

THE YEAR JUST PAST

—IN—

Real Estate and Building



RADICAL change has overtaken the real estate and building market of this city during the past year. Throughout the early months the conditions which prevailed during 1905 continued to prevail with increasing rather than decreasing emphasis. Week by week the total number of conveyances recorded exceeded the large totals of the year preceding, while at the same time the estimated cost of the buildings projected

were promising to be larger than ever before in the history of the city. But these conditions did not continue. Early in the summer the figures, instead of continuing to increase, began to remain about stationary, and by the time that the leaves were falling the totals for the current year were running perceptibly behind those of 1905. For the first time since 1900, the real estate market of New York had to be characterized as a retrogressive rather than as a progressive market, and it is a matter of some importance that the meaning and the extent of this retrogression should be clearly understood.

Between 1900 and 1905 the number of conveyances of real estate situated in the county of New York recorded in one year increased from about 14,600 to about 35,000. An increase so voluminous as this was unexampled in the history of the city, and it was due to very exceptional causes. It was not due directly to the growth of New York in business or in population, because the increase in the number of conveyances in these few years was far greater than would have been justified by the substantial growth of the city. Neither can it be traced to the increasingly general speculation in real estate, although it is undoubtedly true that the speculative element in the real estate market was enormously enlarged during these years. If no other causes had been operating except those of a period of an unusual expansion in business, population and real estate speculation, the number of conveyances would not have augmented any more quickly than they did between 1900 and 1903, during which period the average yearly increase was about 10%. The enlargement in the number of conveyances did not become unprecedented and extraordinary until in 1904 and 1905. In the first of these years the increase was 33% over the preceding year, while in the second it was over 40%. This sudden jump in the totals was due to a combination of causes as exceptional as the volume of the resulting increase—a combination of causes which resulted in a tolerably radical transformation in the economic aspect of the domestic life of New York. During 1902 and 1903 there had been an under-production of tenement houses all over New York City, owing to the new tenement-house law; and this under-production of tenements was co-incident with an unusually large increase in the alien population. The over-crowded lower East Side overflowed into the upper East Side, whose existing population was pushed farther west, while at the same time Harlem and the West Side were feeling the local effects of the under-production of new habitations. This suddenly increasing demand for all kinds of tenements raised rents in the different parts of Manhattan and galvanized into life a class of building which had been dead for some years. It raised the value of the old five-story tenements and flats and justified the wide-spread speculation which sprang up in these old houses. It was the buying and selling of these old buildings which constituted the bulk of the unprecedented increase in the volume of real estate transactions, but, of course, part of it was also due to the constant demand for new tenement-houses and for the land on which to build them. It so happened that the new subway was opened for traffic just about this time, and the land to which it gave access on Washington Heights and the Bronx suddenly became available for improvement. The speculation in this vacant land, and the sales incident to a large volume of new building enterprise also contributed to swell the already swollen totals.

The decreased volume of the real estate transactions recorded in 1906 means simply that the speculation based on this exceptional alteration in housing conditions is now at an end. The values of these old flats and tenement-houses have been pushed as high as is safe. In many cases doubtless they have been pushed too high. At any rate the speculation is subsiding and during the coming year it will still further subside. The conditions which underlay the speculation have changed.

Instead of the under-building of 1902 and 1903, New York City has during 1905 and 1906 been over-building. Its operators have been erecting enough tenements and dwellings to accommodate twice the actual increase in population, and the consequence has been a noticeable decrease of tenement-house building during the last five months of 1906. At the same time there has been a considerable shifting of population from Manhattan to Brooklyn and Queens, owing to the increasing rents which have to be paid in the central borough. This shifting has been very much hampered by the miserable travelling conditions between the boroughs, and it will undoubtedly become very much larger as soon as some of the new bridges and tunnels actually come into operation. Peculiar conditions in the building material and in the money markets have also contributed to the decreasing activity of the past year. Some of the previous speculation in old-law tenements was traceable to increased cost of building materials, which made it impossible to duplicate the old buildings at anything like the same cost. But the fall in the price of brick which took place early in the summer changed all this and it tended in different and opposite ways both to lessen speculation in old tenements and to hinder the erection of new ones. By making the building of new tenements cheaper it diminished the opportunities for speculation, while it hampered the operations of builders by preventing them from obtaining permanent loans as large as they expected on their recently-constructed buildings. The money market also in spite of the beneficial effect of the change in the mortgage tax law has also acted as a check upon building and real estate transactions.

In spite, however, of the many causes which served to check real estate activity during the last half of 1906, the total decrease from the figures of the preceding year was not very large. Thus the number of conveyances of real property situated in New York county recorded in 1906 was 32,277, while in 1905 the corresponding number was 34,853, in 1904 just 24,601 and in 1903 only 18,649. The decrease which has taken place in 1906 compared to 1905 was only about one-fifth of the increase which had taken place in 1905, compared to 1904. This comparison does not, however, tell the whole story. During the last few months of 1906 the decrease from the figures of the preceding year amounted to fully 20%; and it may be expected that this decrease will continue throughout 1907. Probably the total number of conveyances recorded in 1907 will be nearer 25,000 than 30,000, but there is no reason to be alarmed by this prospective decrease. It will mean that the causes which have brought about the decrease of 1906 will continue to be effective, and that during the current year the real estate market will in this respect be restored to its normal condition. That normal condition will mean the regular transaction of a considerably larger volume of real estate business than that to which New York was accustomed before 1905. In spite of certain weak spots and of the strain which results from the high prevailing rates for money the real estate market in Manhattan and the Bronx is in a very wholesome condition. It may be confidently anticipated that during the year the conditions on Washington Heights will improve and building to a certain extent be resumed. Everything, also, points to a large volume of transactions and improvements in the whole central part of Manhattan—in the district bounded by 14th and 59th sts and 4th and 9th avs. That is the region in which speculation continues to be most active and is most justified. That is the district which will be most benefited by the growth of the whole city in population and wealth, and by the rapid transit improvements, no matter in what direction they run, and every new bridge, subway and tunnel will make this Manhattan tenderloin more available to the population of the whole city, both for business and pleasure, and values in this district are sure to improve steadily, no matter what may be taking place in other parts of the city. It is no wonder, consequently, that speculators are buying in this region persistently, and that it is and promises to remain for the present the centre of active and profitable real estate speculation. The activity in general business promises to continue throughout the coming year, and large numbers of new loft and office buildings will be erected. Moreover, even after the inevitable reaction comes in general business, local causes will continue to justify activity in this central core of the borough of Manhattan. During the next few years one important transit improvement after another will

begin to have its effect, and these effects will look in the direction of more and better employment for real estate in the central district.

THE MORTGAGE MARKET.

The totals respecting the lending of money on real estate compiled in the usual manner from the records are not for the past two years very illuminating. During 1905 these totals were swollen by the enormous number of mortgages recorded prior to the mortgage tax law, which took effect on July 1, and after that date they were from the same cause unnaturally diminished. This diminution continued until July 1, 1906, when the mortgage recording tax was substituted, and since the first of July the amount of money loaned on real estate all over the city has been much larger than during the corresponding period last year, in spite of the fact that money has been exceptionally hard to borrow. Thus during the month of December, 1906, alone, almost \$50,000,000 was loaned on real estate in Manhattan against less than \$24,000,000 during the corresponding month of 1905. On the whole, the amount of money loaned on real estate situated in Manhattan and the Bronx was about \$450,000,000 in 1906, compared to about \$565,000,000 in 1905; and the diminution is not very large, considering the abnormal condition of the mortgage and money market. It looks as if the stringency in the money market would continue during the

latter case it amounts to only about 7%, whereas in the former it is not less than 15%. The aggregate estimated cost of new Manhattan and Bronx buildings was over \$160,000,000 in 1905, and only \$136,000,000 in 1906. In Brooklyn the decrease was proportionately less, the total being over \$66,000,000 in the first year and over \$63,000,000 in the second. Queens and Richmond, on the other hand, have been more prosperous in 1906 than they were in 1905. The estimated cost of the buildings projected in the former borough increased from \$12,000,000 in the first year to \$18,000,000 in the second, and this increase shows that with the better means of communication soon to be obtained Queens will be a close competitor with the Bronx. In spite of all deductions, however, the year 1906 has been the largest building year in the history of the city, 1905 alone excepted. The new buildings projected in New York City called for an expenditure of about \$225,000,000 and the projected alterations must have cost \$20,000,000 more. The builders of New York will be fortunate in case they do as well in 1907.

The diminished activity in building in the boroughs of Manhattan and the Bronx can all be traced to two sources—viz., to the decreased number of tenements and hotels which were projected. The decline in the construction of apartment hotels is one of the most remarkable somersaults ever observed in the building market of this city. Four years ago about \$20,000,000



CONSOLIDATED STOCK AND PETROLEUM EXCHANGE BUILDING—BROAD AND BEAVER STREET VIEW.

George A. Fuller Co., Builder.

Clinton & Russell, Architects.

current year, for the demands upon the resources of the country for fresh supplies of floating capital will be enormous. Prospective borrowers on real estate for some time to come will have to pay dear for the money they need; but the experience of the year clearly shows that in the long run the new mortgage recording tax will constitute a great boon to borrowers upon real estate security. When the money market returns to its normal condition it is probable that mortgages will be in better demand than they ever have previously been during the history of the city, and that the average rate of interest will be correspondingly lower. If it is necessary, as Mr. James J. Hill asserts, for the railroads of the country to spend \$1,000,000,000 a year for the next five years on new tracks and terminals, the day of cheap money may be postponed for a long while, but it cannot be postponed forever. In the meantime New York City is to be congratulated on the existing organization of its system of real estate credits. The title companies are rich and strong enough to accommodate borrowers with good security even during a period of tight money, while at the same time they exercise a valuable conservative influence during a period of speculation.

BUILDING IN 1906.

As usual, the amount of new building projected in 1906 has been dependent chiefly on conditions in the real estate market. During the first half of the year the estimated cost of the projected buildings was greater than it was during the corresponding period of 1905, but when the diminution began during the summer time, it gained headway more rapidly than did the decrease in the conveyances of real estate. During the past few months the plans for new buildings filed with the department have been unusually scarce; and the total result is that the decrease in the number of new buildings projected is proportionately greater than the decrease in transfers. In the

was being spent each year in hotels either for residents or transients. Even last year 13 new buildings of this class were projected to cost over \$5,000,000. But in 1906 only one small hotel appears in the building records of Manhattan. The apartment house, which was at one time by way of being eclipsed by the apartment hotel, has again come into its own, and completely dominates the situation. It may be expected that in time the building of apartment hotels will be resumed, but for the present New York has more of them than it needs. A decisive decrease also took place in the number of tenements of all classes projected, owing to causes already outlined in our real estate review. Thus in 1905 the new tenements projected call for an expenditure of about \$73,000,000, whereas during the past year the corresponding total was only about \$57,000,000. This total of \$57,000,000 compares, however, with a corresponding total of \$45,000,000 in 1904, \$23,000,000 in 1903 and \$15,000,000 in 1902. The number of private dwellings for which plans were filed was also much smaller in 1906 than in 1905. Indeed, so far as Manhattan is concerned, 1906 with its \$2,000,000 invested in private residences represents the low-water mark in this class of structure, although in the Bronx the figures tell a different story. When we turn, however, to the figures covering the erection in 1906 of buildings devoted to business purposes, the inferences are very different. More money was planned to be spent on buildings of this class in 1906 than in 1905. In the latter these plans called for an expenditure of about \$28,000,000, whereas in 1906 they call for an expenditure of \$32,000,000. This last total was larger than during any previous year in the history of the city, larger, probably, than it will be for a number of years to come. Yet this great mass of business building projected is also prophetic of the future, because the tendency hereafter will be to distribute population throughout the other boroughs, but to concentrate business.

Real Estate Investments

Views of the President of the Mutual Life Insurance Company

CHARLES A. PEABODY, Esq., as president of one of the largest institutions lending money on real estate, consenting to give his views concerning the standing of mortgage loans, was asked to say what from his point of view is the comparative safety and attractiveness of real estate investments, mortgages and building loans in Greater New York. Mr. Peabody answered:

"The question as to what may be thought of the safety and attractiveness of New York City real estate, by way of investment, covers a broad field. There can be, however, but one opinion as to its safety if due judgment is used in making the investment. I do not think that there is any real estate in the world that holds firmer to its value and that is so satisfactory and practically certain of advance under normal conditions as the real estate of New York City. Of course, you are aware that insurance companies may not invest in the purchase of real estate. So far as real estate is concerned, we are limited to mortgages, and what I have said as to real estate, answers, of course, the question as to mortgages.

"From the point of view of the insurance company, the first consideration must be security. That means that the companies must be conservative in appraising real estate. They must not follow to the limit the occasional movements which seize upon localities under the stimulus of special causes, because these so-called booms invariably flatten out when the special causes are removed. Several of these movements have been seen within the last few years; in fact, the real estate history of New York includes a long series of such movements, but to one who studies such history and uses intelligent judgment in considering the general trend of development, and the lines upon which New York is likely to grow in the evolution of the years to come, investment in first mortgages within the limits allowed by law ought to be, in the long run, as good as any investments that an insurance company could make."

"Ought New York City real estate to receive preferential consideration from insurance companies, and, if so, why?"

"I find this question rather hard to answer," said Mr. Peabody. "It should not receive preferential consideration as compared with other cities having the same prospects for the future and the same reasons for firm maintenance of values. All should be treated alike which offer like conditions, but I think we can all agree that there are few cities in which the market for real estate is so steady and so strong as in the City of New York; and, of course, steadiness and strength in the market are what make safety and stability in the investment."

"What rate of interest might be deemed fair and equitable on loans that the insurance companies may pass upon as safe and attractive?" Mr. Peabody was further asked.

"As I have stated already," replied Mr. Peabody, "the first consideration from the company's standpoint must be security. The next consideration must be the duty of the company to obtain for its policy holders as high a rate of return as can be obtained with due regard to security. Of course, the rate that might be deemed fair, varies. It involves questions of the value of money at a given time, and is based more upon the general conditions of the country and the country's business, or, indeed, the general condition of the world and the world's business than upon local and passing causes. I should say, in a general way, that it is the duty of the company to obtain all it can for its policy holders, always having a due regard to their security. In New York City, within my memory, the rate has been as low as 3½ per cent. for the highest grade mortgages, and it has within my memory been as high as 7 per cent. It is safe to say it will never reach such a figure again, and seems to be now running between 4½ and 5 per cent."

"What apparent reasons exist, if any, for preferring other investments than mortgage loans?"

"A good reason for preferring other investments than mortgage loans will exist if the company can obtain for its policy holders a higher rate of return on their capital without depriving them of safety. If by the purchase of other securities which are allowed by law the company can obtain more in interest it is undoubtedly the company's duty to do so. There are times when such investments pay better at their market prices than real estate mortgages; there are other times when they do not pay so well. It is the practice of the Mutual Life Insurance Company to follow both forms of investment, being guided by the prevailing rates of interest as to the preponderance of one form of investment over another, and, in a general way, to lose no chance to invest as may seem best for the company when the company has any available funds awaiting investment.

"Since January 1, 1906, this company has accepted loans on real estate mortgages aggregating more than \$25,000,000. During that time loans have been paid off to the amount of \$11,000,000 or more, and the total amount of bonds and mortgages now held by this company exceeds that held a year ago by about \$13,000,000."

Wall Street and the Money Market.

THE GREAT PUBLIC KEPT OUT OF THE STOCK MARKET LAST YEAR, IN SPITE OF THE LARGEST VOLUME OF BUSINESS IN THE HISTORY OF THE EXCHANGE.

SOME very striking features of the financial situation which have been strongly emphasized towards the close of 1906 have been the extensive advance in wages consequent on the great scarcity of labor. Then there have been tremendous freight congestion and extraordinary scarcity of railroad equipment. This assuredly implies great prosperity, but the curious and anomalous result is that neither the congestion nor the scarcity of cars and equipment has had any important influence on prices throughout the year 1906. The beginning of the year 1906 found Wall Street, whatever was said to the contrary, in a hopeful mood. Unusual strain and difficulties had been overcome, banking interests were cautious, but it soon developed that an era of speculation had started again and was prepared to run riot in spite of a decidedly unsatisfactory banking position.

It is a matter of history and scarcely necessary to comment on in the Record and Guide's review of the money market that at that time, time money was exceedingly scarce and commanded very high rates. As to call money it went up, or rather touched the unprecedented figure of 125 per cent. In ordinary circumstances this would have forced liquidation, but mirabile dictu it did not do so, Wall Street prices continuing to soar as money advanced. There was renewed confidence, and it was said that a market which could stand up against abnormal rates for money and bank deficits must have the strength of Gibraltar. Without calling into question the soundness or unsoundness of this reasoning, certain it is that for a long time the stock market was very strong. It was not, however, strength combined with healthfulness, and succeeding months of the year demonstrated that the market could go down as well as go up. On the whole, the result of the year has not been satisfactory to the least optimistic and the repeated predictions that the greatest bull market ever known in Wall Street failed to materialize. A few stocks have advanced materially, but the general list has remained in statu quo. To look for the cause it may be summed up in one word—manipulation. It became manifest that the high range of prices was not the result of investment of purchases, but of "deals" or rumors of deals. The real investment market has had a reactionary tendency. While 1906 was the biggest year in stocks the transactions in bonds with the exception of Governments were far behind 1905. Dealings in listed stocks amounted to 220,345,977 shares as against 211,859,800 in 1905, and in unlisted stocks to 59,253,878 shares, as compared with 48,360,457 in 1905. State and railroad bonds to the amount of \$833,802,700 were dealt in in 1905, but only \$633,638,500 in 1906. In unlisted bonds the transactions aggregated but \$38,628,380, as against \$180,598,200 in 1905. Railway earnings in 1906 increased remarkably and dividends increased with them. The community has prospered, but the great public have not come into the stock market. The stock commission houses have suffered in spite of the enormous volume of business, the largest in the history of the exchange.

TREASURY RELIEF INEFFECTIVE.

Again must we go back to this money question and the money market in this review. Real estate and building interests are naturally more interested in the action of this commodity than any other. The year 1906 has taught us that anything that the Secretary of the Treasury may do in aiding the money market is futile. Help from the Treasury is simply a palliative and does not touch the seat of the disease. Treasury relief has simply prevented liquidation by upholding or broadening credit, but the result of the remedy may be worse than the malady itself. There must be a real curative, going to the foundation of things, and that can only come about by legislation in Congress, which will give us a rational elastic currency, with enough money to "go round." Foreign countries and other great financial centres do not suffer as we do. Of course, conditions in Europe differ widely from those in this country, which are, it is almost trite to say, unprecedented.

CURRENCY REFORM IMPERATIVE.

As to the distribution of "rights," the increase in dividends and the great stock watering deals there is little to say. Wall Street is not overflowing with enthusiasm at these things because the money is the dominating factor. Currency reform is no longer an academic question—it is imperative without delay.

As to the bearing of the money question on real estate it is generally conceded that the real estate market is in sound condition. In spite of tight money there have been few foreclosure sales. Interest rates still continue high, and there is much indisposition to loan even on the best of realty security. To sum up, there should be easier money in the early part of this year, as the demand for legislation with that end in view from all over the country is so general and acute. If this be done, the year 1907 may be more notable in the development of the country in all respects than any previous year.

Lower Interest Rate Near.

BY THE PRESIDENT OF THE TITLE INSURANCE COMPANY OF NEW YORK.

THE present situation in real estate is not unlike that which seems to confront the stock market. A long period of prosperity, with steadily enhancing values, has on the one hand predisposed the public toward a chronically optimistic view of the future. Indeed of real estate, which, unlike stocks, cannot be "sold short," it may be said that there cannot be found any



EDGAR J. LEVEY.

widely expressed bearish sentiment. Nevertheless, certain unfavorable elements in the present situation have caused the judicious to proceed carefully in regard to future commitments, and have led to a waiting policy on the part of many conservative operators, with the view of ascertaining what will be the developments of the next few months. While there is no connection between real estate values and the temporary movements of the Stock Exchange, any widespread change in the prosperity of the country cannot

be without its effect upon real estate prices. General business conditions throughout the country to-day are unquestionably on an unexampled plane of prosperity. Money conditions, however, not only throughout the United States, but in almost the entire civilized world, exhibit symptoms of strain which it would be folly to ignore.

To speak with more particular reference to the New York City real estate market, it may perhaps be said that the most acute factor in the existing situation, the overbuilding of tenements, is largely a local condition. While new building operations have for some years past been extremely active throughout the whole country, it may be doubted whether such excesses can be found in any other large city as those which in New York during 1905 and 1906 led to the production of more than double the new housing accommodations required by the increase of population. Nevertheless, even this threatening crisis now seems likely to be safely passed. Mortgagors, building loan operators and creditors of builders generally have exhibited a tolerance and forbearance toward their debtors unheard of in the older days of speculative building. Foreclosures have been comparatively few, and while the strain is still severe, it now seems more than possible that anything in the nature of an acute panic in tenement holdings will be averted. If so, the underlying virtues of New York City real estate and the phenomenal growth of our population may yet bring profits in instances where they are not now expected.

Despite the stringency of the money market, the beneficent effects of the mortgage recording tax law are making themselves felt. Institutional lending still remains disappointing, but an ever-increasing amount of money seems to be coming into the mortgage market from trustees, estates and individual investors. Signs of this are so abundant that the day of lower interest rates on mortgages cannot be postponed to a far distant future. One of the most lamentable features of the present money stringency has been the enforced tying up of investment property with mortgages bearing directly or indirectly the extreme legal rate of interest. Nothing short of absolute necessity should induce such a course, in view of the likelihood of easier mortgage rates before the close of another year.

The one supreme problem which confronts the future of New York realty to-day is that of transportation; and in that problem is bound up not merely questions of material wealth, but in a large sense the betterment of our standard of living and social conditions generally. The outlook in this respect is not replete with encouragement. Between the impracticability of the Legislature and the ineptitude of the Rapid Transit Commission the situation now approaches an impasse. Nor has the press shown that grasp of essential facts which must precede any intelligent moulding of public opinion. The more or less extreme views of impracticable doctrinaires are not likely in the long run to save the city from the designs of corporate monopoly. There could be at present no greater contribution to the cause of civic betterment than the most earnest, intelligent and unprejudiced effort to solve this problem on the part of our foremost citizens. We have been forehanded in our handling of the subject of increased water supply, we should be none the less so in the matter of transportation. A few more years of aimless discussion and haphazard drift will produce a situation which will become intolerable, not merely to some, but to all New Yorkers.

EDGAR J. LEVEY.



ENGINEERING BUILDING—39TH STREET VIEW.

Engineers' Club, Owner.
Wells Bros., Builders.

Hale & Rogers, Architects;
Henry G. Morse, Associate.

Percentage Table for Lot Values.

To the Editor of the Record and Guide:

I believe there is no accepted percentage table for determining the value of full depth lots less or more than 25 ft. front. Some associates and I have worked out the enclosed table, and would ask you to publish it, and encourage criticism in regards to it.

REAL ESTATE.

PERCENTAGE TABLE FOR DETERMINING THE VALUE OF FULL DEPTH LOTS WHICH ARE LESS OR MORE THAN 25 FEET FRONT.

Ft. front	Percentage	Value	Ft. front	Percentage	Value
12	42	\$12,600	31	118	35,400
13	45	13,500	32	122	36,600
14	48	14,400	33	126	37,800
15	51	15,300	34	130	39,000
16	55	16,500	35	134	40,200
17	59	17,700	36	138	41,400
18	63	18,900	37	143	42,900
19	67	20,100	38	148	44,400
20	72	21,600	39	153	45,900
21	77	23,100	40	158	47,400
22	82	24,600	41	164	49,200
23	88	26,400	42	170	51,000
24	96	28,800	43	176	52,800
25	100	30,000	44	182	54,600
26	103	30,900	45	188	56,400
27	106	31,800	46	194	58,200
28	109	32,700	47	201	60,300
29	112	33,600	48	208	62,400
30	115	34,500	49	216	64,800

The Record and Guide would like to hear what objections can be raised to this method of figuring.

Progress in Taxation.

BY THE PRESIDENT OF THE BOARD OF TAX COMMISSIONERS, CITY OF NEW YORK.

THE efforts of the simplified spellers seem likely to have at least one good result, even though they do make us go to spelling school again. There are evidences of a new public interest in our language both spoken and written. It seems generally conceded that, as a nation, we are ready of speech but that our pronunciation is slovenly. We are careless in the use of words and have a tendency to write artificially rather than simply and plainly. The highest function of the language is to convey thought with absolute precision; and careless thinking may be responsible in part for careless speech.

Of late years we have heard much of constructive criticism, probably more than would be at all necessary if we were not in a fair way to lose the proper historical significance of the word criticism. As commonly used, the word criticism is almost synonymous with fault-finding whereas, in truth, it is derived from the Greek word "Kriuo," to judge. A critic then may praise as well as blame and in his judgment, by pointing out the mistakes to be avoided and the work well done, may show the way toward better things. Indiscriminate eulogy is as misleading as useless and indiscriminate blame.

This is the season for thanksgiving and we in the State of New York have much to be thankful for, even in our condemned and despised tax laws. If we regard them critically and with the optimistic temperament, it will not be difficult to see how much better off we are than many of our sister States. We should not give thanks in the spirit of the Pharisee that we are not as other men are, but with due humility confess that what we have we owe more to our ancestors who left us free from the constitutional restraints which tie the hands and check the progress of most of the western States.

CONSTITUTION'S ADVANTAGES IN NEW YORK.

The Constitution of New York is practically silent as to taxation. In Ohio the Constitution provides that all property real and personal shall be taxed uniformly at its true value in money and many other States are similarly restrained or have identical provisions copied from the Ohio Constitution.

I have recently visited the States of Ohio, Kentucky and Missouri, making some special study of their tax conditions. If those who grumble about the New York Tax Laws could be forced to live a year in St. Louis, Louisville or Cincinnati, they would return chastened in spirit and ready to give thanks for all that is good in our native State. In Kentucky every man is under obligations, which can be enforced, to make out a list of his property under more than fifty separate headings, to the accuracy of which he must make oath. Ohio and Missouri have similar laws and in St. Louis a man is not allowed to deduct from the aggregate of his possessions any indebtedness contracted for their purchase. More than this, if he owns stock in a corporation incorporated under the laws of another State, he must pay taxes on the value of that stock although the property which it represents is actually taxed elsewhere.

The State of Minnesota is rejoicing because after a five years struggle they have succeeded in freeing themselves from the identical restraints of the Ohio Constitution which they copied fifty years ago. This clears the way for progress and improvement in Minnesota. In all these States I have mentioned the local tax system so far as it affects personal property is hopelessly ineffective. They have attempted the impossible and, according to the habits Nature has, natural laws suspend the operation of the foolishly-devised, man-made laws.

PROGRESS IN NEW YORK.

We have not wholly escaped from the vices of ineffective taxation, but we have advanced a long distance beyond those typical States of the middle west. There are economic objections to the taxation of many of the subjects taxable there and here but ineffectiveness is a sufficient objection always to condemn any provision of a tax system. When a law is ineffective it bears unequally on persons similarly situated and this in practice confers favors on some and confiscates the property of others. Prior to 1901 this was the situation in New York with reference to the taxation of Banks and Trust Companies and is now the case in most of the middle western States. In 1901 an effective law was passed for the taxation of Banks and Trust Companies under which there is no excuse for any discrimination and under which there practically is no discrimination. Every bank and trust company pays one per cent. on the book value of its assets. Before 1901 banks paid on the market value of their stock at the local tax rate. Sometimes the assessment exceeded the book value and sometimes it was not half so great, while the tax rate varied from 1% to 3%.



HON. LAWSON PURDY.



APTHORP APARTMENT HOTEL—BROADWAY AND 78TH STREET VIEW.

William Waldorf Astor, Owner.

Clinton & Russell, Architects.

NEG # 52728

The revenue from trust companies is improperly diverted, but that presents a different issue from the effectiveness of the tax, to which no objection can be made.

In regard to the taxation of mortgages, the States I have mentioned are in even a worse position than the State of New York was before the law of 1905. The tax keeps up the rate of interest and falls with distressing inequality upon those least able to bear it. The inability in Missouri to deduct debts from credits renders the situation so impossible that good citizens of St. Louis say that lying in regard to this matter is no longer considered an evidence of dishonesty.

The mortgage tax law of 1905 was really a blessing in disguise for people's eyes were opened to the real effect of mortgage taxation and for the first time were ready to believe that the borrowers are the principal sufferers. It was possible then for the first time to obtain comparative statistics showing the effect of mortgage taxation on the rate of interest under the general property tax and the effect of a one-half per cent. per annum tax, as compared with Massachusetts, where mortgages have been exempt since 1881. This experiment was probably worth all it cost for us alone but beside that it has furnished an object lesson for all the States of the country. Without the law of 1905, we might not have succeeded in obtaining the law of 1906, which puts New York in the best position of any State in the Union in which mortgages are subject to any taxation at all. Total exemption is best, but this tax falls equally on all who are similarly situated, and is in the highest degree effective.

Effective taxation in the State of New York is now only a matter of keeping on. What we have left of the old general property tax on personal property amounts to little in revenue and can more easily be ended than mended. Beside, the injustice it creates and the check to our commercial advancement that it imposes, it is seriously disturbing the financial administration of the municipalities of the State.

ARREARS OF TAXES IN NEW YORK.

When the Advisory Commission appointed by the Mayor took up the question of uncollectible arrears of taxes, they found that nearly \$35,000,000 had been lost to the city on account of personal taxes and that under the Charter there was no way to prevent a continuing deficiency to the amount of \$3,000,000 a year.

Amendments to the Charter devised by that Commission were enacted last winter which relieved the Finance Department by funding the deficiency and which gave the Board of Estimate the power and imposed it upon the Board as a duty, to provide in the Budget hereafter an amount sufficient to make good annually the deficiency not previously provided for. For the first time, the city will now pay its current expenses from its current income and will no longer run in debt because of deficiency in current revenues. We may expect that our example will be a help to other cities of the State.

LAWSON PURDY.

The New Hoffman House.

Madison Square is being presented with another notable building—to be erected in connection with the Hoffman House, at the northwest corner of Broadway and 24th st by Francis S. Kinney, of No. 135 Broadway, president of the Hotel de Luxe Co., and owner of the Hoffman House in Madison Square. The scheme first is to erect an L-shape building fronting 49.3 ft. on Broadway, with a wing in 24th st, having a frontage of 47.2½ ft. in that street. Later on the present corner building (as soon as possession can be secured), having a year's lease yet to run, will be demolished and the entire plot will be replaced with this handsome edifice. The exterior will be of granite and limestone, with limestone coping, stone cornices, terra cotta flat arch floors, copper skylights, etc. It will



NEW HOFFMAN HOUSE—BROADWAY AND 24TH STREET VIEW.

Thompson-Starrett Co., Builder.

Francis S. Kinney, Owner.

Rudolph L. Daus, Architect.

have twelve stories and the most modern and elaborate equipment known to metropolitan hotels. The Broadway ground floor has been planned for store purposes. Altogether, the project is estimated to cost nearly \$2,000,000. The Thompson-Starrett Co., 49 Wall st, is general contractor, and R. L. Daus, 130 Fulton st, is architect. Two other great works are also in progress on the square, namely the Brunswick Building and the Metropolitan Tower, to add to the architectural magnificence of the most beautiful public place in the world.

The Mortgage Market in 1906

By RICHARD M. HURD
President Lawyers Mortgage Company

THE mortgage market opened in 1906 with rates $\frac{1}{2}\%$ higher than prior to July 1, 1905, owing to the Mortgage Tax Law of 1905 imposing an annual tax of $\frac{1}{2}\%$. As a counter-acting advantage all such mortgages were tax exempt and hence attracted many millions of trust funds which were hitherto invested in Government or New York City bonds to avoid taxation. Thus while money was in demand and working steadily tighter, borrowers were able to obtain funds by paying $\frac{1}{2}\%$ higher rates than in previous years. About this time a study of the figures of new buildings in New York led the most conservative lenders to the opinion that at the existing rate of progress there was decided danger of over building in New York, and the Lawyers' Title Insurance and Trust Company and some others stopped making building loans. The volume of mortgage business, as shown by the weekly mortgage records of the Record and Guide, while large, continued to fall further behind the record-breaking figures of 1905.

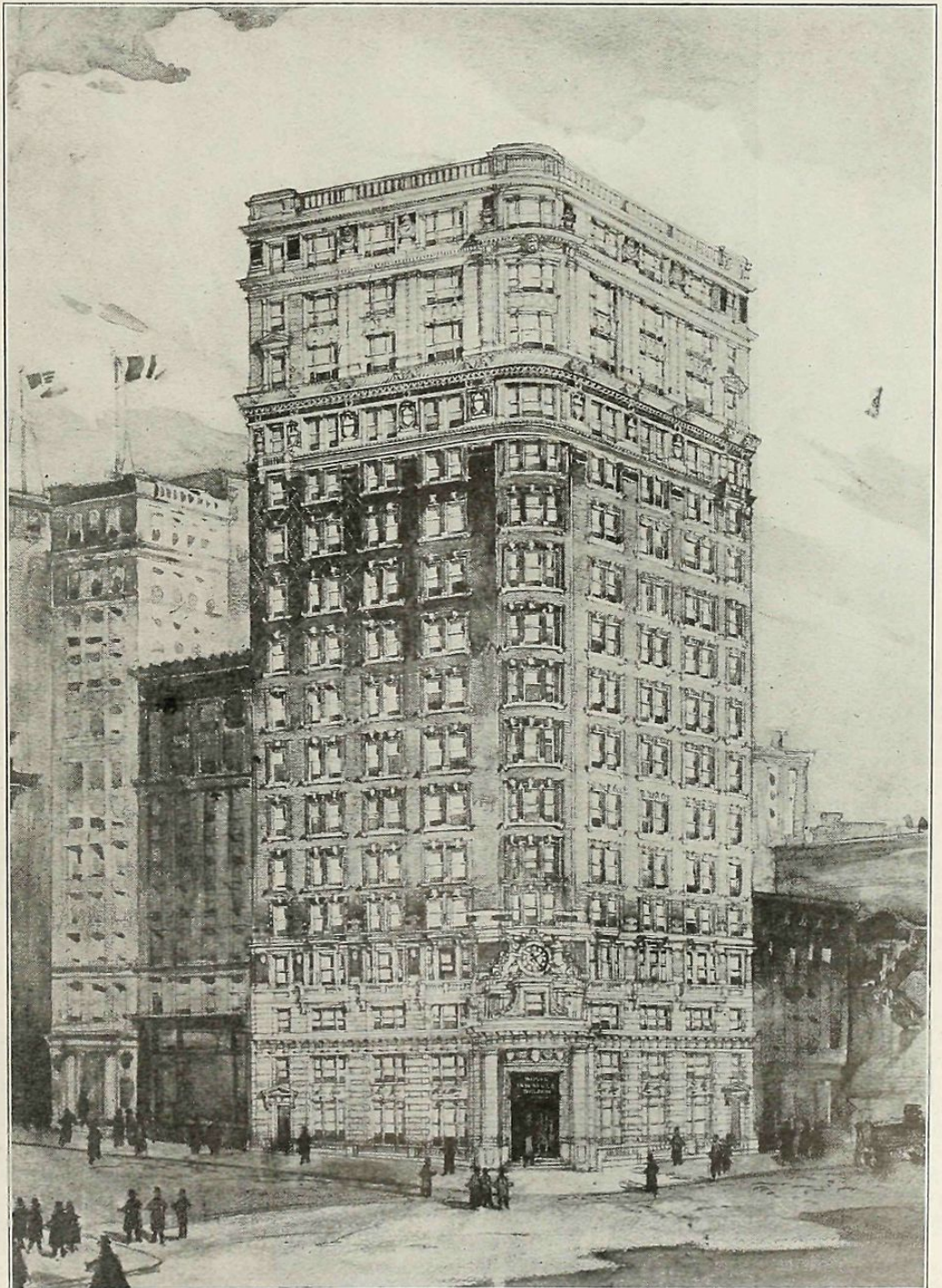
During this time, interest rates on loans on securities mounted to abnormal figures, such as for call money in New York, 60% in January and 30% in April. At Albany a hard and successful fight was being waged by the Allied Real Estate Interests, under the able leadership of Mr. B. Aymar Sands, against the annual $\frac{1}{2}\%$ mortgage tax and in favor of a recording tax of $\frac{1}{2}\%$ paid by the borrower, under which a mortgage would be thenceforth tax exempt. The first effect of the passage of this law was to cause lenders to delay the closing of loans till after July 1, when the new law went into effect. On that date interest rates dropped automatically $\frac{1}{2}\%$, although borrowers had to pay the $\frac{1}{2}\%$ recording tax. The constant pressure of demand for money due in the United States to the extraordinary business activity and the obstinate holding up of prices for stocks on the New York Stock Exchange by large speculators, in defiance of all the steadily accumulating factors adverse to a bull position, and due in Europe to the after effects of the Russo-Japanese and Boer Wars, began to have some influence on mortgage rates. This showed itself chiefly at the two extremes of the security scale, both on the highest grade of mortgage loans by raising interest rates from a minimum of 4% to a minimum of $4\frac{1}{2}\%$, and on loans in the newer outlying districts or on those exceeding 70% of the value of the property, by raising rates from 5% to $5\frac{1}{2}\%$. It is beyond dispute, however, that the change in the Mortgage Tax Law from the annual $\frac{1}{2}\%$ charge of 1905 to the single recording $\frac{1}{2}\%$ charge of 1906 worked an annual benefit of nearly $\frac{1}{2}\%$ to borrowers. In fact if any feature of mortgage interest rates should arouse surprise, it is that with call rates in New York, the last half of the year at 40% in September, 27% in November and 45% in December, with time money at 6% and the German Imperial Bank rate 7%, that New York City mortgage rates have kept along at $4\frac{1}{2}\%$, 5% and $5\frac{1}{2}\%$, varying only according to the grade of the security. The least desirable

loans have had to pay 6%, but this is not entirely abnormal, as there are always loans offered which are so undesirable as to be unobtainable except at 6%.

While the total mortgage loans made in New York dropped from \$757,675,075 in 1905 to \$608,544,826 in 1906, or a decrease of 19%, some companies dealing only in the higher grade mortgages, such as the Lawyers Mortgage Company, did a larger business in 1906 than in 1905. It may throw some light on the gradual change in interest rates to note that of this company's mortgage sales in 1905, 21% netted 4% and 79% netted $4\frac{1}{2}\%$, while in 1906 12% netted 4%, 85% netted $4\frac{1}{2}\%$, and 3% netted 5%, the average interest rate netted by investors rising from 4.39% in 1905 to 4.63% in 1906.

In general it is true that mortgage interest rates, while they do not fluctuate as violently as rates in other financial markets, are necessarily affected by them, as capital flows from one market to another. Interest rates all over the world are now on an almost unprecedented high level, but as far as the United States is concerned, I cannot see any signs of lower rates until liquidation and lower prices rule in the stock market, until the floating debt of Wall Street to London, estimated at \$900,000,000, is paid off, and until a lull in business activity occurs. Further, it is difficult to see why there should be any great drop in interest rates until after the next great industrial and commercial panic. When this will come it is impossible to say, but the foundations for it are already being laid by the widespread extravagance and luxurious living, and by the colossal expenditures converting floating into fixed capital.

It is said that in the event of the erecting of the new court house on Union sq, many buildings in that vicinity will be altered for office purposes. It is understood that the Parker Bldg., southeast corner of 4th av and 19th st, will probably be converted into an office structure should the city conclude arrangements to acquire the proposed court house site.



ROYAL INSURANCE COMPANY'S BUILDING.

Charles T. Wills, Builder.

Howells & Stokes, Architects.

MANHATTAN VALUES HIGH

President Morton, of the Equitable, Thinks
There Are Good Reasons to Believe
That There Is Some Inflation.

To the Editor of the Record and Guide:

I have yours of the 28th, making the following inquiries:

(1) What, from the point of view of the big insurance companies, is the comparative safety and attraction of real estate investments, mortgages and building loans in Greater New York at the present time?

(2) Ought New York City real estate to receive preferential consideration from insurance companies? If yes, why? If no, why?

(3) What interest might be deemed fair and equitable, on loans that the insurance companies may pass upon as safe, and attractive?

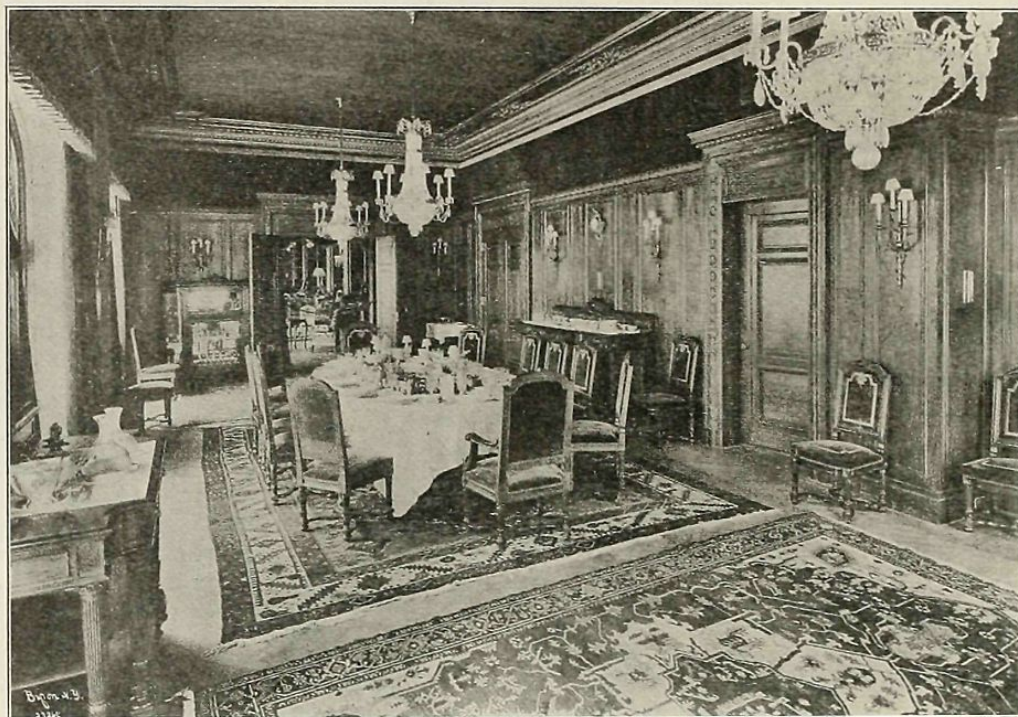
(4) What apparent reasons exist, if any, for preferring other investments than mortgage loans?

In answer to inquiry No. 1, I have to say that from our point of view there is nothing safer or more attractive in the way of real estate mortgages than good business property, well se-

A Healthy Reaction From Abnormal Conditions.

(By the President of the Title Guarantee and Trust Co.)

THE real estate market has been for six months in a healthy reaction from the abnormal activity that had prevailed for the preceding year. The speculation in suburban acreage, particularly, had gone too far and thousands of lots were being offered to the public that would certainly disappoint the buyers if any were found for them. The healthy condition of the real estate market as a whole has been amply proven. A rest of a few months in the production of new houses to enable the builders to dispose of their product which outran the immediate demand, will clear the market and a new and wholesome activity is bound to follow. The factors which make this certain are not at all obscure. The effect of the new transit facilities nearing completion will be very great, and the growth of the greater city will continue along sounder lines than ever. The drift of business and population from all over the country to this great city was never more pronounced than now, and with the new bridges and tunnels to Brooklyn completed, that city of homes will show a growth that will surprise those who have not carefully watched the conditions surrounding it. The effect of all this on business property in the heart of New York will be very great, and now, while the market is not particularly good in many other lines, it is better than ever in business property.



A PRIVATE DINING ROOM IN THE KNICKERBOCKER HOTEL.

Broadway and 42d Street.

(Photo by Byron.)

Bruce Price, } Associated.
Marvin & Davis, }

Trowbridge & Livingston, Architects.

lected on fair valuations, in Greater New York at the present time.

In answer to your second question, I think New York City real estate should receive preferential consideration from insurance companies only on account of its quality, but I see no reason why New York City real estate should receive preference for any other reason. I think the fair way for the big insurance companies to place their money on real estate mortgages, so far as it is possible to do so conservatively, is in those sections of the country which produce the insurance premiums. I can conceive of no good reason why New York should have any especial preference.

3. The question of interest depends entirely upon the money market. The relation of supply to demand is the sole regulator of value, and applies to interest rates as well as to everything else.

4. I do not know of any good reasons why we should prefer other investments to mortgage loans. The first thing that insurance companies must require in their investments is security, and, second, is income. Good railroad bonds are now being sold at prices that yield a good income, and in addition there is a chance at present for an advance in the price of these securities, which does not obtain in real estate mortgages.

Personally, I am of the opinion that values on Manhattan Island at the present time are high. Many people say there is no boom, but I think there are good reasons to believe that there is some inflation. It will be unfortunate to have values increase too rapidly.

Very truly yours,

PAUL MORTON.

The mortgage situation for the moment is very unfortunate, in that the expected advantages to the borrower from the new recording tax law have been entirely postponed because of the conditions prevailing in the general money market and the dearth of money for investment either in mortgages or railroad bonds or any similar security. That the law will ultimately have the effect of reducing the rate to the borrower, there can be no doubt. The Title Guarantee and Trust Co. is the largest dealer in mortgages in the country, and while it does not make the rate, for its customers do that, it knows thoroughly what the rate is and it sees, already, decided effects arising from the new law and that investors are ready to take a tax exempt mortgage at a rate at least one-half of 1% lower than one that is not exempt. It further sees a marked tendency on the part of trustees and other taxable individuals to seek exempt mortgages as the best paying investments open to them. Such investors have been selling their railroad bonds and entering the mortgage market and were very numerous during the last few weeks preceding the second Monday in January in order to be in shape on tax day. There are many who are not yet alive to their opportunities, but no one can doubt their action when they are. The result is going to be that when money conditions become normal there will be a great influx of money into the mortgage market, and 4% tax free will be a rate satisfactory to the lender, and ultimately 3½%. That rate has prevailed in Boston for years under similar conditions and certainly New York borrowers will fare as well in due time.

CLARENCE H. KELSEY.

Tenement Houses as an Investment.

NO one can or will care to deny that the year ending July 1, 1906, witnessed the most remarkable and continued speculation in tenements and flats and the largest production of new buildings of this character that New York or any other city has ever experienced. The rise in their value was as unparalleled as it was phenomenal. That in such a runaway market men's



J. L. BUTTENWIESER.

speculative temperament should get the better of their sober judgment and that a state bordering on intoxication should result from a too free and full indulgence in such tempting, though reckless, speculation is not at all surprising. It required a sobering tonic like the present continued and severe stringency in the money market to call a halt and to exert a steadying influence. And now with the end of 1906 in sight and the approach of the new year, the ques-

uppermost in real estate men's minds is, "What will the year 1907 bring forth? Is the present quiet condition of the market—and more especially the market for tenements and flats and lots suitable for tenements and flats—but the lull before the storm, or is it only a breathing spell before another spurt in rising values?"

Those who were most intoxicated by their success in wild speculation are naturally in a condition bordering on delirium tremens superinduced by the heavy load of debts they still have to carry. That "in the cold gray dawn of the morning after" these operators should take a dark view of the future is to be expected. I have always found that those who are most daring and loudly optimistic in times of prosperity, who ridicule all danger signals and notes of warning, become the most disheartened and pessimistic, the very moment the first cloud appears above the horizon. Personally I could never share their fantastic dreams, nor can I now share their deep gloom.

The present lull in the real estate market is due to perfectly natural causes and should and probably will disappear with their disappearance. The first and direct cause is the long-continued and severe stringency in the money market, which makes it difficult to obtain first mortgages on finished buildings except at higher rates of interest and in smaller amounts, and which at the same time makes it well-nigh impossible to secure building loans for new ventures in tenements and flats except at a prohibitive cost. The remote but more serious cause is the slight overproduction of tenements and flats in the Bronx, on Washington Heights, in the outlying boroughs and in the upper end of Manhattan. By a very natural but fortunate circumstance these two causes, though operating together, prove a corrective of each other. The stringency in the money market turns out to be a blessing in disguise for the investor in tenements and flats, since it is absolutely preventing a continuance of the building fever. This fact, together with the continued flow of immigration to our shores, will soon correct any of the possible dangers of overproduction.

When we stop to consider that the population of our city is growing at the rate of fully 200,000 a year, that the country at large is in a most prosperous condition, that all branches of trade are alike active and profitable, that mill, workshop and foundry are crowded to their utmost capacity and that in spite of this unprecedented activity in every line of business and of manufacture, there is, according to Bradstreet and Dun, no overproduction, when we remember that the laborer, both skilled and unskilled, has steady and remunerative employment, we need not fear that tenements and the cheaper grade of flats will not continue to be in the future, as they have been in the past, one of the very best forms of investment for the man of moderate means.

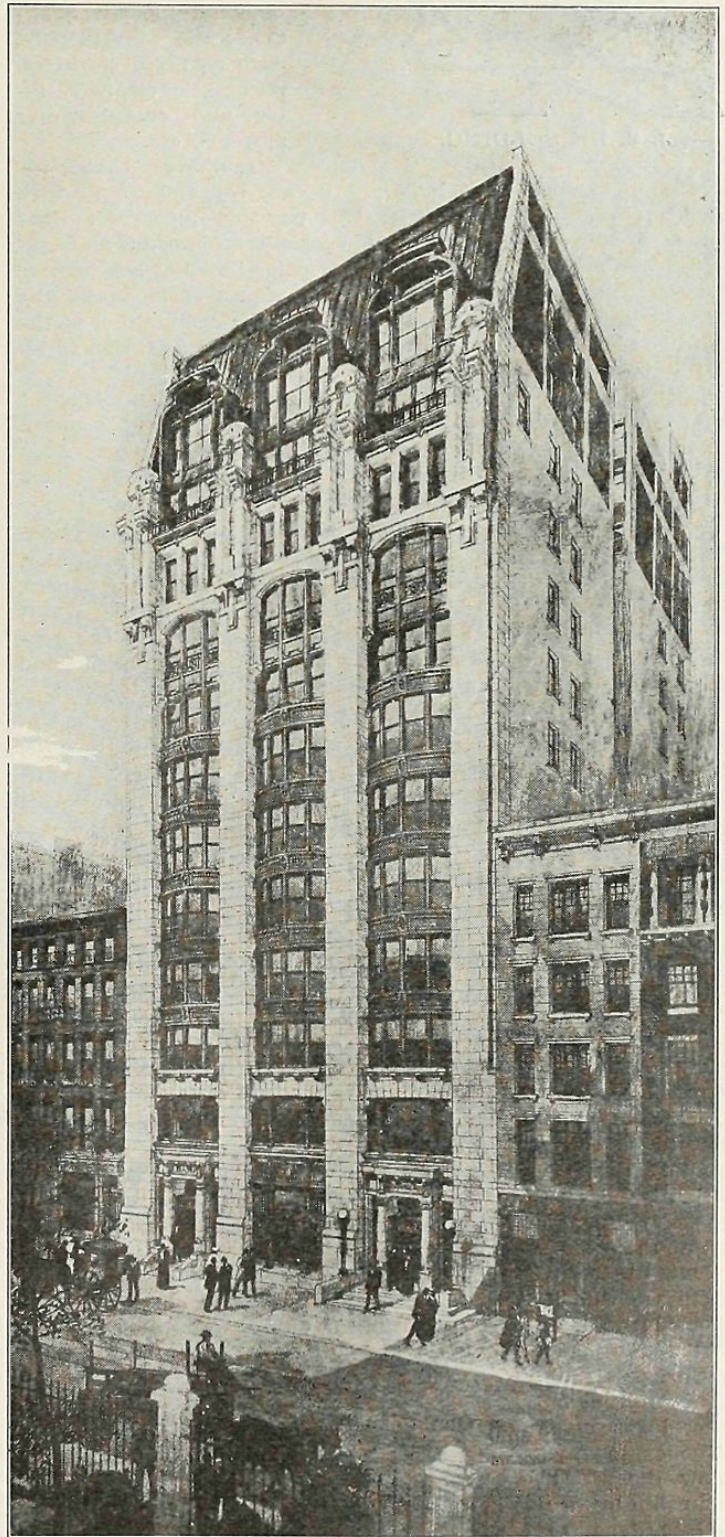
I do not mean to say, nor do I wish to be understood as prophesying that during the coming year we will see a repetition of the speculative activity which prevailed last year. This is neither likely nor desirable. I think, however, it is reasonable to expect that there will be a continually increasing demand for this class of real estate from small investors, merchants and manufacturers, who wish to lay by part of their profits in some safe field outside of their business. They will continue, if they are wise and conservative, to look with favor on centrally located tenement and flat property, which, come what may, will ever prove a sound and profitable source of income and will in all likelihood grow more valuable as the city continues to increase in size and in importance. No man who invests in this kind of property situated in the heart of Manhattan, within easy access of the main avenues and arteries of

trade, need be alarmed that his investment or ultimate prospects will suffer materially from any temporary cessation of speculation. The supply of centrally located property of this class, instead of increasing, must ever grow less and less, as bridge approaches, railroad and tunnel terminals, parks, business houses, factories, stables, storage and warehouses require the demolition of row upon row of existing tenements and flats and at the same time cause the value of the land to rise beyond the point where it can possibly pay to erect new tenements.

Those who are more daring and who still have a desire to combine more of speculation with their investment will be tempted to purchase less favorably located tenements in the extreme end of Manhattan and in the outlying boroughs. If they buy them cheap enough, if they have a substantial equity in their purchase and if they will have the patience to stand a year or two of comparatively meagre returns upon their investment and to overcome the troubles that are always attendant upon securing desirable, steady tenants in newly-settled districts, they will have the satisfaction of knowing that they own a piece of property at a price below its cost of production, and the future ought, and I think will, realize for them their hopes for better rental returns and increased fee values.

Of course prophecy is both a safe and a dangerous thing—safe because no one can at the moment authoritatively contradict it—dangerous, because events may quickly prove its fallacy. None the less I feel safe in prophesying that, if business conditions in general fulfill their promise of continued prosperity, we may look forward to a gradual, steady, healthful return to normal activity in this as well as in every other branch of the real estate business.

J. L. BUTTENWIESER.



EVENING POST BUILDING.

Marc Eidlitz & Son, Builders.

Robert D. Kohn, Architect.

Successful Management OF A Modern Office Building

By J. S. DeSELDING

IN response to the request of the Record and Guide that I write an article on the successful management of the modern office building, I feel that in no better way can I comply with such invitation than by giving the results of my own firm's experience with down-town office buildings during the past ten years.



J. S. DE SELDING.

The requisites for a successful office building are, first, suitable location, preferably a corner; second, design, to give best light and air to each office; third, floors, so arranged that small offices can be readily combined into large suites to suit the demand of tenants who need additional space. The building should be at least twenty to thirty stories in height and have all modern appliances and conveniences, such as rapid elevators, pneumatic cleaners, filter and cooled water systems, etc.

Assuming that we have such modern office building to care for and to fill with the best class of tenants who will pay top prices for their offices, we now arrive at the serious consideration of its management. The management of a modern office building has become of necessity a science, since the high values of land and the cost of constructing a skyscraper to meet the competition of the present renting market require the most careful attention to all details, both small and large.

The first thing to be secured is a responsible and efficient agent, having suitable offices, convenient for tenants, and a sufficient and capable office force to handle the business. Such offices are divided into departments, whose representatives look after their special branches, as follows:

(a) The agent or manager, who has the general supervision and looks after the preparation of renting plans, schedules, character of tenants, drawing leases and other necessary papers, prepares circulars, letters, etc., and passes upon all important questions that may come up. Purchasing supplies and the general care of the building are among the duties of the agent, and require honesty, ability and much time to be devoted to them.

(b) Cashier's Department—Should contain an exact method of keeping records of leases, renting plans, references of tenants, payment of rent, etc., etc.

(c) Collectors, who must keep after tenants for prompt payment of rent.

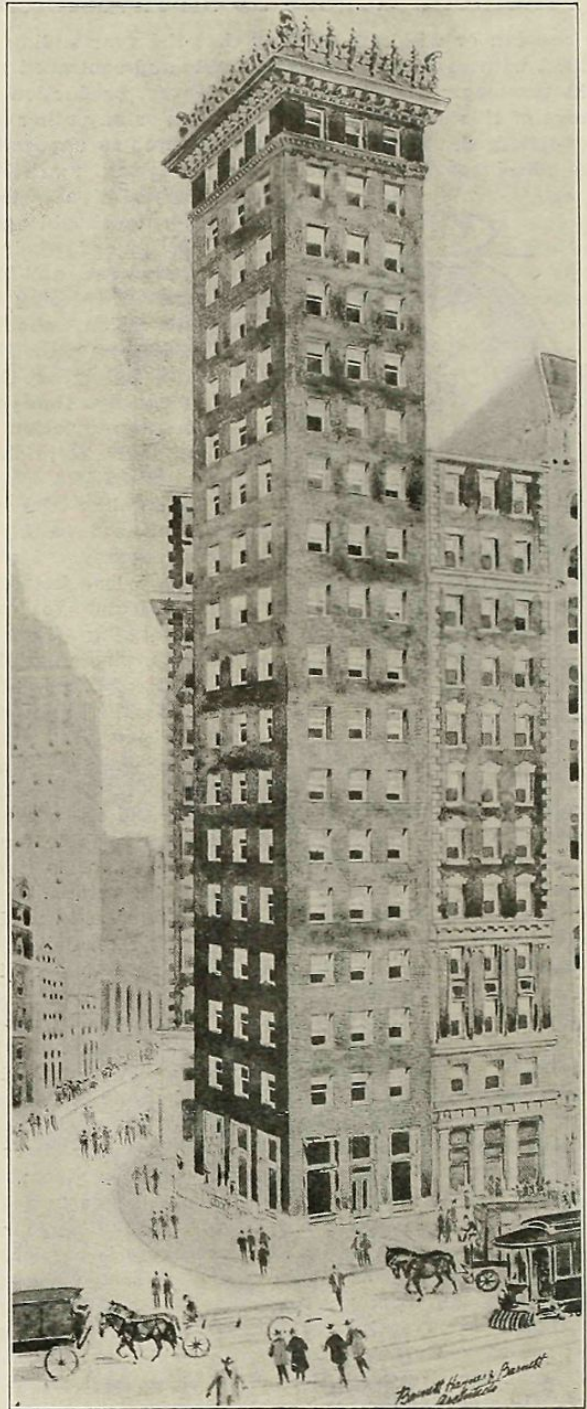
(d) Renting clerks, who canvass for new tenants personally and by letter. Should be persistent in their effort to effect leases and in following up inquiries, their motto being "Vigilance is the price of success." Arranging for changes in layout of offices, looking up tenants' references as to responsibility and desirability.

The making of sub-leases, where tenants fail, leave town, need more space, or for other causes, is often a source of trouble (in case of dispossess proceedings), and should be avoided as much as possible.

All complaints of tenants should come to the office and be referred to the proper department. Great care is needed in handling these complaints in order to avoid friction between landlord and tenant, as polite but firm conduct on the part of the management will often save the landlord considerable money and at the same time put the tenant in good humor.

Next to the office management comes the superintendent, whom we will consider for the present as the chief engineer, whose duties are to look after the engine room and entire steam, electric and machinery plant, and also to inspect all work done in care of the building. Cleanliness is a matter of first consideration, not only on account of health, but as adding to the general appearance of the building.

The engine room of a modern office building is located far below the street level, and resembles that of a large ocean steamship in its size and number and varieties of pumps, boilers, engines, dynamos, etc. A pneumatic cleaning plant, water filter and cooling system, carpenter shop and storeroom for supplies and extra partitions, etc., are all part of a complete plant. The



A COSTLY CORNER SITE—No. 1 WALL STREET.

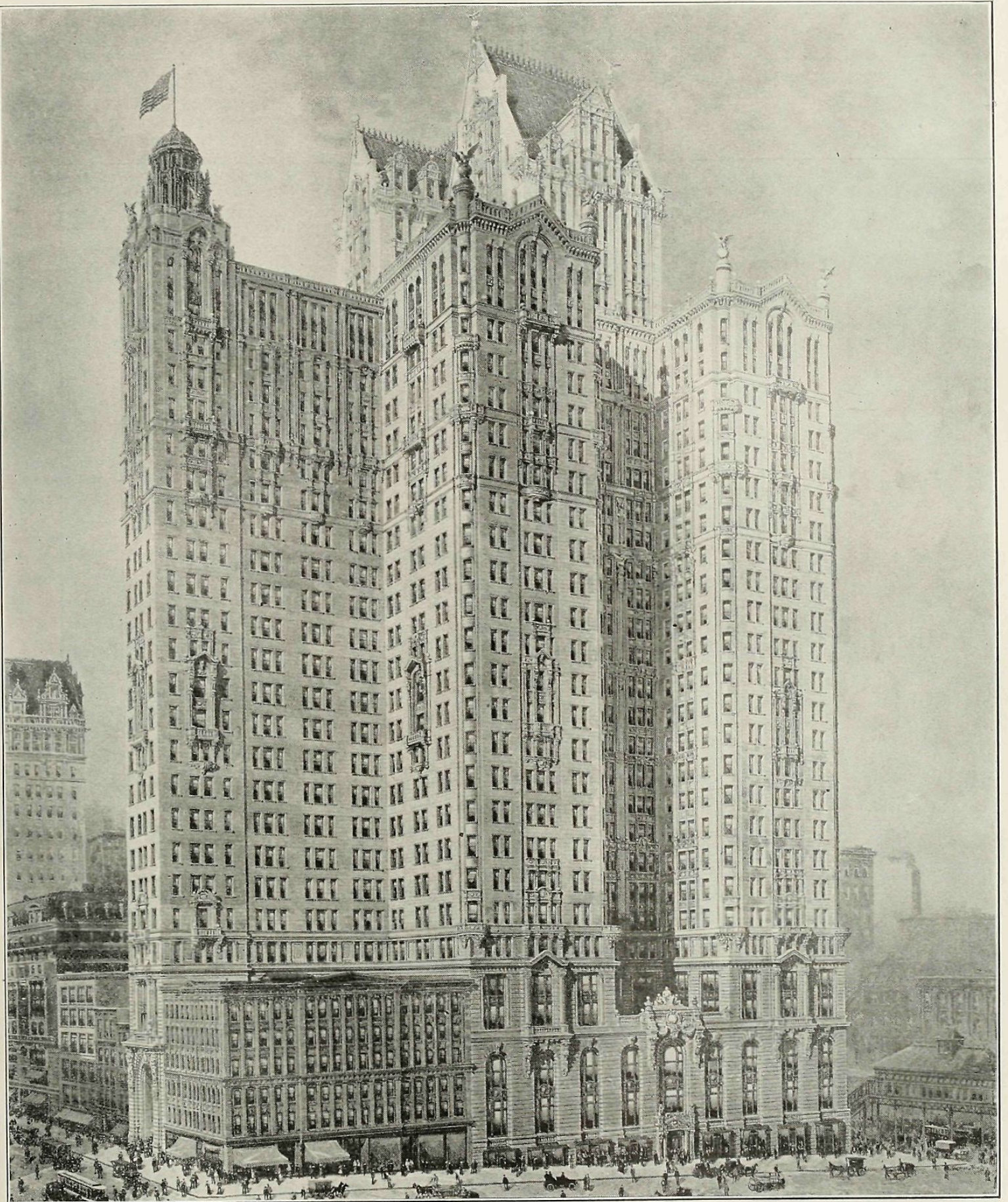
question of coal supply is a most important one in winter weather, as few buildings have sufficient space to store more than enough for one week's consumption. Light, heat and power are generally supplied from the building's own plant, though some take theirs from outside lines of steam and electric companies.

The great amount of space necessary to accommodate this department takes away from what was formerly known as the "basements" of stores, and to this extent is driving out of office buildings the retail stores. It is probable that in the near future this class of trade will be found located exclusively on the side streets.

The engine room force consists of assistant engineers (night and day), firemen (night and day), oiler, plumber and electrician; the number depending upon the size and character of the plant. Chief engineers often have their apartments in the building, generally a deck-house on the roof, so as to be always on hand in case of necessity. They also look after the fire hose and connections, and some instruct the porters in "fire drill."

The care and up-keep of the elevator system requires constant attention, as no other branch of the "service" of a building comes in for so much complaint and criticism as this one. Elevator runners are a source of worry and annoyance, as they must be polite and efficient and have good memories for names of tenants and come in contact with many varieties of passengers in their cars. Their hours on duty vary, but are on the average about ten hours per day. When one is sick or away for any cause a porter or extra elevator man is put on the car to take his place. "Breaking in" of a porter as elevator man is one of the disagreeable features, as he requires a "regular" man to instruct him, and often leaves the building as soon as he knows a little of the duties of the position to engage somewhere else as an "experienced elevator man."

Hallmen, or starters, are also watchmen, and patrol the building day and night. Porters and scrub women are under



CITY INVESTING BUILDING (in course of construction), Broadway, Cortlandt and Church streets.
Ready for occupancy May 1, 1908.

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111 Broadway - - - New York

Transacts a general business in the
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UNITED STATES REALTY BUILDING.

Showing also Broadway Elevation of Trinity Building.

United States Realty & Improvement Co., Owner.

George A. Fuller Co., Builder.

Francis H. Kimball, Architect.

the direct supervision of the janitor, or head porter. A carpenter also is kept as one of the force in some of the larger buildings. The porters are in the building all day; the scrub women from 6 to 9 a. m. and 5 to 9 p. m.

From the foregoing it will be seen that there are four objects to be accomplished by the agent before he can rest contented—first, he must have a successful location commercially; second, a successful building architecturally; third, tenants for all the offices who pay their rent promptly and have no complaints to make either in winter or summer; fourth, an owner who is satisfied as to the net income returned upon his investment.

Then only may he say "I have demonstrated the successful management of the modern office building."

J. S. DE SELDING.

The Upper West Side

Present Era Finds Builders With No Lots Upon Which to Increase the Supply of Dwellings.

EDWARD CLARK, "pioneer" of the West Side, before a meeting of the West Side Association on December 20, 1879, read a paper entitled "The City of the Future." In this paper Mr. Clark illustrated the lack of foresight by the original founders of the City of New York, the inadequacy of conditions for both commercial and residential purposes, and the importance of planning a city which would be appropriate 100 years hence. He referred particularly to the necessity of constructing apartment houses and dwellings adapted to the requirements of elegant house-keeping, which should be "Some splendidly, many elegantly, and all comfortably; that the architecture should be ornate, solid and permanent, and that the principle of economic combination should be employed to the greatest possible extent." He pointed out that the strip of land lying north of 59th street and west



GEORGE L. SLAWSON.

of Central Park afforded an excellent opportunity for the prosecution of such work. The same year Mr. Clark began to improve the north side of 73d street, Columbus avenue to Amsterdam avenue, with private dwellings, and the Columbus avenue corner with an apartment and store. A few months previous John D. Crimmins had begun the erection of some tenements at Ninth avenue and 63d street, and H. H. Cammann, the erection of similar buildings at Tenth avenue and 82d street. These three operations, the first of the kind on the West Side, permanently stamped the character of their respective localities, and right here we may place the real beginning of the West Side. The progress of improvement, however, was retarded by the hesitancy of builders. But this is not at all surprising when we recall that comparatively few crosstown streets had yet been opened; public improvements, such as grading, paving, flagging, water and gas mains were progressing slowly; on all sides were shanties and market gardens; transit facilities consisted of the Eighth avenue horse car line and the elevated railroad, which, prior to December, 1879, terminated at 104th street.

1880—THE BUILDING MOVEMENT STARTED.

In the latter part of 1880 the work of improvement was again taken up. During that year, besides the construction of some twenty-seven dwellings on the north side of 73d street, west of Columbus avenue, Mr. Clark, despite assurances from all sides of the fallacy of such an enterprise, began the erection of his long-heralded apartment house, the "Dakota," which at its completion in the latter part of 1884, was the largest apartment house of the character in this country, and which to-day is a creditable monument to its founder. The success attending this and other immediate undertakings, soon attracted the attention of builders and operators throughout the city, and, beginning with the year 1881, there was a gradual increase in the construction of dwellings, the production being most prolific in the years 1886, 1887 and 1889. The filling up of the East Side and the high prices established there, soon obliged residence seekers to look elsewhere and they were quick to recognize the attractions of the West Side, with its broad avenues and boulevards, its unrivalled natural beauty, the novel styles of archi-

ecture adopted, the superiority of the interior arrangements over the old-style house, and the many modern conveniences introduced. Thus houses met with rapid sale. Builders made substantial profits and went into one operation after another. Of great importance at that time was the liberality of financial institutions in making loans. Money was always forthcoming for any suitable improvement. During this period of construction had the financial institutions withdrawn their support or become more conservative in the amount of money which they were willing to advance in so new a section, it is questionable whether the high character of the improvements could ever have been maintained.

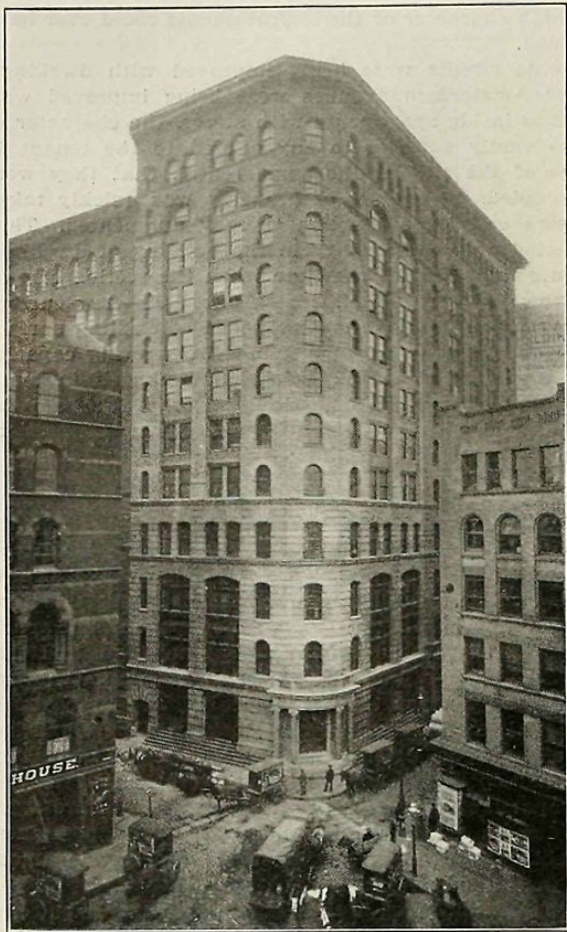
While the side streets were being improved with dwellings, Columbus and Amsterdam avenues were being improved with 5-sty corner and inside apartments with stores, the character of which was so vastly superior to any offered to the tenant in other sections of the city at the same rental, that they were soon fully occupied. This class of property was quickly taken up by investors and its production thereby augmented. Thus followed a period of great activity in the building of dwellings and apartments until just at the time when the section threatened to outgrow its transit facilities—about 1901—new surface lines were constructed and the motive power of existing surface lines changed and great advantage gained in carrying capacity and running time, and the West-sider found himself in touch with every possible business or social center of the city by means of four surface trolley lines with their many connections together with the Sixth and Ninth avenue elevated systems.

BROADWAY REVIVAL.

Although there was active building in progress all over the section, Broadway, as late as 1898, had been severely left alone. The erection of handsome residences along this avenue as first contemplated, was found to be impracticable. About this time there appeared in one of our leading newspapers an article which maintained that the 5-sty apartment must go, and that on the West Side the 7-sty apartment would supplant the 5-sty flat, as did the skyscraper the old office building in commercial districts. This article aroused considerable interest and had a powerful effect upon determining the future of Broadway, for builders and operators now turned their attention to that avenue, and apartments began to multiply rapidly. Here again success was due, in a great measure, to the liberal permanent loans obtainable, the West Side being a favored section among the loaning institutions.

Nor were they satisfied with the 7-story apartment, but proceeded to erect others of greater dimensions. Prominent among these is the Ansonia, erected at a cost exceeding \$6,000,000, which we do not hesitate to say is unrivaled throughout the world. Then there is the Apthorpe, the new Astor apartment hotel, now in the course of construction, estimated to cost several millions. Not only Broadway was benefited by this movement, but also Central Park West, where there are such apartments as Georgian Court, Livingston, Cascade, Cherboung, and Riverside Drive with the Turrets, Chatsworth and Hendrik Hudson. To return to Broadway, it is amazing to see what strides have been made along this thoroughfare when one reflects that less than ten years ago there was scarcely an improvement along that avenue. At the present time, excepting block fronts, there are barely a dozen available corners below 116th street. These corners and the block fronts represent for the greater part the most valuable property on the West Side, and are being held by estates not desirous of disposing of them, but if once sold, they would rapidly be improved. With the advent of the subway and the resulting advantages, residentially and commercially, it is difficult to predict when values along this avenue shall have reached their top notch. The increase, particularly in the proximity of subway stations, has been as much as 100 per cent. The commercial aspect is decidedly favorable. High-class retail shops, offices, garages, hotels and places of amusement are locating in great numbers. A point of special interest is at Sherman square, where there has been a complete transition. At one corner we find Acker, Merrill & Condit occupying the first story of an imposing apartment structure just completed at a cost approximating \$3,000,000; at the northwest corner, the Hotel St. Andrew; at the southwest corner, the Lincoln Trust Building, formerly the famous Colonial Club, now converted into a modern office building, and the southeast corner, formerly a school, has been leased by the Import Cigar Co. for twenty-one years at a rental aggregating \$300,000. This business expansion on the West Side originated at the Grand Circle, then proceeded to Empire square, has now reached Sherman square, and will not halt there. The block intersecting Sherman square, that is, 72d street, between Broadway and Columbus avenue, bids fair to participate in this commercial development. Situated as it is with a subway express station and the junction of two surface lines on the west, an elevated station and surface lines on the east, and being on a driveway which is the connecting link between Fifth avenue and Riverside drive, it is destined to become the site of smart retail shops catering especially to automobile and carriage trade.

Enhancement in value has not restricted itself to Broadway, but has penetrated the entire section under consideration, par-



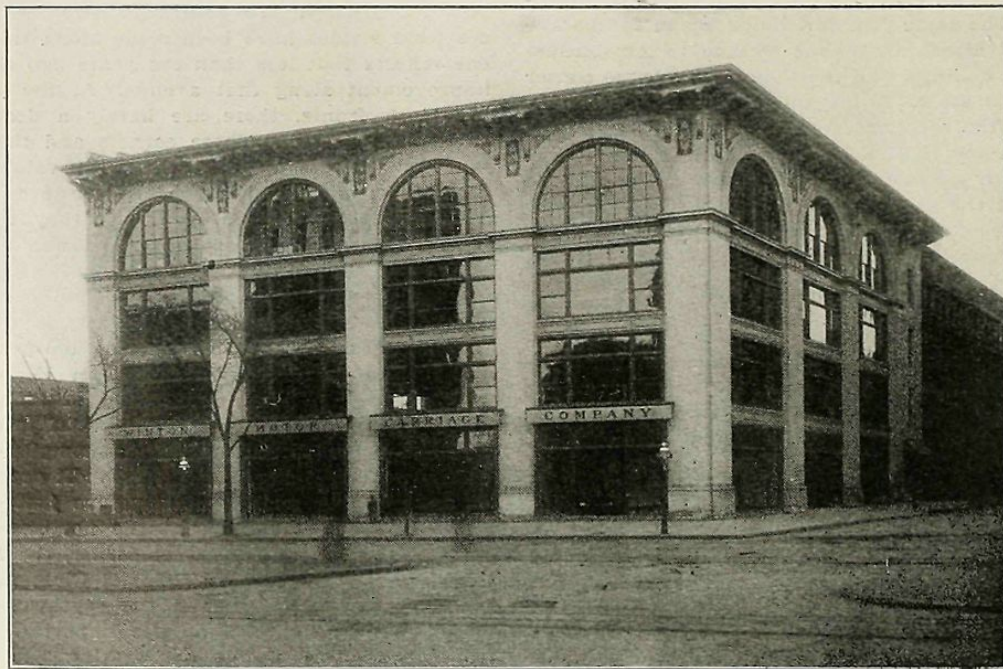
RHINELANDER BUILDING
William and Duane Streets
CLINTON & RUSSELL, ARCHITECTS

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WINTON GARAGE, Broadway and 70th Street
CHARLES A. RICH, ARCHITECT

ticularly the northwestern extremity, Cathedral Heights, which has, within the past five years, developed into a choice residential and institutional locality, attributable to the introduction of present transit facilities. In the section under consideration, we find almost every spot available for the building of private dwellings, south of 116th street, taken up. Builders have no lots upon which to increase the supply of dwellings, and the many purchasers brought by the subway are buying their dwellings from old holders at advanced prices. People are realizing the accessibility of this section and the increased inquiry is most noticeable. THE NUMBER OF AVAILABLE DWELLINGS FOR SALE IS SMALL, THOSE FOR RENT, EVEN SMALLER, WHILE APARTMENTS NEVER WERE SO READILY RENTED. We ascribe this to the fact that we are nearer to the great business and amusement centers of the city than residents in the Fifties, between Fifth and Sixth avenues; that the subway takes us from 72d to the Grand Central depot in five minutes, to City Hall in sixteen minutes, to Wall street in twenty minutes; that our transit facilities are superior to those of any other section of the metropolis, and lastly, that there is probably no greater or more charming residential section in any of the commercial capitals of the world, for none can boast of a Central Park West with its unobstructed view of Central Park, or a Riverside drive with its superb view of the Hudson.

SLAWSON & HOBBS.

Dated New York, December 11, 1906.

Auction Market in 1906.

THE market for improved property last spring was better than it has been for many years. Owing to the fact that the stringency in the money market this fall made it difficult for builders, speculators and operators to obtain building or permanent loans at reasonable rates of interest, there was not much activity in the auction market, especially in unimproved property. The market, however, for low-priced Bronx lots in the neighborhood of Williamsbridge and Wakefield, and along the White Plains road and Pelham Bay Parkway, has been excellent; and this section is to-day perhaps the most favored by speculators and home seekers, as every sale that I have held up there—and I have held most of them, such as the Schieffelin estate, Bathgate estate, Crawford estate, etc., has been very successful. The Drake estate property on Washington Heights, which I sold



BRYAN L. KENNELLY.

at auction last spring, was also very successful, owing principally to its nearness to the subway, which made it accessible to the lower part of the city; but at the present time, however, I am advising my clients and friends not to offer their unimproved property in the Dyckman section until mortgage conditions improve, as this property is now ripe for improvement by builders.

While well located improved property will sell in any part of the city, I, personally, am not encouraging any sales of real estate until after Jan. 25, when, with the two hundred million dollar dividend and interest disbursements, I feel that the conditions of our real estate money market will materially improve, with the prospect of Secretary Shaw depositing in the banks a substantial amount of the Government surplus, and Congress passing some currency reform measure, which I hope will be permanent, as recommended by our President in his message of a few days ago. All these things will tend, in the near future, to help relieve our money market.

A great deal of property has been offered at auction recently that should not have been offered, and, in many cases, reported sold when not sold; this, of course, has a very bad effect on the market generally and is very misleading to adjoining owners.

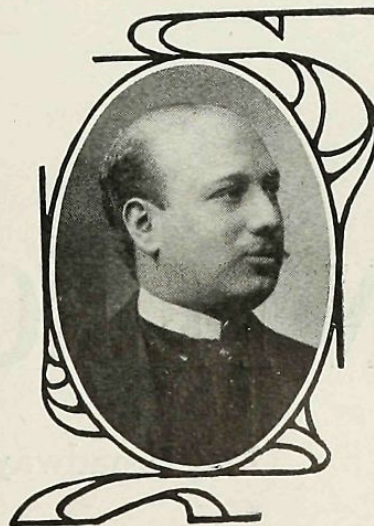
The real estate market is all right and will continue to improve steadily, and I look for a splendid spring auction business, and only ask to have it as good in 1907 as it was in 1906.

B. L. KENNELLY.

—Work is advancing rapidly on the 11-story building now in course of construction for Oppenheim, Collins & Co., at 33 and 35 West 34th st and 48 to 52 West 35th st. All of the steel framework is practically completed. The facade will be almost entirely of limestone and the structure will cost about \$500,000 when completed.

Demand for Lofts South of 14th Street.

THE demand for lofts south of 14th street has this year been better and greater than at any time in the past. This is especially true of the newer buildings, which have good, natural light and all the modern improvements. The demand for large, light lofts, containing 10,000 square feet of floor space and more, has completely outrun the supply. During



E. TANENBAUM.

the present season, I have received more orders for lofts of this description than it was possible to fill. The whole trend of our day is toward the concentration of industry. The modern, up-to-date merchant finds it necessary to apply this principle to the utilization of space, condensing his business to as few floors as possible, thus rendering personal supervision easier, and reducing the force needed for business of a given magnitude. If the entire business can be conducted on one floor, so much the better.

The question is asked: "What will become of the vacancies created by the tendency of certain trades to move north of 14th street?" The answer is simple enough, since the expansion of business is continually compelling importers and kindred trades further downtown to move steadily northward, together with the great number of out-of-town concerns eager to locate in the great metropolis, while their places again are quickly filled by the rapid increase of office buildings required by the large industrial concerns anxious to be represented in New York. Within the memory of many now living, the clothing trade of the city was located entirely in the district south of Canal street. Now it has gradually moved uptown and other trades have flocked into the downtown district to fill the vacancy. History is simply repeating itself with reference to other branches of industry.

Inasmuch as New York City is recognized to be the centre of trade of the United States, each year finds a greater increase in the number of out-of-town concerns locating here. Rentals may be expected to remain firm, or rather to ascend steadily, as is the case this year. The tendency is especially marked in the case of large lofts. With the population of the city constantly increasing at the rate of 150,000 a year, no other result could be expected.

E. TANENBAUM.

Fifth Avenue Transformation.

The year 1906 will go down in Real Estate annals as being one of marked activity and advancing prices on Fifth avenue and the adjoining cross streets. This activity has extended the entire length of the new business section, from 27th to 48th street, although south of 34th street and north of 42d street

have perhaps disclosed the more important developments. The erection of the Brunswick Building on the old site of the Brunswick Hotel at 26th street has acted as a stimulant to that section and is, undoubtedly, indirectly responsible for the sale and final improvement of the old Addicks corner at 28th street; also the Lyons Building now under course of construction at No. 236-8 Fifth avenue. Two other prominent buildings in this section are now being built, one at the Southeast corner of 32d street, the other a 16 story building opposite the Waldorf.



J. P. SPEYERS.

It is also understood that plans are to be shortly filed for a mercantile building at 286-8-90 Fifth avenue. Prices obtained for ground in this locality show marked advances over the year 1905, lots readily bringing from \$12,000 to \$14,000 a front foot.

(Continued on Page 162.)

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Federal Bldg., Indianapolis, Ind.; Rankin & Kellogg, Arch.	West Street Bldg., N. Y. City; Cass Gilbert, Arch.
U. S. Custom House, N. Y. City; Cass Gilbert, Arch.	Post Office and Office Bldg., Grand Central Terminal, N. Y. City; Reed & Stem and Warren & Wetmore, Arch.
New Hall of Records, N. Y. City; John R. Thomas, Horgan & Slattery, Arch.	

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U. S. Post Office Bldg., Brooklyn, N. Y.; U. S. Supervising Architect.	Carnegie Library, Allegheny, Pa.; Smithmeyer & Pelz, Arch.
Germania Bank Bldg., N. Y. City; Robert Maynicke, Arch.	Federal Bldg., Cleveland, Ohio; Arnold W. Brunner, Arch.



John Peirce Co., Builder.

THE WEST STREET BUILDING.

Cass Gilbert, Architect.

We look for higher prices in this section on account of the unusual transit facilities offered, a condition not enjoyed by that part of the avenue further north.

Between 34th and 42d streets the activity has not been so great, but this is explained by the fact that this property is now, I might say, out of the market. We have seen the opening of the new Altman store at 34th street, the new McCreery store in 34th street just off Fifth avenue and also the acquiring of sites by three of the prominent Trust Companies of the city; the New Netherlands Trust Company at the Northeast corner of 36th street, the Union Trust Company at the Northeast corner of 38th street and the Farmers' Loan & Trust Company between 40th and 41st streets.

The advent of these prominent financial institutions only emphasizes the strength and stability of this new business area, 34th street between Fifth avenue and Broadway has perhaps shown more marked development than any one block in the city. Prices have nearly doubled and the demand by the merchant for space brings out the fact that there is practically nothing left to offer.

It is impossible to predict the future of values or conditions in this block, but it will undoubtedly enjoy a higher standard than even 14th street or 23d street enjoyed in their palmy days.

North of 42d street there have been some very prominent sales and building operations, some of them being the erection

and opening of the new Day & Night Bank Building at the corner of 44th Street, the buildings now under course of construction at the northwest corner of 45th street, the southwest corner of 46th street and the southwest corner of 47th street.

To illustrate the marked advance of prices in this section, we might cite the case of one building which has sold four times in the last three years, the first sale being made at \$470,000, the next at \$485,000, the next at \$625,000 and the last sale in the neighborhood of \$700,000. I might also mention the sale of the Lotus Club at \$15,000 a front foot, as being a record price for this locality.

The question is now being asked on all sides, "When are prices on Fifth avenue going to reach their top?" It was predicted two years ago that we had seen the limit of value and that the merchant could not afford to pay the rents then demanded. Since then, rentals have steadily advanced, until as high as \$18,000 a year has been paid for a single inside store, and it is no longer a question of what the landlord is asking for his space, but for the desired location, the merchant is willing to pay nearly any price.

Comparing, if such a comparison can be made, prices of store rentals on Fifth avenue to-day with Old Bond street and Piccadilly in London and Avenue de l'Opera and Place de l'Opera in Paris, the same relative streets in those cities, we find that Fifth avenue rentals, figuring on a square foot basis, are about

(Continued on Page 163.)

AGENTS

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20% higher, although the buildings in Paris and London are very old, the stores very much smaller, and the area much more limited than on Fifth avenue.

Fifth avenue property has been taken out of the hands of the weak holder and speculator and has been acquired by the estates, the large investors, and the merchants. The pieces that can be bought at the present time are few and far between, and it is not now a question of what property is in the market, but more a question of who can be induced to part with his or her holdings; except at figures far above the present range of prices. This condition will undoubtedly be the cause of fewer transactions being recorded as time goes on. We may see a general period of trade depression and falling off of prices throughout the country, but I do not think that Fifth avenue property, held as it is to-day, will suffer perceptibly.

The question is also often asked, how far up Fifth avenue the march of the business house will extend. It is understood now that very strong pressure is being brought to bear on the Trustees of Columbia University to release the fees on the blocks from 48th to 51st street, but there are so many owners in these blocks, of our millionaire class, who will vigorously oppose any encroachment of business, that it is doubtful if in the very near future, we will see this section very greatly disturbed.

The movement on foot to compel the removal of all stoops and encroachments on Fifth avenue and widen the roadway 14 feet will undoubtedly be brought to a head soon, and I find that the general opinion of the property owner, and merchant is very much in favor of this change. I might mention the case of two owners whose property is altered for business, but who still retain their stoops and areas. These men, although it would mean an expense of thousands of dollars to make the necessary alterations to comply with the law, are heartily in favor of the changes, their idea being, that the value of their property would be much enhanced and they would get back many times over the money expended in the alteration.

The high rents and high ground values on Fifth avenue at the present time have caused many merchants to seek positions in the side streets, adjacent to the avenue.

The streets from 27th to 34th, between Fifth avenue and Broadway have for some years been business streets. Rentals are good and prices have advanced, unimproved lots selling readily at from \$4,500 to \$5,000 a front foot.

Between 34th and 42d streets and Fifth and Sixth avenues, we have seen in the past year the first modern improvements. Loft buildings are being erected in 37th, 38th, and 39th streets and we can safely predict that in a few years these blocks will be entirely given over to the merchant. Prices here have also advanced until at the present time, \$5,000 a front foot in the center of these blocks is the general price quoted.

J. B. SPEYERS.

(Of Tucker, Speyers & Co.)

1906 in Washington Heights Real Estate.

THE year of 1906 has been in many respects one of the most remarkable in the history of real estate on Washington Heights, and a careful and dispassionate review of its progress must result in a feeling of satisfaction to all who have the well-being and prosperity of this section at heart. The years immediately following any period of great activity and phenomenal

increase in land values in any particular section must necessarily be those to which such values are put to their most severe test. It has been almost without precedent, not only in Western cities, but also in those near at hand, that so-called booms are followed immediately by long periods of absolute inactivity and great recession in prices. The tremendous market of the latter part of 1904 and the beginning of 1905—that movement which was by no means a boom in its usually accepted sense, but rather an



CHARLES GRIFFITH MOSES.

awakening and a realization on the part of the real estate world of the tremendous possibilities in the development of the upper part of Manhattan Island—is too fresh in the memories of the readers of this paper to call for more than passing mention. The question that was foremost in the minds of all of those who are students of real estate conditions and who, by means of long experience and ripe judgment, have the power to see beyond conditions which sometimes blind the majority was whether this great increase in prices was also as great an increase in actual values. And now that the year of 1906 has drawn to its close we are in a position to say and to prove conclusively how well-based and how void of inflation the rise in values on Washington Heights was.

The summer of 1905 saw the beginning of the greatest building activity ever known in New York, and in this Washington Heights had its proportionate part. The prices of materials went higher and higher, but the builder was undismayed and the filing of plans went gaily on. In the beginning of 1906 many of these buildings, which were apartments of all descriptions, were completed and were ready to be subjected to the final test. Would they rent? The real estate man of average experience hardly expects to find many tenants during the months of January, February and March, and there was grave apprehension that most of the buildings completed during those months would stand untenanted for a long period. To the surprise of all, however, the contrary proved to be the result, and renting during the winter was so brisk as to be, to my mind, nothing short of phenomenal.

And not only was the demand for new flats active, but what was far more encouraging was the fact that there was little difficulty in maintaining and in some instances exceeding the rent schedules originally laid out by the builder. As the year developed it followed naturally that those forces which influenced the entire real estate situation made themselves felt on Washington Heights as well as elsewhere. And as the money market grew tighter active trading was curtailed here as in other parts of the city. The fact remains, however, that there was and is to-day a healthy demand for properties that show themselves to be satisfactory investments. New flats were bought all through the spring months, and there was considerable dealing in houses built under the old law. The demand for houses of this kind is always with us, for the reason that the investment required for their purchase is so much less than that of the new-law house. It is, I think, safe to say that there are practically no vacancies in old-law houses on Washington Heights. Rents have been maintained, and in some cases raised, and active dealing in them has almost ceased, owing to the fact that owners are finding them so profitable an investment that they can see no reason for selling.

When the anticipated summer dulness came it found Washington Heights in splendid condition to withstand it. Land values had been tested and proven. The rents obtained in the new flats had justified the prices paid for the land, and while there were few sales of vacant plots made, this was an additional proof of the stability of values. In any neighborhood where prices have been raised too high there are always many who are forced to dispose of their holdings either at cost or less. There has been nothing of this nature on Washington Heights. No plots are being offered at less than the market price, and if any were they would be quickly snapped up by keen speculators.

In the early part of the fall the situation on Washington Heights was similar to that all over New York. Tight money had its effect. Builders found great difficulty in getting permanent loans, and it was feared by some that there might be many foreclosures. But the class of builders operating on the Heights is so strong and the houses have been bringing such good returns that this has not come about. The proportion of foreclosures has been so small as not to have affected values in the slightest degree. Now that money has become easier and some of the large institutions are taking mortgages again there has been a very much more active aspect to the market.

One fact must be very patent to everyone who has made any study of conditions on Washington Heights, and that is that the demand for property has been for the best. Every builder who has put up a good building, well constructed and laid out, has had little difficulty in filling his house at perfectly satisfactory rents. I have in mind one builder who put up three apartments in the upper part of the Heights in a street some blocks from a subway station. These houses have been filled since completion and within the last ten days two have been sold at good prices. This is merely a typical instance, and many more of a like nature could be quoted. Where there have been many vacancies the reason can generally be attributed to poor construction and lay out. It is, however, in the success of the elevator apartment house that the future development of the Heights can be foretold. Broadway and many of the adjacent side streets have been built up with high class elevator apartments, all of which have rented easily, and in numerous cases having waiting lists of prospective tenants. The success of this character of improvement has been so pronounced that I believe there is nowhere in New York at the present moment so profitable a field for the builder and investor as that of the elevator house with apartments ranging from six to eleven or twelve rooms on such streets as Broadway, Fort Washington avenue and Riverside Drive.

Looking back over the year 1906, it seems to me that not only we who are specially interested, but the real estate world at large, may justly feel well satisfied with the year on Washington Heights. We have passed through the fever heat of a great activity in land; we have seen the values rise in some instances almost 100 per cent.; we have seen this land improved with buildings, most of them of the class which their surroundings call for; we have seen these buildings tenanted and sold, and that during a year which has not been remarkable for activity in real estate; and we are in a position to look to the future complacently, with the firm confidence secure in our minds for the onward development of this great section.

CHARLES GRIFFITH MOSES.

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Five Bell Telephone Buildings in Philadelphia

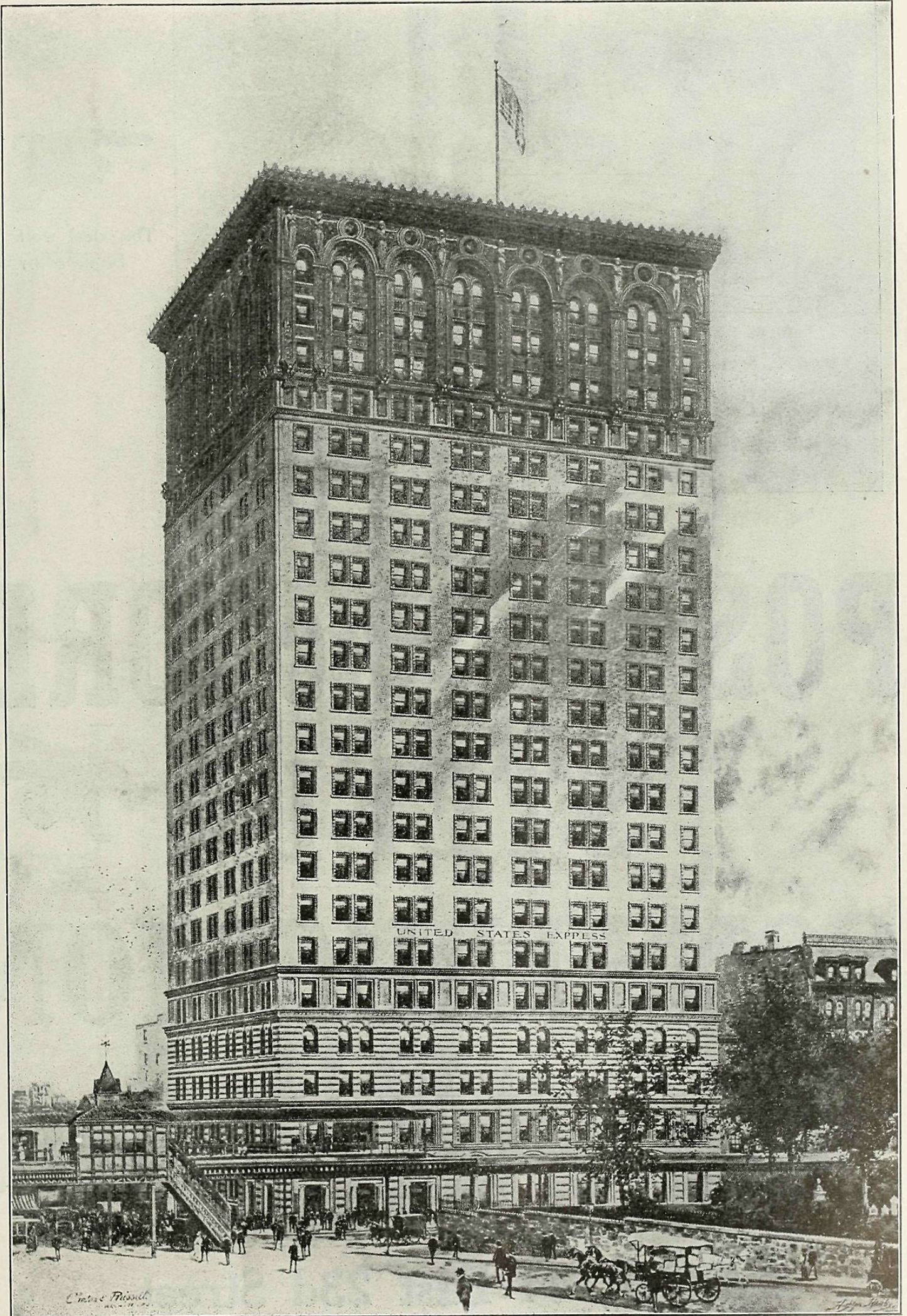
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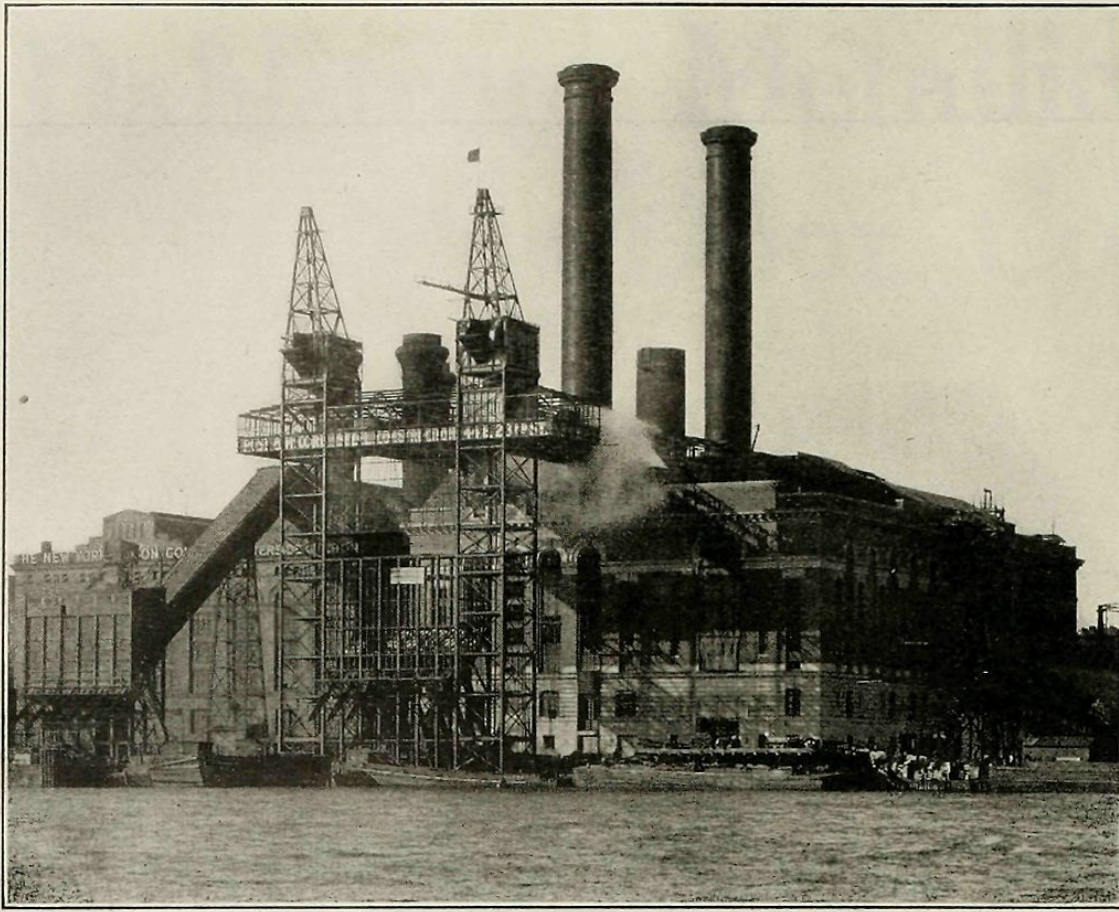
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We are furnishing the Steel Work for the Metropolitan Tower, which is
illustrated on another page



CORTLANDT STREET VIEW—CITY INVESTING CO'S BUILDING.

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Manhattan's Highest Skyscraper.

METROPOLITAN INSURANCE COMPANY'S TOWER WILL OVERTOP THE SINGER BUILDING—PLANS COMPLETED BY MR. LE BRUN.

WORKING plans have been completed by Napoleon Le Brun & Sons, architects, of No. 1 Madison av, for the highest tower building in Manhattan, to be erected on the southeast corner of Madison av and 24th st (across the street

from the uptown office of the Record and Guide), which will complete the Metropolitan Life Insurance Co.'s home office building, on the block bounded by Madison and 4th avs, 23d and 24th sts. This plot measures 75x150 ft., the site being that of the old Madison Square (Parkhurst) Presbyterian Church. The Hedden Construction Co., 1 Madison av, is the general contractor; the American Bridge Co., 42 Broadway, will furnish the steel, and Messrs. Post & McCord, of No. 24 East 23d st, have taken the contract for the erection of the structural steel. Steel columns weighing between 800 and 900 tons will be required in the corners of the tower, and at the thirty-first story eight-ton steel columns will be placed.

Second highest of New York buildings will be the tower of the Singer Building, at Broadway and Liberty st, which will rise 593 t. The Washington Monument is 555 ft.; the Philadelphia City Hall, 547; the Cologne Cathedral, 515; the Pyramid of Cheops, 486; the Antwerp Ca-

thedral, 476; the Strasburg Cathedral, 474. The third highest building in New York is the West Street Building, 404 ft. The Park Row Building is 382.

The entire steel frame will be a regular bridge job, bolt-punched and reamed.

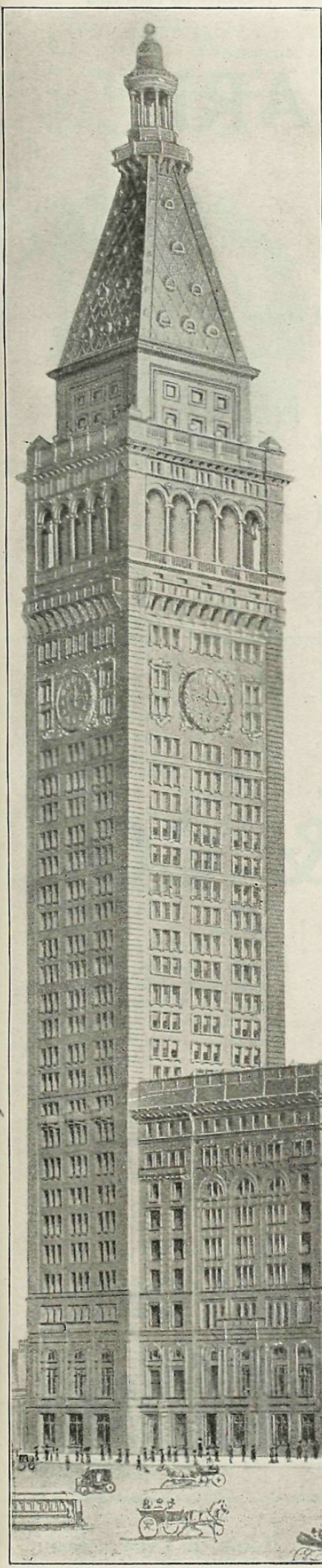
The building operations of the company on the block commenced in May, 1890—when the five old brownstone mansions at the corner of Madison av and 23d st were demolished and excavations were started. By the spring of 1893, the building was sufficiently advanced for the company to move in, and by the summer of 1894 this first section of the building, with a frontage of 125 ft. on Madison av and 145 ft. on 23d st, was completed. The increasing business of the company required in 1895 an addition in 24th st, 115x100 ft. in area, and in 1898 a 2-sty extension with a frontage of 180 ft. occupying the centre of the 23d st half of the block.

The next operation, started in 1901, was an important one, and extended the building for its full height to and around the corner of 4th av and 23d st, and included the sites of the old Academy of Design and of the Lyceum Theatre, as also some 3-sty brick structures on 24th st, adjoining the first extension of the "Metropolitan" on that street. The building on the plot, 60x100, at the corner of 4th av and 24th st, was finished last May, leaving only the Parkhurst Church site unoccupied by the company. Up to this point the crowning cornice and all the horizontal lines and features of the building have been carried around the block at the same levels, and with a monumental sweep and nice balance of parts that the size of the block, 425x100 ft., and the height of the building, 165 ft. above sidewalk level, rendered possible.

The company occupies over 60 per cent. of the present building, including the annex for its home office purposes; and for the convenient transaction of its business required more space on the different floors, which the Madison av corner will provide. This corner furnished an opportunity to supply future needs of the company's office force by increasing the height of the building, and meanwhile, until the occupancy for this purpose becomes necessary, to increase the rental returns. It has been decided, therefore, to complete and crown the work with a tower. It will be probably the highest and most massive structure of the kind in New York City, and indeed, up to the present time, in the entire world. It may be noted how ideally fitting is its location, opposite the open square overlooking the junction and beginning of the two busiest and most important streets of Greater New York.

The pure, early Italian renaissance style of the main structure will, of course, be preserved throughout, the tower in its general design and outline belonging to the type of the Italian Campanile of the period. It will rise from a rich base, continuing in line and detail the general features of the four lower stories of the main building. Above the fourth story the design of the shaft of the tower will be severely simple, consisting of three groups of triple windows on each side, with heavily moulded and deeply recessed jambs; this treatment to extend through twenty-one stories without interruption other than a course of projecting marble balconies at the level of the main cornice of the main building, whose projection will

(Continued on Page 173.)



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FROM MANHATTAN TO SUBURBS SUBWAYS UNDER CONSIDERATION

By GEORGE S. RICE

COMPARATIVELY few realize the magnitude of the problem entailed in attempting to furnish transit facilities adequate for this great city, due to the constant growth of its population and the steady expansion of each borough. It is not generally known that over three-quarters of the population are compelled to travel by the various railroad systems, surface, elevated and

subway lines, and this mainly in going to and from their places of business to Manhattan from all the boroughs, which large travel, represented by single fares, amounts to between three and one-half and four millions of passengers daily. Of this number the four elevated lines have on one special day carried 935,000 passengers and the subway, but two years in operation, carried on the same day nearly 585,000 passengers, or in the ratio of about four passengers to seven passengers during the same time.

Realizing the demand for increased facilities, the Board of Rapid Transit Railroad Commissioners took under consideration two years ago the question of new routes and extensions, and, as a comprehensive plan to meet all possible requirements, finally adopted in May, 1905, nineteen specific routes, covering about 165 miles, principally subways, and involving an expenditure estimated at about \$300,000,000, to be constructed as traffic demands require. In conjunction with the Board of Estimate and Apportionment, the Rapid Transit Board has now authorized the letting of contracts for what are considered at present routes most desired. Of this series of routes one is the Lexington avenue route, a line on the east side of Manhattan, extending from the Southern Boulevard, in the Borough of The Bronx, to the Battery. Another route extends from Woodlawn, down Jerome avenue to Harlem River, thence through Eighth avenue and Seventh avenue on the west side of the city to the Battery. Direct connection by stations will be made by the Lexington avenue route with the New York Central Railroad and by the Seventh and Eighth avenue line with the Pennsylvania Railroad, these two railroads at present being engaged in making extensive improvements in Manhattan.

Almost ready to be put in contract form is also the so-called Tri-Borough route, which extends from Pelham Bay Park, in the Borough of the Bronx, through Westchester avenue to the Harlem River, thence via Third avenue to the Battery, with a connection with the new Manhattan Bridge to Brooklyn, thence via Fourth avenue to Fort Hamilton, with a branch to Coney

Island. Another of these routes is a line extending from the end of the present subway at Bronx Park to the northern part of the city through White Plains road.

A route which has been laid out, but which unfortunately has not been able to be finally determined upon by the Board on account of delays in obtaining the consents of abutting property owners, is the connection with Brooklyn by a loop line. This connection is of great importance, and the Board, recognizing the necessity for the same, is doing everything in its power to get this route into contract form, as, in a great measure, it will relieve the present congestion at both the Brooklyn and the Williamsburg bridges.

New York City is doubling its population practically every thirty years, and the travel doubles itself about every twelve years. For the last twenty-five years New York has not had the facilities for travel which it should have had, and at the present time the traveling public is very much inconvenienced in every direction. No matter whether one travels by the ferries, the bridges or by any of the railroads in the rush hours, he is bound to meet congestion on almost every line extending through and out of the city.

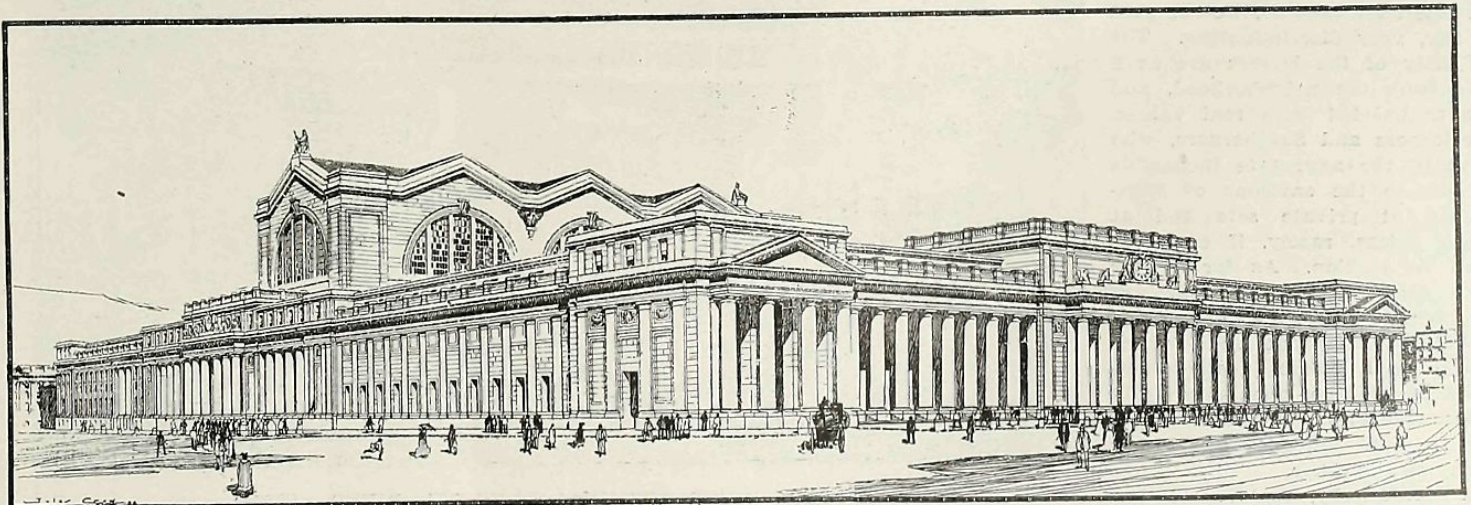
GEORGE S. RICE,

Chief Engineer of the Rapid Transit Railroad Commissioners.

GOVERNOR Hughes still insists that the proposed new Rapid Transit Commission should be appointed by himself rather than by the Mayor, but the only reason which he can give for a State Commission is the fact that in some instances, such as the Portchester R. R., the lines coming under the jurisdiction of the Commission have a part of their mileage outside of the city. But it might just as well be argued that it ought to be an inter-state Commission, because the New Jersey trolley companies propose to operate a tunnel into Manhattan and a subway under its streets. It would be perfectly simple to plan the constitution of the State Railway Commission and the local Transit Commission so that they could have, as it were, a co-operative jurisdiction over roads such as the one which the Portchester Company is building. Surely the reason which Mr. Hughes gives is a very trivial one compared to the startling character of the innovation he proposes. New York is not accustomed to being governed by Boards appointed by the Governor of the State; and it will not take kindly to the change. After many years of agitation the power of appointing the Rapid Transit Commissioners was finally conferred on the Mayor and there it should remain. The only possible result of persistence by Governor Hughes in his idea of a State Commission will be the failure of his plan for a Rapid Transit Commission with really sufficient powers to guard the interests of the people of New York in economical and efficient means of communication.



GEORGE S. RICE.



PENNSYLVANIA RAILROAD STATION—7TH AVENUE VIEW.

George A. Fuller Co., Builder.

McKim, Mead & White, Architects.

The Suburban Auction Market

THE results of the various auction sales of vacant lots in the boroughs of Brooklyn, Queens, The Bronx and Richmond during the year 1906 have been generally satisfactory, but so far as the total number of sales is concerned several years in the past present much better records. This statement may seem surprising, in view of the unprecedented speculative activity in the four outlying boroughs during the first half of the year. The reason, however, is apparent, as the owner of a large tract of vacant land could, in the majority of cases, sell his property in bulk for more than it would bring under the hammer in lots. Speculation in acreage at private sale has been rampant, and has included the good, bad and indifferent. Indeed, this speculation has been relatively greatest in the most inaccessible and sparsely settled locations, particularly in some sections of Richmond and Queens, the reason being that the apparent cheapness of properties so located has appealed to outside speculators, who reason that "any old thing," as long as it was within the limits of the City of New York, could be made to sell.

Now, on the other hand, if a large tract of land is to be successfully disposed of at auction in lots, the property must be of relatively high character; it must be quickly and cheaply reached from the business centers of Manhattan; it must be in or contiguous to some local center of population and industry, and it must have water and gas mains, either throughout the property or where connections may be inexpensively made. The owner, moreover, must be conservative in his ideas of value. There are other improvements and advantages which the property should possess, but the above are the essentials.

The truth of this proposition is amply demonstrated by the auction sales during 1906. On the theory that any lots within the city limits could be sold at auction in such a bull market, several sales were attempted in remote and inaccessible locations, and the result in every instance was a dismal and costly failure. Conversely, sales where the lots possessed the essentials we have enumerated were successful, and as a rule good prices were realized.

During the year the more prominent auctioneers received many visits from owners of large properties who wished to arrange auction sales, but who expected that their respective holdings would bring about as much as similar properties were retailing for at private sale; this, too, despite the fact that these latter properties were probably being sold at relatively enormous expenses for commissions to soliciting agents and for newspaper and other advertising. It certainly speaks well for the auctioneers as a whole that few, if any, sales of this character were attempted. If we will be pardoned for referring to our own business, we may say that we have probably refused since the 1st of last January at least fifty such auctions.

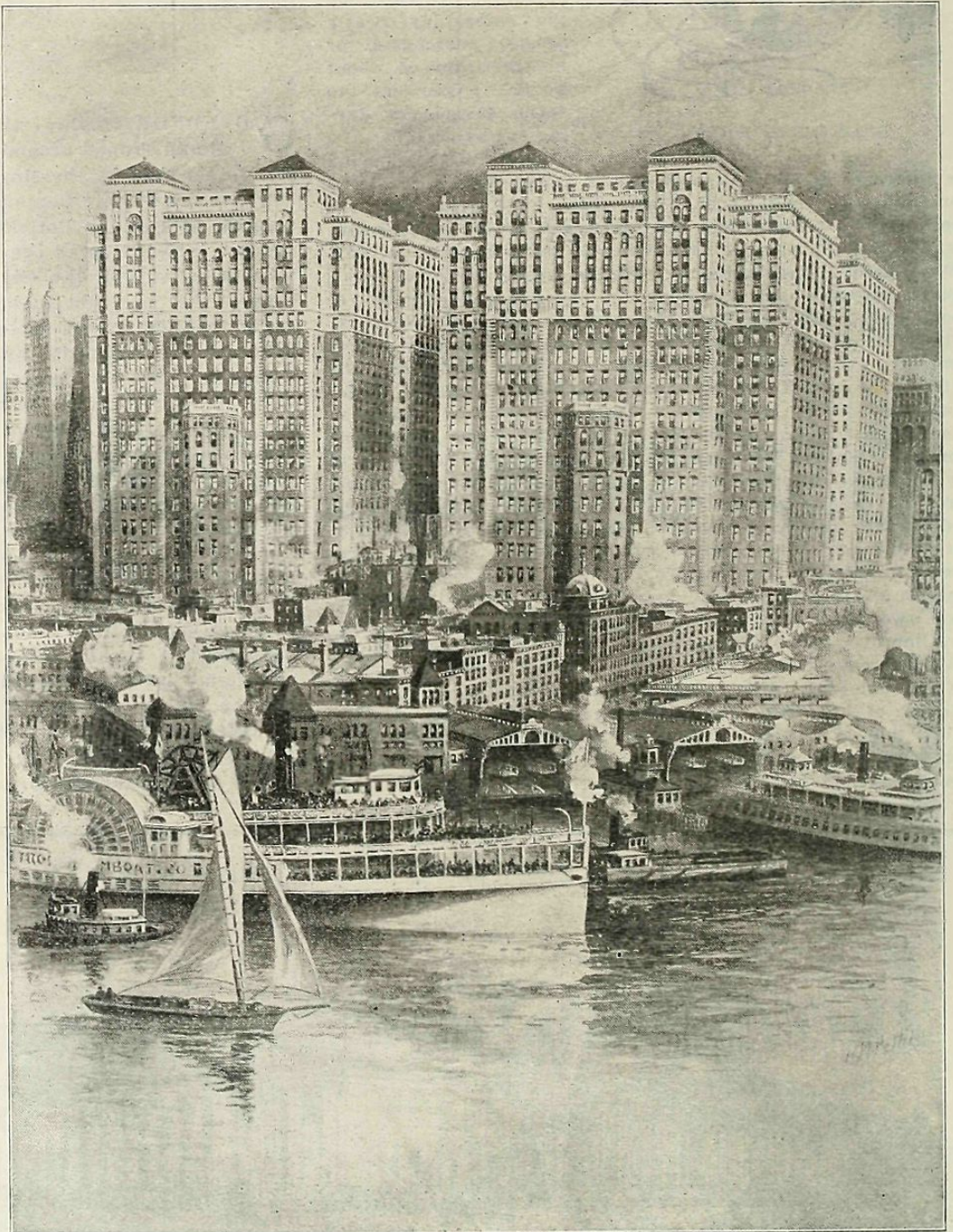
The people who attend a large lot sale have become, we are glad to say, very discriminating. The majority of the buyers are as a rule from the neighborhood, and are acquainted with real values. Westerners and Southerners, who have in the aggregate thousands of lots in the environs of Manhattan at private sale and at fancy prices, rarely, if ever, attend an auction. As far as our own sales during the year are concerned, the purchasers have been divided about equally between real estate dealers and builders on the one hand and small investors and those intending to build for their own occupancy on the other.

A noteworthy feature of the year has been that for the first

time in many years there has been an active auction demand for well-located lots in the Borough of Richmond. A number of successful sales have been held. We ourselves disposed of, in four sales, about 600 lots, all we had to offer; and although we would not consider this anything out of the ordinary in the boroughs of Brooklyn and Queens, these sales were the most successful held on Staten Island since 1890. About 70 per cent. of the buyers were residents of the Borough of Richmond, most of the remaining 30 per cent. being from Manhattan. The prices realized, although relatively low, considering the character of the property, were more than we had expected. The improved ferry facilities, the establishment of several enormous manufacturing plants and the fact that the Borough President is acquainted with local conditions and is alive to local needs, point to a better and more lasting demand for well-located property than has been heretofore the case.

The great advantage in selling a large number of lots at auction is the economy. For instance, during the past year the average cost of advertising and conducting our own sales, exclusive of the physical development and of our commissions, was less than 1½ per cent. of the total amount realized. Of course, this percentage varies. In one case last spring, where we sold about 200 high-grade Brooklyn lots, the expense was within a few dollars of one-half of 1 per cent., and yet this particular sale was very extensively advertised. The disadvantage of an auction is the uncertainty of prices. In many instances the property brings more than the auctioneer can reasonably anticipate, judging from other sales in the neighborhood, but in some instances it brings less. As regards the auction branch of our own business during the year now ending, we are perfectly satisfied, both with the number of sales held and the prices realized; and we trust that the new year will show equally favorable results.

JERE. JOHNSON, JR., COMPANY,
Remsen Johnson, President.



HUDSON RIVER TERMINAL BUILDING—RIVER VIEW.

Geo. A. Fuller Co., Builder.

Clinton & Russell, Architects.

Large Transactions of the Year and Their Effect.

PROBABLY the year 1906 was the banner one for large transactions in real estate. Sales of a million dollars and over have been so common as almost to cease to attract special attention. It is not many years ago when a sale of two hundred thousand dollars was regarded as a very large transaction, while to-day one of four millions causes no extraordinary excitement.



HERBERT A. SHERMAN.

The most important sales that have occurred were the Stewart Building, about \$4,000,000; the Lord's Court Building, 27 William street, at nearly \$3,000,000; the Broadway Tabernacle, about \$2,500,000; the Altman store, at 6th avenue, 18th and 19th streets, about \$2,500,000; the Coal and Iron Exchange, southeast corner Liberty and Church streets, about \$1,500,000; Proctor's Fifth Avenue Theatre, about \$1,000,000; 5th avenue and 18th street, about \$1,500,000; 160-164 Broadway, about \$1,000,000; 58-62 Broadway, about \$1,000,000; the Union Dime Savings Bank, Broadway and 32d street, about \$1,000,000.

Most of these properties have been sold for improvement. One hundred and sixty and 164 Broadway will be the site of the Lawyers' Title Insurance Company Building; the Coal and Iron Exchange site will have a 25-story building; the Consolidated Exchange, 58-62 Broadway, is in the hands of a trust company and was bought for investment and their own use; the Broadway Tabernacle plot is being improved with a 12-story building; the 5th avenue and 18th street corner was bought as a permanent investment; the Stewart Building site will, in all probability, eventually have to be improved with a large building. Lord's Court, a 19-story up-to-date office building, is the first office building sold to a private investor; the few other sales of office buildings have either been trades to corporations or speculators.

Possibly only two or three of the parcels named have been sold to speculators. This indicates the willingness of large capitalists to put their money into New York real estate and the withdrawal of many of these parcels permanently from the market narrows it for those who may wish to follow the

example of this year's buyers. On the other hand, the owners who have disposed of these large holdings and made substantial profits are very likely to turn their money back into real estate in which they have been so successful, feeling that it is safer than other investments, some of which are under fire by the courts and the National Government. The history of these large transactions as well as that of the small ones tends to confirm the view that there is no safer or better investment in the long run than Manhattan real estate.

HERBERT A. SHERMAN.

Manhattan's Highest Skyscraper.

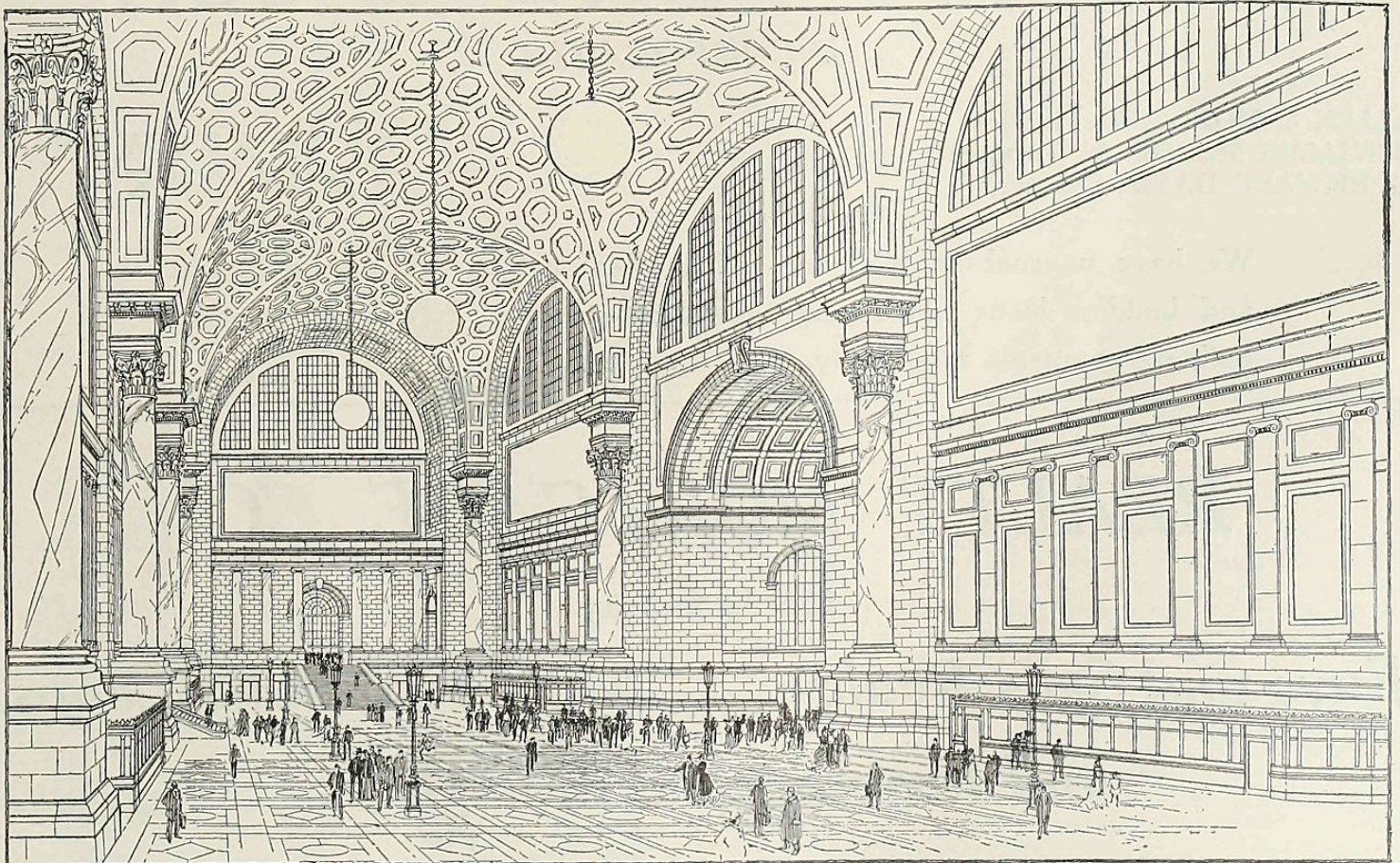
(Continued from page 169.)

have the effect of continuing the line of strong shadow of that cornice without interfering with the upward trend of the piers and heavily rusticated angles of the tower. At the 21st, 22d and 23d stories, or 334 ft. above the sidewalk, will be a great clock with dials on each front 25 ft. in diameter, hands 12 ft. and figures 4 ft. long—which should be visible and give Metropolitan time to New Yorkers for miles around.

The capping to this shaft will consist of, first, a line of boldly projecting, double-bracketed and paneled balconies, throwing a deep shadow and forming, as it were, a necking, and then deeply recessed Ionic loggias, with five arched openings on each side of the tower. Over the arched openings will come a deep frieze with windows and then a cornice and parapet balcony. Over the parapet the walls of the tower will be offset in receding 8 ft. on each face. This offset portion will continue up four stories and form a base for a pyramidal termination—pyramidion being terminated in an octagonal colonated observatory, which will terminate 658 ft. above the sidewalk level.

DIMENSIONS OF THE METROPOLITAN TOWER

Frontage on Madison av.....	75	feet
Frontage on 24th st.....	85	feet
Height above sidewalk.....	658	feet
Height from cellar floor to top.....	680	feet
Total height from foundation.....	690½	feet
Height of clock face above sidewalk.....	346	feet
Floor of lookout (46th story) above sidewalk.....	603	feet
Centre of window over lookout (highest point for observation) above sidewalk.....	633	feet
Number of stories above sidewalk in tower.....	48	
Number of stories below sidewalk in tower.....	2	
Grand total of cubical feet in building.....	16,287,034	
Grand total floor area Metropolitan Building (about 25 acres), feet.....	1,085,663	



GENERAL WAITING ROOM—PENNSYLVANIA RAILROAD STATION.

George A. Fuller Co., Builder.

McKim, Mead & White, Architects.

Values and Rentals.

THE ONLY CLASS OF APARTMENT HOUSES NOT WELL RENTED ARE THOSE NOT HAVING GOOD TRANSIT FACILITIES OR ARE POORLY CONSTRUCTED.

LOOKING over the record of the real estate market during the year one cannot but feel that with the exception of the tight money market we have a very satisfactory condition of affairs. In the Spring of 1906 there was a general cry of over-production of apartments and flats in the outlying districts,

the Bronx and Washington Heights in particular, and also that the prevailing prices for business property were too high, and that reaction must set in. Pessimists are to be found in every walk of life, and it is hard to convince them at any time that a healthy condition of affairs exists. But to those weighing the matter calmly and without prejudice it will be evident that everything points to a very active market for 1907. The renting of apartments has been remarkably good, and any danger of over-production is



ROBERT E. SIMON.

now passed, as during the year so few new plans have been filed that it is safe to say that the necessary number to keep up with the ordinary demands caused by the growth of the city were not complied with, and that if it were not for the large number of buildings that were planned during 1905 and started during that year and the Spring of 1906, we would find that we would be behind in building operations. The only class of apartment houses that is not well rented today are those that have no transit facilities within reach, or those that have been poorly constructed. No complaint is heard from the builders that have constructed honest buildings along the line of the Subway and Elevated railroads. This is particularly noticeable in the elevator houses and well constructed five story non-

elevator houses in the Heights, and in the two-family and five story flat houses in the Bronx. The best proof of this is that there has been no cutting of prices, renting rates having been held firm, and it is evident that if there were an over-supply or a lack of demand, the natural result would be for prices to be lowered.

The immigration reports of this year will show that it has been one of the largest in the annals. This in itself means more than the mere fact that a large number of additional inhabitants are looking for places to live in. It means that these people must be clothed, and that they must be fed. In order to clothe and feed them additional manufacturing and selling facilities are necessary, which in turn necessitates more manufacturing buildings, more stores, and consequently work for a larger number of people in proportion. This is a healthy growth and one which offers every prospect of its continuing for some time to come, as it is a well known fact that immigration does not begin or stop suddenly. Its growth or cessation is very gradual, and at the present writing there is not the slightest indication of its letting up.

As to business properties, New York is becoming more and more the financial center of the world. All large corporations and industries are compelled to have quarters in the city. The financial district is permanently anchored and the large number of office buildings which are planned and are in course of erection, some of which will not be completed for two years to come, have all signed up leases, totaling sums which would be considered splendid results if the buildings were completed. These advance rentals show the confidence of the moneyed interests in New York as a financial center.

In the retail sections uptown values are steadily rising and have been doing so for some time, and will continue to do so in the future. Each year will provide additional transit facilities, making our shopping centers accessible to a greater area, and as we know, the larger the circumference of the wheel the stronger must be the hub, so the greater the area made accessible to the heart of the city the greater volume of business done there, consequently, the higher the rentals that can be paid, and as a natural result, the greater the value of real estate in these locations.

Real estate is recognized as one of the safest forms of investment, and with the continued and assured growth and development of this city, although there may be seasons when the market is slightly inactive in certain classes of property, in general the trend for real estate in and about the City of New York will be upward and will prove a satisfactory venture to those who invest in it.

R. E. SIMON.
(Vice-President, Henry Morgenthau Company.)

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The Mortgage Situation and Its Effect on Real Estate Values.

THERE can be no doubt that the loan market has a great deal to do with real estate values; especially is this so where the small buyers have been asked by the money-lending Institutions, Executors and Trustees to pay off their mortgages made prior to the mortgage tax law of 1906 and have matured. In many cases the loaners have been willing to make another mortgage under the present law, thereby compelling the borrower to assume the tax and relieve the loaners from the personal tax which exists on all mortgages made prior to the tax law. This is the effect of hasty legislation, requiring one class of mortgages to pay three times more than the others. It is this feature of legislation that is causing a clash between mortgagors and mortgagees, affecting both wealthy and poor buyers; both are compelled to pay the expenses which include the mortgage tax of 1906.



SHELDON B. SHAW.

There has been a suggestion of amended legislation to remedy this trouble, but I have my doubts if it can be legally done; in other words, would the Legislature have the right to pass an amendment of such a kind affecting mortgages re-

corded prior to July, 1906? Such a clause, I understand, was stricken out of the present law by the Governor.

Then, again, drains have been made upon the Savings Banks to procure money to buy Long Island acreages; investigation shows that ninety per cent of such drafts were made for this purpose. The no small amount of such funds that have found their way into mining ventures which, the writer knows, has been largely done, has tended to make a scarcity of money.

Again, the larger Life Insurance companies have been in a chaotic state and will be until their elections take place to decide who shall control those companies.

Then, again, the stock gamblers in Wall street, without any public visible, putting up stock without any new buyers has made money on call command from six to one hundred per cent. interest in the last year.

Also, we have to thank our wise Legislators for the building law of 1901, which demands such a radical change in the construction of houses under that law, so much being given for air and light that the rooms of even a four or five-room apartment are nothing more than closets. This has called a halt in loans.

There is, too, a call upon the Banks to take care of the crops in the last three months; this is another factor looking for high money. In this class of cases the money is sent West to pay the farmers for the grain and then the grain is sent abroad to the various points of destination and the money returned to the banks after from sixty to ninety days.

Also, the calling of all matured loans of any denomination, from \$10,000 to \$1,000,000, no matter what the rate of interest may be, especially those that do not come under the mortgage tax law of 1906, has become general owing to the prevailing high rates of interest for call loans which has existed for a year past, greater in fact than has ever before been known.

The writer knows of one case where a loan of \$150,000 has been in existence upwards of twenty years at 4½% on property in a gilt-edge location upon which an offer of \$350,000 has just been made and refused, has been called for the reason no doubt that they can get six per cent or better for the money on call. I have no doubt there are many such cases to support this theory. One of the officers of one of the largest Trust Companies informed the writer some days ago that for several months all their funds had been loaned at not less than six per cent.

Therefore, I say, anything tending to raise the price of money affects the mortgage situation which in turn affects the value of real estate.

SHELDON B. SHAW.

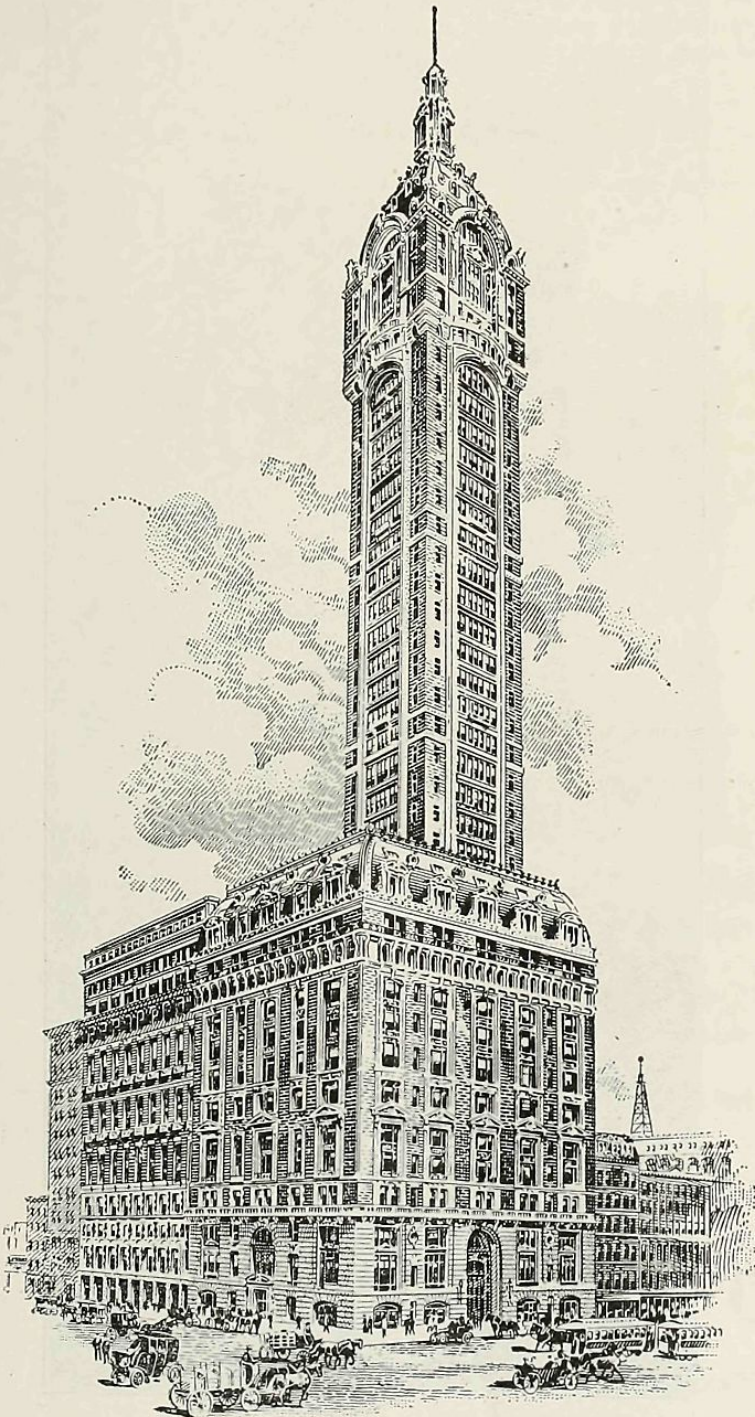
(Of Richard V. Harnett & Co.)

The New Shopping Center

AT the present time, lofts in West 34th street do not rent as well as they should. Business men in the street believe that at least three years must ensue before the many office and business buildings are completed, and the block is firmly settled by the big stores now locating in said vicinity. In this time, it seems safe to say, judging by the present strong demand for locations in this block, that the lofts now to be had will be all rented. The speculators have come and gone; they have taken their profits with them. The investors have followed and with them have come as purchasers, the large business houses. Closely on their heels have followed the usual movement of building and altering for stores, lofts and offices. Now nearly every available store in this block has been leased for a long term. Therefore we feel that the smaller business concerns must, as a logical sequence, come into the field—the little furrier hastening into closest possible proximity to Revillon Freres, the little skirt manufacturer and jobber, the shirtwaist, the lace, the white-goods man hurrying to locate near Altman's, McCreery's, Saks' or Macy's, and for the same reason the stock broker and the banker will choose his office or his floor near the uptown financial centre,—the Waldorf, and near the North River, the Thirty-Fourth Street National, the Astor National Bank or the Knickerbocker Trust Company. It seems reasonable to us to believe that lofts and floors in this block will not long be unoccupied.

Between Sixth and Seventh avenues, and extending westward from Seventh avenue there is an active movement among the big operators. They are to-day searching for the cheapest parcels to be found and buying quickly. The great lode-stone

—A Western syndicate composed largely of Cincinnati capitalists has completed arrangements to acquire the entire interests of the McLoughlin Real Estate Company at Hollis Terrace, Hollis, L. I., and at McLoughlin Park on Coney Island av. The reported consideration approaches \$350,000. The New York and Pittsburgh Real Estate Co., which controls Hollis Terrace, has been reorganized and the present directorate comprises several Brooklyn realty operators. McLoughlin Park consists of about 40 acres and in Hollis Terrace are approximately 4,000 lots. The total valuation of the parcels involved in this transaction is about \$1,500,000.



BROADWAY AND LIBERTY STREET VIEW—SINGER TOWER.
Singer Mfg. Co., Owner. Ernest Flagg, Architect.

which attracts is of course the Pennsylvania station. We are sure of what will follow. Something like 250 millions of people will be carried per annum, and we may say, deposited right at the corner of Seventh avenue and 34th street. This fact alone assures the future of this block of 34th street. The applicants will not be slow in coming into a full realization of the advantages of this block, and some have gone so far as to declare that this block will prove a better location than that between Fifth and Sixth avenues. All this we believe will happen, not in a day, nor a month, nor a year, but in the near future.

The demand in this vicinity is first for store floors, and then for second floors. The upper floors do not rent readily, mainly on account of the high prices asked, and similar lofts in neighboring streets can be had at much lower rentals. Tenants in the upper lofts can just as well conduct their business in some of the adjoining blocks. If, however, long leases can be obtained, even at the present prices there will be no difficulty in renting the lofts which are now vacant, but prospective tenants will not pay very high prices, if they can obtain only short term leases. We can safely say however that the present demand for loft locations in this vicinity is fully one-third better than one year ago.

POCHER & CO.

The Year in the Bronx

By the HON. LOUIS F. HAFFEN

THE year just closing has been for Bronx building and real estate interests a repetition of 1905, a period of unprecedented progress and prosperity. Population has greatly increased and the number of buildings erected is the largest in the history of the borough. The estimated cost of these buildings is slightly below the cost of buildings erected in 1905, but

to many discerning people this is a cause for congratulation. It means that a movement has gained headway among builders and investors for the construction of one and two-family houses rather than for the large apartment houses which were the dominant feature of the extraordinary building operations of 1905. From the viewpoint of the conservative capitalist and real estate owner, as well as the social reformer, it is not a matter for regret if future development in The Bronx is to be more

along the line of small or moderate-sized houses to accommodate single or at most two families. The development of the year has not been confined to any one section of the borough. Every part of The Bronx has felt the stimulating influence of extended and improved transit facilities. Even neighborhoods that are distant from existing subways and elevated lines are astir with activity, due to a confident belief that within a brief period the plans of the Rapid Transit Commission for new subways will materialize into accomplished facts.

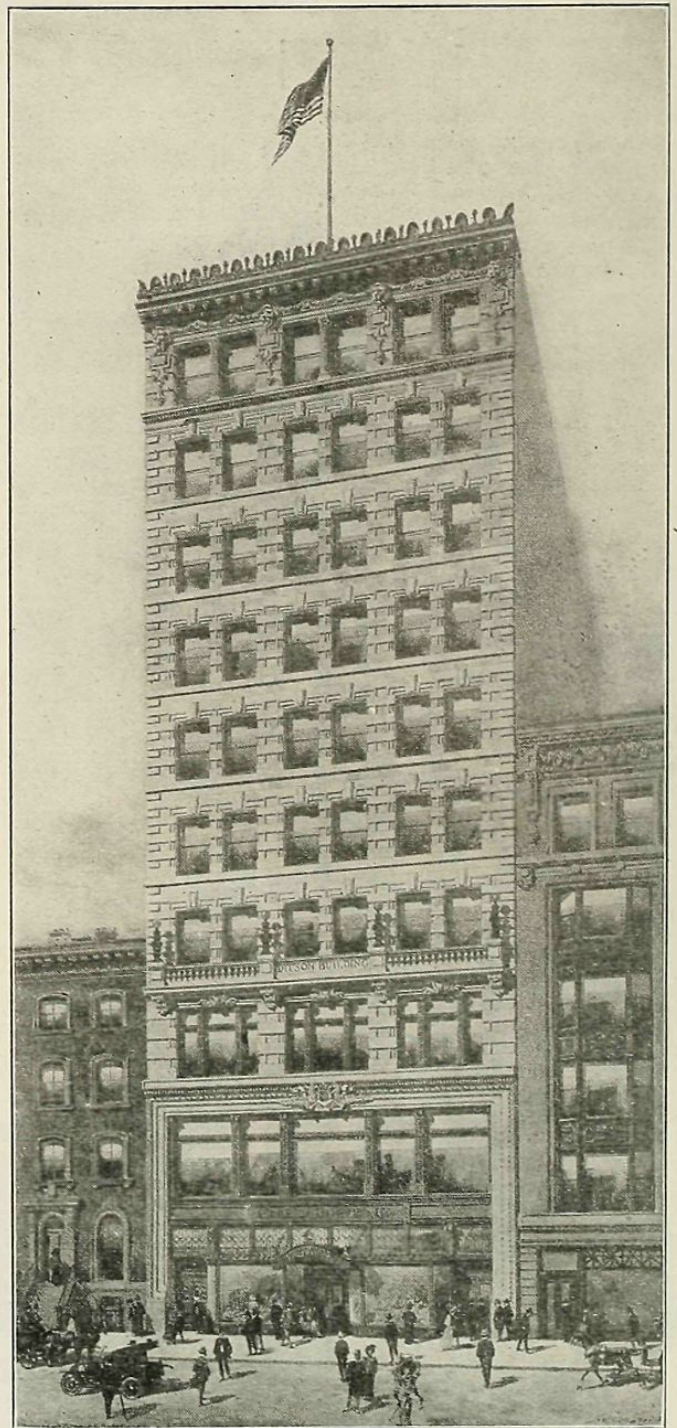
The noticeable feature of the year's development in this borough is the remarkable addition to the number of manufacturing establishments of every sort. The Port Morris section and the territory in easy and direct communication with the Harlem River and the New York Central Railroad have witnessed an industrial expansion beyond all precedent. Millions of dollars are being invested in modern factory buildings within the borough, but especially along the Sound near Port Morris and in the area parallel to the New York Central and Harlem railroads from the Harlem River at 133d street to Bedford Park. A great impetus to every local interest flows from this growth in industrial establishments. Employment is provided for many thousands of people who are not dependent upon subways or the "L" for transportation between their homes and down-town places of employment. The wages paid in local establishments are expended in local stores, and from this flows a degree of prosperity for the local merchant that has much to do with the solid and substantial development of the borough. Indeed, it may be truthfully said that the current year has justified the optimists who scouted the predictions that were well-nigh universal in many quarters in 1905 that the phenomenal progress of that year would never be repeated and that it would surely result in a disastrous reaction. If causes wholly foreign to real estate and building operations in this borough had not produced a so-called tight money market, which resulted in abnormally high interest rates on loans, The Bronx in 1906 would have distanced 1905 in every feature of its development.

What of the future of The Bronx? I am asked. The answer is that the future is one of absolute certainty. History will repeat itself in The Bronx. As rapidly as new transit facilities are provided, new population will rush into the borough and will accelerate its already tremendous ratio of growth. The subway brought relief, but it is already crowded to its capacity and there is imperative need of new subways and many of them. Ten years ago the population of The Bronx was not more than 100,000. To-day the population is 360,000, and ten years from now it will be a million. To one who has watched the development and growth of the borough and who has been even in a small way a participant in its new life and history there is a fascination in contemplating the immediate future. Of all the cities in the United States, The Bronx is exceeded in population only by Chicago, Philadelphia, St. Louis, Baltimore, Cleveland, Boston and Buffalo. In cost of annual building operations the borough far exceeds the total of similar operations in each of these great cities except Chicago. Yet we are only at the beginning. Plans projected and certain to be carried out in the near future for the enlargement of local transit facilities by the construction of new subways; the extension and improvement of existing underground, elevated and surface lines of communication with the business heart of the city in lower Manhattan; the construction of bridges over the Harlem and of docks along the fifty-nine miles of Bronx water front; the completion of boulevards and parkways on a scale greater and grander than anywhere else in the world; the extension of street, water and sewer systems; the development and beautifying of our wonderful park areas; the expansion of our educational and church facilities—all these are working for the creation of a mighty community of prosperous and contented people north of the Harlem River which will constitute the greatest glory of the greatest city in the world—the City of New York.

LOUIS F. HAFFEN.



HON. LOUIS F. HAFFEN.



DITSON BUILDING.

Charles Ditson, Owner. Townsend, Steinle & Haskell, Architects.

edly there will be attempts in certain districts to boom prices beyond the actual values, the public is too discriminating to allow themselves to be fooled.

The outlook for the coming year is therefore for a good, steady, substantial business. I do not think there will be great activity in any particular section; rather the activity will be confined to those sections which will be open by the new rapid transit roads extensions of the present line, which will, of course, open large sections to convenient access to business centers.

There will be probably a steady absorption of apartment houses by investors who have small means and can live in the houses and take care of them, but I think the builders who will erect one, two and three-family houses in good neighborhoods will find a far better market for them, with better chances of profit.

Altogether the year 1907, to my mind, is a year to be looked forward to, with confidence that there will be a fair amount of work and a fair share of profits in the real estate market in The Bronx for all concerned. J. CLARENCE DAVIES.

The New Consolidated Exchange.

(See Illustration, page 146.)

The new building for the Consolidated Stock & Petroleum Exchange, situated on the southeast corner of Beaver and Broad sts, is to be built from plans by Clinton & Russell, the architects, and will occupy a plot fronting 100 ft. on Broad st and 112 ft. on Beaver st. The classic style of architecture has been employed to advantage, the Broad st front showing a series of massive Ionic columns. The material used in the exterior will be of limestone on a base of granite.

The board room will be four or five feet above the Broad st level, with steps leading up from the sidewalk all along that side of the building and affording access to the three large doors which will be the members' entrances. The trading floor itself will be about 95 by 82 ft. in size—an area of about 7,500 sq. ft. Special care has been taken to provide the floor with an abundance of natural light, even on the darkest days. Not only will the whole of the Broad st front of the building, back of the row of Ionic columns, be practically one immense window, as in the case of the New York Stock Exchange, but a dome with a center skylight 30 ft. in diameter will let in a flood of light from above.

Along the southerly wall of the board room will be ample accommodations for telephones, above which will be the bulletin board in a position where it can be seen from any part of the floor. Opening off the board room along its easterly side will be a smoking room and rooms with additional telephone and telegraph facilities. At the easterly end of the building is the public entrance which gives access to the quarters for the officers, the Clearing House and Visitors' Gallery. The greater part of the basement will be used as a restaurant, but there will also be a barbers' shop, coat room, and adequate toilet accommodations for members and employees.

Luxury in the New Hendrik Hudson.

(See Illustration, page 179.)

The Hendrik Hudson, one of the largest apartment houses planned during the last year, was designed to meet the large demands for luxurious apartments of seven, eight and nine rooms, which has been such a feature in the past renting season. The architects are Rouse & Sloan. The building covers a plot 208 ft. on Riverside Drive and 300 ft. on Cathedral Parkway and 135 ft. on 111th st and 91 ft. on Broadway. It is planned with a system of exterior courts so that all apartments face the drive or streets. There will be fourteen apartments on a floor, consisting of seven, eight and nine rooms with three baths. The living rooms will be grouped around the foyers with separate entrances in each apartment for service, giving a large degree of comfort and privacy. There will be direct connection between the building and the subway at 110th st. The elevators front on a central court, forming a feature on each floor. The corridors will be wide and well-lighted.

The facade in scheme will be that of an Italian villa, material for same will be of limestone, brick and terra cotta with wide projecting Spanish tile roof, supported by large ornamental bronze brackets. Brick work will be Roman-shape, laid up in Flemish bond. The Riverside Drive elevations will have two towers which rise above main roof and are connected by a pergola. As the house is situated at one of the most picturesque points of the drive, it will be the crowning feature of a series of terraces overlooking the driveway. The building is owned by "The Hendrik Hudson Co." Geo. F. Johnson, Sr., is President; Geo. F. Johnson, Jr., Vice-President, and Alexander Kahn, Treasurer.

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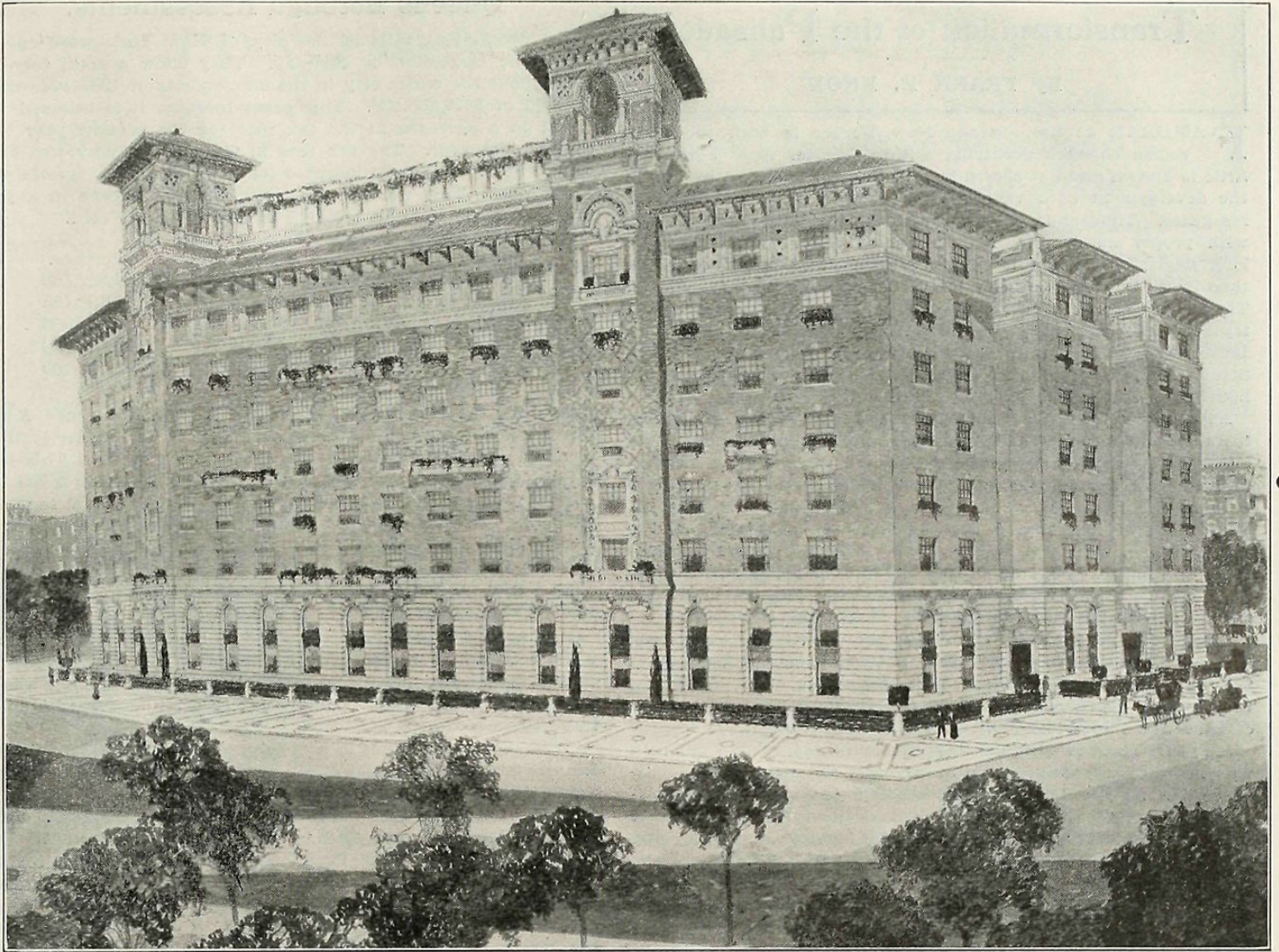
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Riverside Drive and 110th Street.

THE "HENDRIK HUDSON."

Rouse & Sloane, Architects.

Harlem in 1906.

WONDERFUL RISE OF PROPERTY VALUES IN 125TH STREET—SECTION BORDERING RIVERSIDE DRIVE BUILDING UP RAPIDLY.

THE growth of the great City of New York is not to be denied, neither is that of Harlem, which has kept pace with the rest of the city; in fact, some districts have so improved as to astonish even the most sanguine. Harlem has felt the effect of rapid transit via subway, which stimulated the building of many apartment houses of different types, so that we could accommodate those who had to leave the Pennsylvania Depot district as well as those of the New York Central; and the consequence is that all the old-law houses are full and the new ones filling up almost as soon as finished. There has been a great demand the last six months for old-law houses; in fact, we cannot supply the demand, even at prices 30 per cent. higher than two years ago.



F. E. BARNES.

the residents finding they can do as well in the shops here as by spending their time and money going down-town, and as a consequence stores on the main thoroughfares command good rents. One Hundred and Sixteenth street is fast growing to be considered a business street; where three years ago were only flats, now the first floors have been transformed and every store is rented as fast as finished. The block between Seventh and Eighth avenues is considered the best in that section, rentals being nearly 20 per cent. higher than on the blocks further east; therefore the price of land has greatly increased within the last two years. The block between Fifth and Lenox avenues is a good second in that line, owing to the thickly populated section on and adjoining Fifth avenue and the subway station on Lenox avenue.

Seventh avenue holds its own, but owing to putting the

water mains and the proposed improvements of making it a boulevard keeps it in an unsettled condition, rentals are not so good, but property is held at a high price, as, just as soon as these improvements are complete, Seventh avenue will be one of the finest in the city.

Eighth avenue has steadily increased as a business thoroughfare and store rents keep going up, half stores renting for \$65 and \$75 per month. But the street which has surprised all is 125th street. Values have so increased it would seem like a fairy tale. Taking the blocks Eighth to Lenox avenues, stores which a few years ago rented for \$3,000 and \$4,000 a year now command from \$8,000 to \$12,000; in fact, all the property on the south side has been leased within a year or so for long terms, and nothing can be had at any price. There is no use giving values, because nothing can be bought, but lots on the south side would easily bring \$140,000, while those on the north side \$65,000. The section adjoining the extension of Riverside Drive and Broadway is building up so rapidly and filling up with good tenants that business is extending west of Eighth avenue on 125th street and Manhattan street, and the indications are that with the Eighth avenue subway 125th street at this section will become one of the great centers of travel. The block between Fifth and Lenox avenues has been greatly injured by the short-sightedness of either owners or agents in renting the stores to those "nickel-in-slot and moving pictures," which has spoiled the block for shoppers. The demand for private houses continues good and the supply limited, particularly in the renting line. With our population increasing rapidly, real estate on Manhattan Island shows the best and safest investment.

F. E. BARNES.

Development of South Brooklyn.

John Pullman, of the Brooklyn Board of Real Estate Brokers, says the prospects of Brooklyn are better than in any other borough in the city. "Manhattan," he says, "has 13,487 acres, Bronx was 25,270, while the Borough of Brooklyn has 49,650—more than these two combined. People have been driven from Manhattan by the thousands, and yet we have thousands of lots that a man can get for a reasonable sum on which to build him a home. What with our beautiful drives, including Shore Road Boulevard, our view of New York Bay, Prospect Park and other attractions too numerous to mention, we have things that will make Brooklyn the largest and greatest borough in Greater New York. The development in South Brooklyn has been extraordinary within the past few years. Kensington, Borough Park, Bay Ridge, Martense; in fact, all that land lying between Coney Island and New Utrecht avs, has undergone a great change. The building boom is still on. There is no danger of its waning."

Transformation of the Palisades

By FRANK E. KNOX

FAMILIAR as the average New Yorker is with the marvelous changes occurring within Greater New York, but little is known and but slight, if any, interest is shown by him in the development of a vast territory within a stone's throw of his gates. Thousands gaze westward at the beautiful Palisades with proper admiration, little realizing the rapid strides this long neglected section is making. Ten years ago Woodcliffe, then in its infancy, was the northern boundary line of progress. Thence as far north as Englewood lay a sparsely settled country served by extremely primitive transportation facilities. The 130th Street Ferry ran only hourly and connection with 42d Street Ferry was made half-hourly during the rush hours and hourly the rest of the day.

Now, from Woodcliffe north are found in quick succession towns of no mean dimensions, such as Hudson Heights, Cliffside, Grantwood, Palisade, Fort Lee and Coytesville. Fifteen-minute cars during the middle of the day and seven-minute cars in the rush hours, on Sundays and holidays on the 42d st route and half-hourly and quarter-hourly service on the 130th st line, with still better running schedule promised, illustrate the improvement due to demands of a rapidly increasing population. Those whose knowledge of the locality impressed them with its unlimited possibilities lacked the ability and resources of benefit by it. To them the practically solid rock formation, the dense growth and untrammelled ruggedness of the Palisades Plateau offered unsurmountable obstacles, hence the opinion, prevalent only a few years since, that this entire district was impossible of satisfactory improvement.

Six years ago, however, there appeared in this locality a few men who not only appreciated the beauty and grandeur of the Palisades, but its possibilities under development and who furthermore had the courage of their convictions and a sufficient amount of capital to back them up. They incorporated a company known as the Columbia Investment & Real Estate Company and began operations. Prophecies of dire disaster were thick as locusts and many a wise head wagged knowingly. Ceaseless activity, dogged determination and minute attention to every branch of the work succeeded in overcoming all obstacles. Street improvements were made only by years of constant attack by an army of steam drills and dynamite. Sewers and cellars were excavated, streets, sidewalks and houses soon appeared, and the transformation has been so continuous as to amaze those who are not in close touch with these events. Property, worth but little a few years since, has advanced rapidly but steadily and in keeping with the demand.

As illustrations of the wonderful growth which has taken place in lot values within a comparatively short time, the following sales are cited: Lots on Lincoln av and Hudson terrace, Grantwood, the pioneer village of this locality, sold in 1900 for \$600 each. The adjoining lots sold last month for \$2,000 each, an advance of over 300 per cent. in six years. In November, 1901, lots 76 and 77, Grantwood, 50x100, brought \$500 each, reselling in April, 1906, for \$1,000 each. In 1899 the average selling price of lots in block 9, Grantwood, was \$375, to-day it is \$1,050. These results have not been accomplished without tremendous, albeit judicious, expenditures. The Columbia Investment & Real Estate Company has expended in sewers, sidewalks, streets, gutters, etc., on its properties at Grantwood, Morsemere and Hudson Heights to date over \$250,000, and in the erection of houses over \$600,000. Each ensuing year shows by the greatly increasing demand for homes at constantly higher prices the correctness of the judgment which prompted this company to become the pioneer of Palisades development.

No claim is made that the transformation of the Palisades is complete, but a stupendous change has been effected, and with the location of the now practically assured Trans-Hudson Bridge settled, property values will advance still more rapidly and to figures which will dwarf all past records.

Queens Borough Assessments.

The assessment rolls of the city of New York were opened for public inspection on Monday. They show a total increase throughout the entire city in the assessments of 1907 over those of 1906 of \$479,865,239. This great increase it is believed will result in a decrease in the tax rate for the present year over that of last year. The tax rate in Queens last year was \$1.55 on the \$100. The total increase for the Borough of Queens was \$52,307,600. This was the greatest relative increase in any of the boroughs. It is an increase of nearly 35 per cent.

Wards.	Assessment.	Increase.
First	\$55,294,815	\$14,322,580
Second	47,410,020	13,132,485
Third	29,815,425	8,274,985
Fourth	48,954,565	13,856,330
Fifth	17,248,070	3,722,160

An interesting fact of assessment is the Lawrence Smith farm which was sold at foreclosure sale at the Town Hall on Monday. In 1906 this farm was assessed for \$2,400. This year it is on the books for \$4,800. On Monday it was sold for \$11,100.

In the vicinity of State, Chestnut, Central av and Flushing pl during the past year there has been considerable building of houses that are sold on the instalment plan from \$3,500 to \$5,000. The lots in this vicinity were last year on the assessment books for \$800. This year with the houses added the assessments are now \$3,600.

On lower Congress av the Halleran estate has improved what was nearly marsh land by the erection of a number of double tenements. The land which these houses occupy was in 1906 assessed for \$1,500. This year with the improvements made there the assessment is \$16,000.

C. W. Copp two years ago at public sale paid \$7,500 for the old Leavitt and Lawlor nursery property at the rear of the Flushing Town Hall. The property at that time was assessed at \$4,000. In 1906 Mr. Copp was erecting the row of houses on Carlton pl which have since been completed. Then the assessment of this property was increased to \$20,000. Since that time all the houses there have been completed and others are being erected on State st. This year, therefore, the same property is assessed for \$37,500. As this is marked "in progress of erection," the assessment will probably be increased next year when the buildings are all completed.



WYOMING APARTMENT HOUSE.

7th Avenue and 55th Street.

Rouse & Sloane, Architects.

HOW 1906 WENT WITH BUILDERS

RACING WITH SKYSCRAPERS

The Building Situation.

THE total amount of building permits in the boroughs of Manhattan, Brooklyn and The Bronx for the twelve months ending December 22, 1906, was \$197,844,461. Two hundred millions of dollars spent in the three principal boroughs of New York City alone, and that doesn't count the extras! Chicago, according to Building Department permits, spent

\$63,836,700 in the last twelve months, but the chronicler who made the annual real estate spiel for one of the leading newspapers there called attention to the fact that the actual cost always exceeds the estimated cost by over 10 per cent. He also made some disparaging comparisons, in true Chicago style, between the healthy boom in his town and the unnatural overgrown condition here. I guess the Chicago man was right about extras, though. His method of figuring would make Chicago's



THEODORE STARRETT.

business last year over \$70,000,000 and New York's—but did it only exceed estimates by 10 per cent. in New York? Well, say 10 per cent. New York's buildings in three boroughs last year cost at least \$220,000,000. The two greatest American cities spent \$290,000,000 in buildings. Truly, the building business is a big affair. It always has been big, too; that is, relatively to other businesses.

And this great industry is a very peculiar one. There are always two ends to every industry—the employer's and the employee's—the staff and the rank and file corresponding to the commanders of an army and the army itself. The great peculiarity about the building army is that the commanders do not seem to be on the same basis as they are in some of the other industrial armies. They don't seem to command the same amount of respect from their fellow citizens as some of the other commanders do. Perhaps the world despises them because they are led by their army instead of leading it.

Whatever the reason is, it's a fact that the commanders of the building army have got the worst of it and the rank and file have got the best of it. I could almost go further and say that the building business in a sense has no commissioned staff, but is led by the non-coms, sergeants and corporals, who have not the sinews, poor devils, to get up and take their own.

The unions get as high wages in the building trades as are paid anywhere. I used to think that the reason for this was that they had no opposition when they struck for more, owing to what I will call the prostrated condition of their employers; but I don't think that is so. Supply-and-demand does the trick on the wage end, and then the nature of the building mechanics' work—out-of-door, open-air—makes them hardy and able to fight for their own.

No; the bosses are prostrated, but the unions didn't do it. They always try to help their bosses if they can. Wages are high; there's lots of work, a great and steady volume of business; but the employing class cannot gather itself together. Even if an employer has skill and capital, he cannot find scope. In the archaic condition which exists in a business where the finished product is the work of a dozen—nay, thirty or forty—industries, each going upon its field after another is through, or perhaps while the others have withdrawn temporarily to return later—in this archaic condition there is nothing to attract brains or capital. Even though the piece-meal bosses enjoy their benighted condition, and though the schemes of the office-holding class among them to perpetuate that condition should prosper for a while longer, yet the end of it must come at last, because the industry has not kept pace with other industries.

The condition in the building business is like that of the colonies before the Constitution was adopted. It is generally admitted that the prosperity of these United States is due to obliteration of State lines and the growth of the national idea.

Changes in Building Methods—To Revise the Code—Notable Structures of the Year in Manhattan

Chaos is nothing compared to what this government was drifting to when the Civil War had to come to set it straight.

We won't have a civil war to modernize building. The rank and file of the building army are going to help to save that army if nobody else will. They will choose captains for themselves if no other way is found.

What is the use of a high union rate if there's no work in the trade? Of course, the reactionary will give a loud roar of joy at this argument and say there's lots of work, etc., etc., but I am trying to draw a comparison between the political world and the industrial world, and have to make theoretical conditions to illustrate.

What is the use of bricklayers getting 70 cents an hour and having to knock off a building for two days out of each week when there is no steel because the steel contractor isn't ready, or no floor joists because the carpenter contractor is behind

It's just the same as some State down South having a bumper crop of cotton and no one to sell it to on account of some law that might have been on the books, but now, thank Providence, isn't.

The public is very much interested in this matter, too. Many a story could be told by owners, if they would, of excessive cost on the one hand or of inferior work on the other, due to paying too much to get good work done or to being skinned because of trying to get it too cheap. No good comes from having a headless army or a headless government. Selfish grafters may profit as they do in politics and some other institutions which need reforming, but in the end they will all be cleaned out.

So it will soon be with the building business. Some day the public can treat with a well captained, well quartered, well disciplined army, and the benefit will be just as great in business as it has been in government.

It might be interesting to inquire into the causes of the prostration of the building army, but that would be another story. The fact is the army has been prostrated, but it will be restored.

A business of two hundred millions a year in one city, of probably more than a billion in the whole country, is worth a big effort.

THEODORE STARRETT.

The New York Building Laws.

By WILLIAM J. FRYER, Chairman of the Board of Examiners.

AS the recurring year adds not only age to the Record and Guide, but extends its influence and power within its chosen sphere of usefulness, its readers should not lose sight of the fact that to this newspaper more than to any other or all other newspapers belongs the credit of advocating good building laws and extending encouragement and help in every effort made for the betterment of those laws. Never has the Record and Guide failed in its duty to the general public, to the owners of real estate and to the best interests of architects and builders in demanding wise, conservative and comprehensive laws governing the erection of buildings. Because of its encouraging attitude in sustaining every sincere effort made for the revision and bettering of the laws, the Record and Guide has ever enjoyed the fullest facilities for advance information as to each important step proposed to be taken or actually decided on, and in turn kept its readers as well posted as it were possible without trenching on confidential information. When the building code of 1899 was adopted the Record and Guide gave generous and unstinted praise of the work. Not so other papers, for without exception these denounced the code on the general principle that nothing good could emanate from the Board of Aldermen. Some of the editorials in the daily newspapers were bitter in tone and untrue in statements. One paper understood the code; the others did not. In due time the newspaper sentiment changed, and this change can be mainly ascribed to the fact that the daily newspaper writers on building subjects closely watch the views of the Record and Guide and are influenced by what appears in the columns of this recognized authority on building and real estate. The Record and Guide made public sentiment for the abolishment of the bureau of buildings in the Fire Department and the creation of a Department of Buildings, and when this change did occur in 1892, it was received with general approval by the interests affected. No other paper had advocated the change. Not only in the Record and Guide as a newspaper, but in its other publications, its monthly architectural magazine, its building law publications and its historical publication of real estate, building and architecture in New York, space was given without stint to making clear and plain the meaning, intent and operation of the

building laws and other laws relating to buildings. Altogether these publications have placed owners, architects, builders and lawyers under a lasting debt of gratitude. The proprietor and the editor of the Record and Guide are too modest to claim the merits to which they are entitled for benefits conferred on the building interests, but I may do so, for I am writing about matters of which I have personal knowledge.

Coincident with the anniversary of the Record and Guide there are anniversaries of the building law that deserve at least passing mention. It is nearly half a century since the first separate building law was given to New York City by the State Legislature in 1860. It is a year more than a quarter of a century ago since the first comprehensive and adequate building law was introduced in the State Legislature in its session of 1881. It failed in that session, and it failed in three subsequent sessions, but it passed in the session of 1885—twenty-two years ago. This law of 1885 was the first modern building law not only in the United States but in the world. In 1892 a number of important amendments were made to the law, including the change of the Bureau of Buildings to a separate department. With the coming of Greater New York in 1898 came the power conferred on the Board of Aldermen to establish and from time to time to amend a code of ordinances to be known as the "Building Code." For the first time in more than fifty years New York was given home rule in respect to regulating its building affairs, although every city in the State, other than New York and Brooklyn, had continuously enjoyed this privilege. Prior to the Greater New York charter, the "building law" was part of the "Consolidation Act," the New York charter, and every change in the building law had to be obtained from the Legislature. Many are the interesting events in obtaining changes to the building law, and it is to some of these that I shall briefly call attention. It would require a volume by itself to set forth adequately the history of the making of a great building code.

Like unprofitable discussions of the question whether buildings or the people make a city, it is useless to discuss whether a building law encourages building operations or the reverse. The fact is that a building law does neither. The public safety must be conserved by building laws and regulations, but it is intended to do nothing beyond that. The very best construction is not demanded by law. The law does demand that buildings shall be safely and well constructed, and to this end enters necessarily into many details. The mandatory requirements are many, but each and every one voices the experience of the past. The humblest building as well as the largest is rightly a subject of public solicitude. The Chicago conflagration started in a frame shanty from the overturning of a lamp by the kick of a vicious cow. The Baltimore conflagration started in the cellar of an important mercantile structure. Shall men be permitted to build frame buildings where they like; shall they be permitted to build non-fireproof buildings to unlimited heights; shall they be permitted to build structures to a height above the ability of the Fire Department to cope with fire without every reasonable restriction being imposed by law or without requiring that the steel frame shall be so encased that in case of fire the building shall not topple over? If the answer be that the acts of the individual must be subject to control, then the law must go into detail, and it is better that such detail shall be clear and precise rather than vague and indefinite. In every city the building laws have followed this general rule of definite requirements. A few theorists have advocated a building law made up of a few broad principles as to the strength of materials and leave the architect to work out his own salvation. It is to laugh. Nothing feasible has been presented in this line, and nothing can be worked out on any different lines than the building code. Architects and builders build no better than the law requires; they never did and they never will.

In the Record and Guide's History of Real Estate, etc., I



MARBRIDGE BUILDING, COR. 34TH STREET AND BROADWAY, NEW YORK CITY.

Townsend, Steinle & Haskell, Architects, 22-33 East 19th Street, New York City.

have given the genesis of the New York building law, and have given due credit to the men and associations who have taken part in bringing the law up to its present high state of excellence. No one man, nor any twenty men, locked up in a room and kept there for a year could produce the building code. It is because it embodies the best ideas of more than one hundred active, practical and competent architects, builders and engineers that the code is so complete and comprehensive. Many of the excellent ideas and suggestions were scattered through various reports in the several revision committees, but all were in due time gathered up and are embodied in their proper places in the code. The orderly and sensible arrangement of the subject matter of the code has been highly appreciated by those who are daily making use of it. Both in substance and arrangement the New York code has been used as a model in the drafting of building laws for other cities.

The building laws of New York for the past thirty-five years have included a safety-valve in the interests of securing justice to an applicant for a building permit, and to overcome the arbitrary action of a Superintendent of Buildings—the Board of Examiners. To this board—its membership being made up of representatives from building and other associations—an appeal may be taken from any adverse decision of a superintendent who shall reject or refuse to approve the mode, manner of construction or materials proposed to be followed or used in the erection or alteration of any building, or when it is claimed that the rules and regulations of the department or the provisions of law or ordinances do not apply, or that an equally good and more desirable form of construction may be employed. The very existence of this board works for good in securing a better treatment of applicants than would otherwise probably be the case.

In the years that have passed since 1879—28 years ago—by reason of my personal dissatisfaction with the building law as it then stood, I started in single handed and alone to revise and modernize it, it has fallen to my lot to hold the laboring oar in every subsequent revision up to the present time. From a financial standpoint it was a poor thing for me to take up and then to follow up, as from the very force of circumstances I had to do. To illustrate how momentous in its results to this city have been some of the powers exercised by me during that time in influencing legislation, as well as to show what a single individual can do I shall relate a single incident that occurred in 1885, when my saying stubbornly "No!" secured to this city the right to erect buildings to an unlimited height,

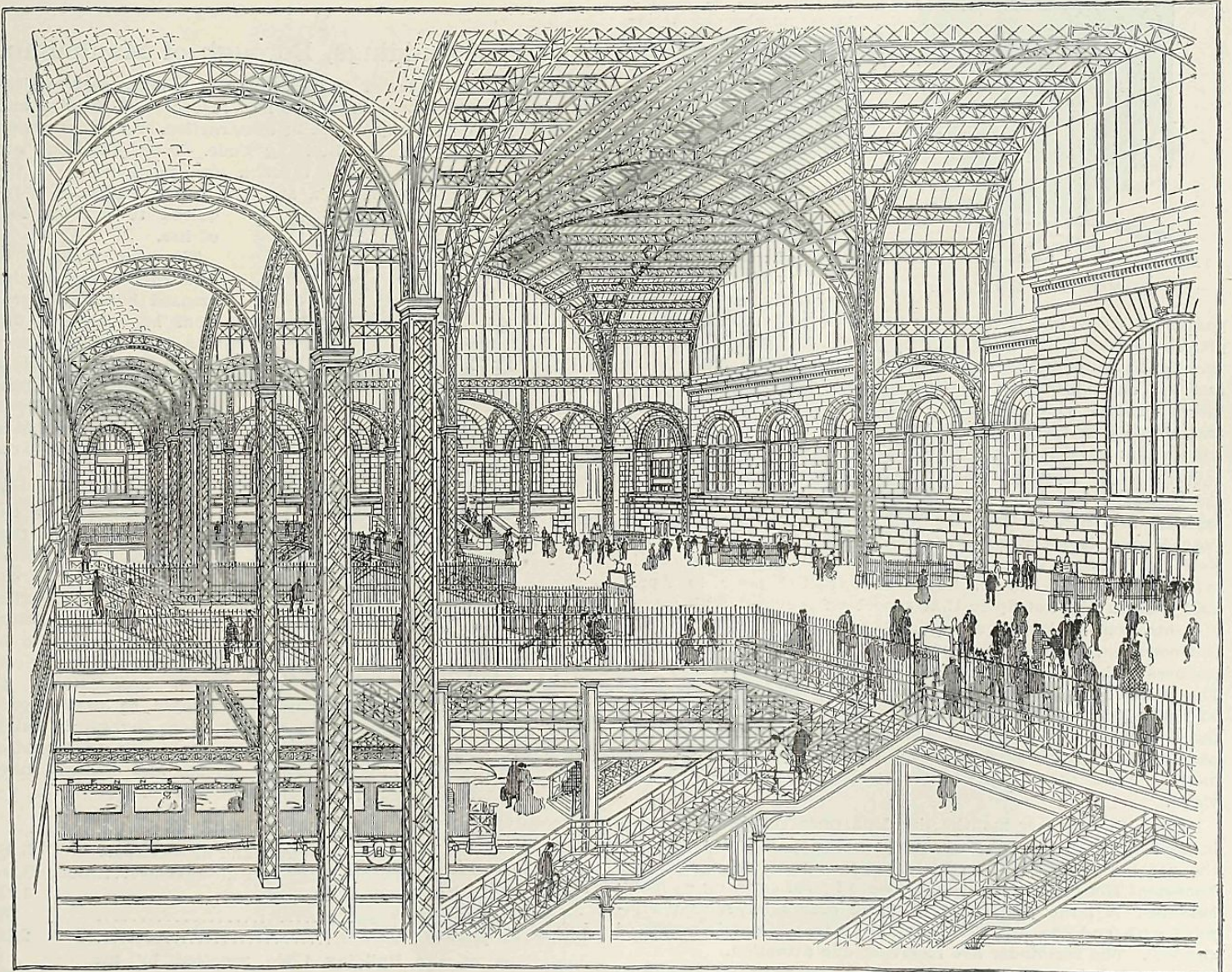
whereas had I said "Yes," the height would have been limited to one hundred feet, and if this limitation had gone on the statute books it doubtless would have remained without material change.

In the Legislature of 1885 I stood alone in defending the bill to give New York a new "building law." Two or three hearings on the bill had been given by the Senate Committee on Cities. Opposition had simmered down to the Fire Department, represented by its attorney, Mr. William L. Findley. This was to be the last hearing. At the opening Mr. Findley announced that he had a number of amendments to the bill, but that he could not get me to accept them, and so we had agreed to state them and abide by the decision of the committee. The chairman conferred with one or two of the members and then announced that the hearing on the building bill would be adjourned until the following Tuesday afternoon, and he told Mr. Findley and myself to go home and settle our differences and come there next week agreed and the bill would be reported then or it wouldn't be reported at all. On our way to New York Mr. Findley suggested a conference with President Purroy, of the Fire Board. I agreed to this, and a meeting was duly held. Mr. Purroy had a list of some twenty changes to the bill. The first one was to put in the bill the section providing for the power of arrest, as it was in the then existing law. I said no; that I would agree to increasing the fines, making the fines cumulative, increasing the causes for stopping work by injunction, but no power of arrest would I consent to. After some discussion Mr. Purroy consented to waive this demand.

Then came the next: To limit the extreme height for buildings to 100 feet. I said no, that if there was not enough in the bill in the way of auxiliary fire protection for a high building or if anything else was desired to be put in the bill to make the building safer in itself I would gladly put it in, but in the face of what was already being done in Chicago and what was about to be done here I would consent to no limitation for height of buildings. Finally Mr. Purroy consented to waive this demand.

Having won on the two most important proposed amendments, I gave way fairly to all the others. Most of them were not very important any way, and some were offered under a mistaken apprehension of the wording in the bill. On the following Tuesday Mr. Findley and I presented ourselves to the Senate Committee on Cities. Our amendments were adopted, the bill was reported and duly became law.

In 1885, when the law was passed, there were only a few



CONCOURSE AND TRACK—PENNSYLVANIA RAILROAD STATION.

George A. Fuller Co., Builder.

McKim, Mead & White, Architects.

buildings in New York which exceeded 100 feet in height. Besides the U. S. Post Office, there were the Western Union building, the Tribune building, the Produce Exchange, the Mills building and a few others. The owners of real estate didn't know just then that New York was about to erect buildings to a height that would make one lot do the work of five. The effect of my having said "No" to any limitation of height for buildings has been to double and treble the price of lots suitable for the erection of skyscrapers. The facts are simple, and the story itself is almost incredible.

At a later revision of the building law a request was made by the Fire Commissioners that a requirement be put in the law that all buildings thereafter erected more than three stories in height should be constructed fireproof. This was thought to be too drastic at the time, and the request was not acceded to.

The building code needs a revision for many reasons. Since its adoption eight years ago, the Department of Buildings has been abolished and Bureaus of Buildings created instead. Superintendents of Buildings now enforce the code instead of Commissioners. A separate tenement house law has since been passed, and therefore a considerable portion of the building code referring to tenement houses needs to be eliminated. These changes are needed to make the text conform to present conditions. Then there is the bringing up of the technical portions of the code to date. The art of building is progressive and the New York building code must correspondingly progress or fall back from the front place that it occupies.

Tenement House Department Work.

THE Tenement House Department has gone through the busiest period of its existence during the year 1906, and has accomplished a great deal for the betterment of the housing conditions in the City of New York. The record which follows will show the amount of work done in the five boroughs of the city on the principal lines of the department during the



EDMOND J. BUTLER.

period beginning Jan. 1, 1906, and ending Dec. 31, 1906. In the Borough of Manhattan the general sanitary inspection which was started in the fall of 1905 was completed and resulted in the filing of a very large number of violations covering the conditions disclosed by these inspections. A similar system of inspection was started in the other boroughs and is now under way, and will probably be completed early in the present year. As a result of these inspections and subsequent work, the solid wooden

panels of 3,244 hall doors were removed and substituted by glass panels, and 739 skylights were provided, thereby improving the lighting conditions of the halls; 2,305 school sinks were removed and 13,502 new water closets provided; the number of interior rooms which were formerly deprived of light and air, and which were changed in this respect by the introduction of windows in partitions, numbered 7,348.

At the close of the year 1906 practically all the buildings in the entire city needing fire escapes or additions and repairs to existing fire escapes, had received attention, and during the year a very large amount of work was done on these lines. New fire escapes were erected to cover 13,477 apartments in existing tenements (i. e., houses constructed prior to April, 1901,) which had not up to that time been provided with means of protection. A large number of the old fire escapes were in bad condition and needed repairs, and in some cases additional features to bring them up to the effectiveness required by law. The number of fire escapes on which work of this character was done aggregated 16,424. Another feature in connection with the provisions for escape in case of fire is the construction of passageways, gates, or scuttles for exit. Under this heading it may be noted that 3,844 of such methods of egress were provided.

During the summer months the department made a thorough inspection of all the bakeries in the city and issued orders for the necessary fireproofing of the same as provided for by the Tenement House Act; 1,136 orders were issued covering as many bakeries. A large proportion of these orders have been complied with and the bakeries brought up to the requirements of the law. The remainder are receiving due attention.

Plans filed for new buildings during the year, while not so numerous as during the preceding year, still make a very good showing. The total number of plans filed and the valua-

tion of buildings proposed to be constructed thereunder are as follows:

PLANS FILED FOR TENEMENTS, JAN. 1ST TO DEC. 31ST, 1906.

	No. of Buildings.	Est. Cost.
Manhattan	926	\$55,299,400
Bronx	475	15,716,300
Brooklyn	3,230	37,852,250
Queens	504	3,245,900
Richmond	5	23,500
New York City	5,140	112,137,350

The following table shows the progress of tenement house construction since the institution of the Tenement House Department, and may be of interest as a proof that the Tenement House Act has not proved to be a deterrent to the building of tenement houses as was predicted by those who were not favorable to its passage.

Year.	Number of Bldgs.	Estimated Value.
1902	562	\$19,080,200
1903	1,362	34,163,670
1904	3,177	79,110,000
1905	5,918	146,020,775
1906	5,140	112,137,350
Total.....	16,159	\$390,511,995

The alterations during the year 1906 exceeded in volume and character those of any preceding year. The number of buildings for which alteration plans were filed aggregated 5,995, and the estimated cost of the alterations was \$6,516,187. A great deal of this work has been done as is indicated in the report above, with regard to school sinks removed, new toilets, lighting of dark rooms, etc.

One of the most pressing needs for effective aid in accomplishing the work intended by the Tenement House Act is the enactment of a law making it necessary to have some particular individual, thoroughly equipped by practical experience, to supervise the construction of houses intended for occupation as multiple dwellings. To do this a license should be required to be furnished to either an architect or practical builder of recognized ability, who would be in constant touch with the building during its construction, so as to detect variations from approved plans, check defective work and obviate the necessity for filing of violations and subsequent alteration of work done.

EDMOND J. BUTLER.

Bureau of Buildings, Borough of Manhattan.

THE Bureau is taxed to its utmost in making daily visitations to buildings which are now in course of erection and alteration to detect any defect in construction or any infraction of the provisions of the Building Code. Also, buildings are continually becoming unsafe through age, particularly in the older portions of the borough, and the utmost vigilance is required to prevent loss of life.

The new methods of construction and the increased building operations have imposed duties upon the inspectors which have demanded a higher annual compensation, and consequently their salaries have been advanced during the year.

After assuming the superintendency of the Bureau I found that copies of the Building Code could not be obtained at the office thereof. I therefore caused the same to be compiled and revised, with amendments, to



EDWARD S. MURPHY.

date. I ordered a sufficient number printed so that anyone could obtain a copy gratis. As a result those engaged in building operations have become more familiar with the requirements of the law, and owners, architects and builders have shown a better disposition to comply therewith.

SUMMARY FOR YEAR 1906.

Applications filed for new buildings and alterations..	5,582
Estimated cost of new buildings and alterations....	\$126,075,565
New buildings in progress	1,115
Alterations in progress.....	678
Buildings reported unsafe.....	2,181
Violations of the Building Code reported by the inspectors	4,522

EDWARD S. MURPHY.

Recent Developments in Building Construction.

BY THE FORMER CHIEF ENGINEER OF THE MANHATTAN BUREAU OF BUILDINGS.

IT would be surprising, if, in the unprecedented building operations of recent years, there had been no new development in methods or materials of construction. And yet, when these apparently new developments are mentioned some critic will usually point out that they were known, well, ever so long ago. But until these things have found such general acceptance

that they do not call forth special mention in our trade and technical journals, they may still be said to be new. The most striking of innovations in building construction is undoubtedly reinforced concrete. The mention of buildings of this type is quite frequent now in the pages of the Record & Guide, though it was not so long ago that there was only occasionally an opportunity to speak of them. Reinforced concrete has been quite extensively used throughout the country, especially in the West, but conserva-

tive New York is only now finding a place for it. At the present time there are more than a dozen buildings under construction in Manhattan in which the structural parts are of stone concrete reinforced by steel of various shapes (most generally rods) to provide the tensional strength which the concrete lacks. Fully twice that number are already completed, in which part, if not all, of the construction is in reinforced concrete.

There is hardly a type of construction in steel or masonry that cannot be reproduced in reinforced concrete, the preference for any one of these constructions being generally a question of appearance or economy. It is too bad that the advocates of the concrete construction sometimes resort to bad practice in design or construction for the sake of securing that economy. This is sure ultimately to redound to their disadvantage. For the failures of this construction that we read of occasionally, are generally attributable to that cause. These failures naturally create in the mind of the layman (who must be depended upon to furnish the capital for building operations) a prejudice against a legitimate and, for certain purposes, excellent construction.

New York City was—in this country, at least—the first municipality to lay down guiding principles for reinforced concrete construction, in the regulations of the Bureau of Buildings that have been from time to time published in the Record & Guide. These regulations for the Borough of Manhattan represent the best practice, and have served as a basis for the regulations adopted by other cities in this country. They do not go into unnecessary detail, and for that reason are not onerous. If conscientiously and intelligently applied the result will be safe construction. The present practice of many of our architects and owners, however, of leaving the design for reinforced concrete to the contractor is to be condemned. The construction should be designed or, at least, checked by an engineer, independent of any contractor.

Competent superintendence during construction is a most important element in successful reinforced concrete work. The permissible working stresses in use are based on the assumption that only good materials, properly mixed and prepared are used. The prescribed proportions of cement, sand and stone, must be constantly maintained, and for good work must be mixed mechanically. Care must be exercised to see that the reinforcement is provided where called for, and to make sure that it is in the position fixed by the design. A slight shifting of the tension rods may very materially weaken a beam or seriously affect its fire resisting quality. The so-called "Unit" systems, in which the steel work is previously wired together, overcome this danger by maintaining at all times the proper position of the reinforcement.

It is strange that the most important structural element of a building, the column, should not have received more study than it has. Here again New York (Manhattan) practice, though the most conservative, is the best. Higher unit stresses are allowed on the concrete in columns when they are wrapped than in the plain column. But it is to be feared that much of the so-called wrapping or banding of columns is such in name only. The best column thus far developed, and the one capable of greatest loading within proper working stresses, is that used in the ten-story McGraw Building in West 39th street.



R. P. MILLER.

At the present time there are more than a dozen buildings under construction in Manhattan in which the structural parts are of stone concrete reinforced by steel of various shapes (most generally rods) to provide the tensional strength which the concrete lacks. Fully twice that number are already completed, in which part, if not all, of the construction is in reinforced concrete.

There is hardly a type of construction in steel or masonry that cannot be reproduced in reinforced concrete, the preference for any one of these constructions being generally a question of appearance or economy. It is too bad that the advocates of the concrete construction sometimes resort to bad practice



George A. Fuller Co., Builder.

PLAZA HOTEL.

H. J. Hardenbergh, Architect.

Here the steel reinforcement is in itself sufficient to carry the dead load of the structure. The additional strength required for live load and other forces is provided by the concrete.

Of the structures thus far completed or under construction in Manhattan about one-fifth are residence buildings, the rest being business buildings, chiefly lofts and garages. For factory purposes this form of construction is undoubtedly the most suitable, for in it we have mass to take up vibration. One visit to a concrete structure where heavy machinery is in operation, would be all that is necessary to convince any un-

The natural outcome of the great development of the cement industry in this country is the development of new cement products. Thus, in addition to reinforced concrete and concrete blocks and somewhat in the nature of the latter, is the cement brick coming into the market. These bricks have shown a very high resistance to crushing. According to the reports of the Building Bureau some test pieces have reached as much as 7,000 pounds per square inch ultimate load.

There is one other form in which cement is being used that is worthy of mention, though little has been done with it in



THE KNICKERBOCKER HOTEL FROM THE NORTHWEST CORNER OF BROADWAY AND
42D STREET.
Bruce Price, } Associated.
Marvin & Davis, }
Trowbridge & Livingston, Architects.

(Photo by A. Patzig.)

biased mind. Here, then, is the field in which this construction should be developed.

A movement which has received a great impetus in the West, but has found little support thus far in New York, practically none in Manhattan, is the use of concrete building blocks for the walls of buildings. In the outlying districts of Greater New York examples of their use may be found in numerous private dwellings. Economy in construction is one of the advantages claimed for them; ease and rapidity of production are others. The blocks are generally made in moulding machines that can be operated by one or two men. There is still much difference of opinion as to their architectural value. Structurally, they are satisfactory in low buildings where loads are light. Being of necessity made of a dry mixture they are not apt to develop the full strength of a good concrete, and on account of the hollow spaces the effective carrying capacity is not more than half of that of ordinary brickwork of same wall thickness.

this neighborhood. I refer to what is called cast stone. Very artistic and beautiful effects have been secured in imitation of cut stone, particularly limestone. The word imitation will, no doubt, be objected to by the inventors, as they will not even admit the name artificial stone. The process of manufacture consists in mixing up Portland cement, sand and some very fine broken stone (depending on the color to be produced), with water, to about the consistency of molasses. This is then run into sand moulds very much as cast iron is poured, and allowed to set sufficiently for removal from the mould, when it is stored in a damp place and allowed to cure and harden. It is particularly adapted for the ornamental stone work of exterior walls.

Closely allied to these cement products is the so-called sand-lime brick, of which about twenty million have thus far been used in this city. These bricks have had their greatest use in sections of the country where clay bricks are difficult to get. When well made they are equal to the ordinary clay brick in

their physical characteristics. In this market where an unusually good product comes from our brick yards, the sand-lime brick has had a hard time in competition. On account of its light color it is well adapted for interior court walls and has been successfully used for that purpose in the Phipps Model Tenements and in the Lorsch building in Maiden lane. It has also found use as a front brick, as in the Hotel Latham in East Twenty-eighth Street.

This product, a mixture of lime and sand, pressed into shape by heavy machinery and then hardened or set by subjection to steam under pressure in large cylinders, is also now being made into larger hollow building blocks, similar to the concrete building blocks. Great strength is claimed for the material in this form. Its appearance is said to be very pleasing, looking much

like cut stone. None of it has yet been used in New York; the nearest application of its use has been in the Carnegie Library building of Philadelphia.

RUDOLPH P. MILLER.

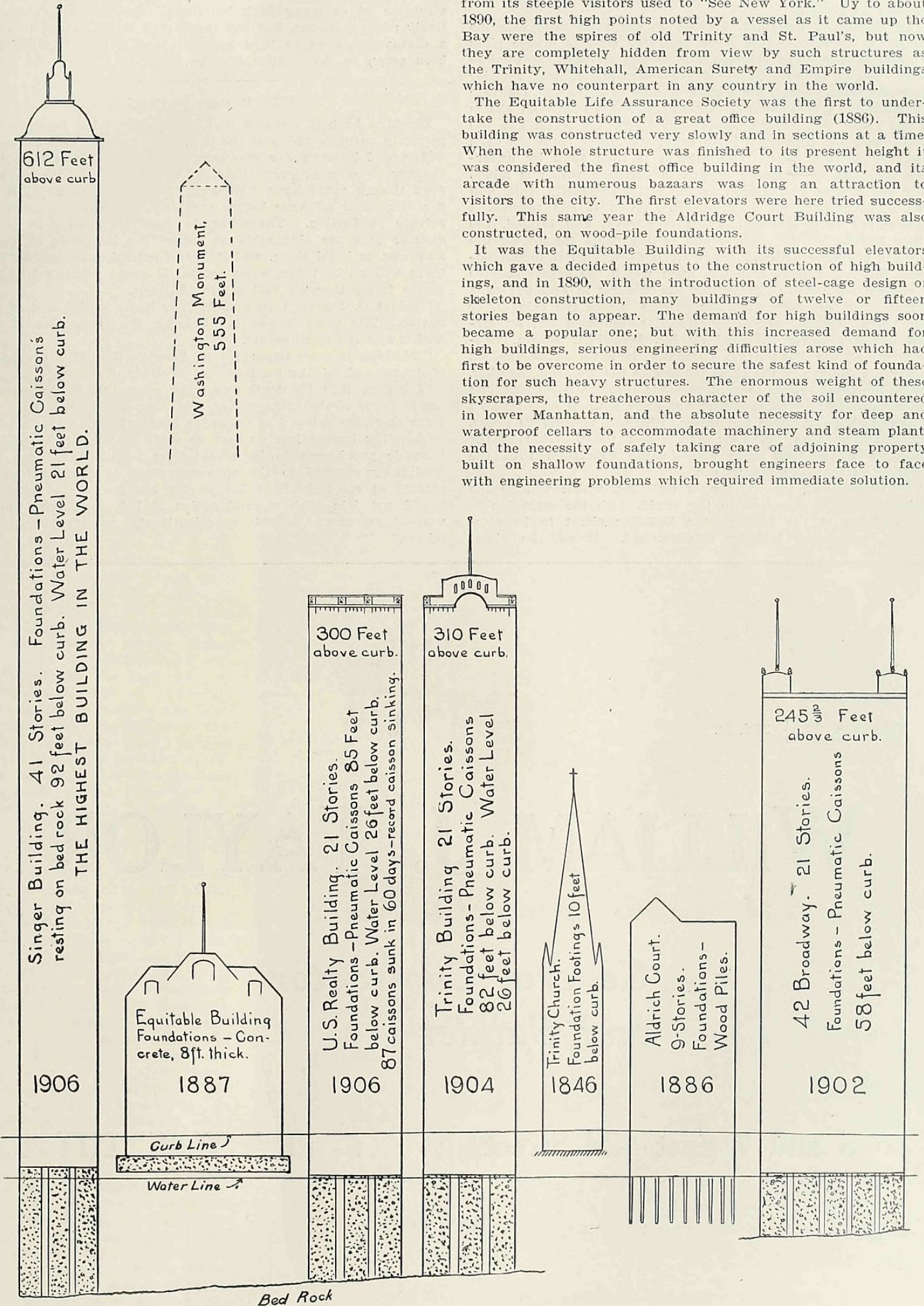
Foundations of High Buildings.

By M. Deutsch, C. E.

IT WAS not until after the Civil War that five-story buildings made their appearance to any extent. During the period 1836 to 1852 several high churches were built in New York City, of which the Trinity and Grace churches are the only ones remaining. Trinity Church, built in 1846, for many years was considered the highest structure in America, and from its steeple visitors used to "See New York." Uy to about 1890, the first high points noted by a vessel as it came up the Bay were the spires of old Trinity and St. Paul's, but now they are completely hidden from view by such structures as the Trinity, Whitehall, American Surety and Empire buildings which have no counterpart in any country in the world.

The Equitable Life Assurance Society was the first to undertake the construction of a great office building (1886). This building was constructed very slowly and in sections at a time. When the whole structure was finished to its present height it was considered the finest office building in the world, and its arcade with numerous bazaars was long an attraction to visitors to the city. The first elevators were here tried successfully. This same year the Aldrich Court Building was also constructed, on wood-pile foundations.

It was the Equitable Building with its successful elevators which gave a decided impetus to the construction of high buildings, and in 1890, with the introduction of steel-cage design or skeleton construction, many buildings of twelve or fifteen stories began to appear. The demand for high buildings soon became a popular one; but with this increased demand for high buildings, serious engineering difficulties arose which had first to be overcome in order to secure the safest kind of foundation for such heavy structures. The enormous weight of these skyscrapers, the treacherous character of the soil encountered in lower Manhattan, and the absolute necessity for deep and waterproof cellars to accommodate machinery and steam plant, and the necessity of safely taking care of adjoining property built on shallow foundations, brought engineers face to face with engineering problems which required immediate solution.



Among the first to solve these engineering problems were the engineers of the Foundation Company. The Manhattan Life Building on Broadway (1892) was the first building where the pneumatic caissons were used for constructing foundations, and it was soon followed by the American Surety, Empire, Washington Life Building, Standard Oil, Commercial Cable Annex and others. When we consider that in lower Manhattan there is a layer of 45 to 75 ft. of quicksand and other water-bearing strata overlying the rock and that a great many of the old buildings in this vicinity have very shallow foundations resting directly on the upper soil, it can be seen that the foundations for such very high buildings must go down to rock in order to safely support their enormous weights, and that to reach bedrock a method must be adopted which will not disturb the fluid material upon which the adjoining building may be resting.

The engineers, therefore, decided to use pneumatic caissons similar to those that are often used for sinking bridge piers to great depths. The caissons are simple, air-tight, bottomless boxes, square or cylindrical in cross-section, having interior chambers large enough for a gang of men to enter and excavate the bottom. The excavated material passes up through shafts in the roof. As the caisson extends below the water-line the compressed air is pumped in to expel the water from the open lower or cutting edge. The caisson is thus sunk by undermining, aided by a heavy weight of concrete which is added over the roof of the caisson as the latter gradually sinks and also by additional pig iron blocks. When it has reached a satisfactory hard stratum, which is cleaned and leveled, the whole interior of the caisson and of the shaft connecting the working chamber with the outer air is filled with rammed concrete, forming a solid monolith upon which the superstructure is readily supported. To permit the passing in and out of a bucket or of the men from the outside air of the caisson, or vice versa, without excessive loss of compressed air, an air-lock or air-chamber invented by Mr. Daniel A. Moran, vice-president of the Foundation Company, is used. This air-lock surmounts the top of the shaft leading to the working chamber, and it is now possible to sink caissons through quicksand and water close enough to adjoining buildings without causing flow of material from under the latter, which if allowed to occur, would settle those buildings and crack them. This is the invention which has made possible the construction of the skyscrapers in lower Manhattan.

The foundations for the Singer Building, which will be the highest masonry structure in the world, with the exception of the addition to the Metropolitan Building about to be commenced, are being laid by this method. It will be about

three times as high as the spire of the old Trinity Church, and is more than twice the height of the "Flat Iron." The area of its combined floor space will be about 413,820 square feet, or about nine and a half acres. On this, considering it all on one level, 100,000 men could find standing room. The total area will be 28 city blocks, or equal to all the available space in a territory bounded by Exchange Place on the south, Dey Street on the north, Trinity Place on the west and Pearl Street on the east. Within this enormous structure are to be accommodations for an office force of perhaps 7,000 persons, or about seven regiments.

It is the enormous value of building sites in New York City which will always continue to encourage the construction of multiple story buildings in order to increase the number of tenants for a given ground area, but of recent years the construction of so many high buildings, especially on comparatively narrow streets, has put those of a lesser height to such a disadvantage as to light and air that a new impetus has been given to sky-scraper erection.

Why It Pays to Build.

Brooklyn brokers contend that conditions in the borough are perfectly natural, and that the difficulties in the way of a more widespread business are gradually dissolving. "As a rule it is cheaper to own property than to rent," said a broker, "and even though rents have advanced 20 per cent. there must be a still greater advance before reaching the point of extensive private production. There remain desirable houses in every quarter that are obtainable at values far less than it would now cost to build them, and it is the professional opinion that these will all be taken when capital is again permitted to circulate freely through real estate channels.

"Robert G. Ingersoll once said: 'The home is the unit of the nation. The more homes the broader the foundation of the nation and the more secure.

"'Nothing is more important to America than that the babes of America should be born around firesides of homes.'

"I believe that Ingersoll was right upon this subject—and I am in favor of the home owner, first, last and all the time, and I am therefore opposed to extensive landlordism. I am in favor of building houses just as fast as such houses can be sold to bonafide purchasers to be occupied as homes—but I am unqualifiedly opposed to the encouragement of combinations of capital to erect dwelling houses for the purpose of rent. I would not join such a combination if I had millions to invest—therefore I cannot conscientiously recommend it to others."

Telephone 433 }
434 } 38th St.

WILLIAM J. TAYLOR

*General Contractor
and Builder*

5 and 7 East 42d Street : : : NEW YORK CITY

Co-operative Building.

FEW people, I think, properly measure the importance of the co-operative savings and home building association as a factor in the development of real estate values in and about New York City. Indeed, the growth of co-operative financing in the country at large has been a fact of prodigious importance that has seemingly escaped the notice of students of political economy. And from the general public these institutions have not attracted attention at all commensurate with their importance as factors in social growth and prosperity. A movement that can show in 1906 an attachment of 1,642,127 active members and total assets of \$629,324,257, and that is steadily growing in membership and financial importance, can hardly be ignored in the life of the republic. It is to be remembered that this vast membership is composed of men and women of small means,



CHARLES O'CONNOR HENNESSY.

associated to save money and build homes. Relying little or not at all upon governmental favor or special privilege, and depending mainly upon Benjamin Franklin's philosophy of Self-Help, the movement may be said to have the most far-reaching effect upon the development of individual as well as national character.

How many people realize that in the States of New York and New Jersey combined there are nearly 650 of these co-operative banks or building associations, with a membership exceeding 225,000 people and assets approaching \$1,000,000,000? These assets consist almost exclusively of monthly payment mortgages upon small homes. Many thousands of such homes have been created in the suburbs of the metropolis. That the promoters and beneficiaries of these institutions are mainly people of small or moderate means is indicated by the fact that the average amount of individual mortgages in building and loan associations throughout New York and New Jersey is less than \$2,000. The average monthly installment of principal and interest required to be paid by the home-buying mortgagor is seldom more than 1 per cent. of the amount of the mortgage indebtedness.

Despite the fact that the widely advertised failure of a few fraudulent concerns claiming to do business on the building and loan plan has tended to discredit these institutions in some directions, the genuine local building and loan associations carry on their business with a degree of equity and fair dealing and with a freedom from loss that is surprising, considering the magnitude of their operations and the fact that their management is usually in the hands of men of modest abilities and of no special training as financiers.

While many of the local building and loan associations continue to preserve old-fashioned methods in their dealings with their membership, maintaining as incidents of the business, fees, fines and premiums for loans, the larger and more progressive institutions have adopted the simpler Ohio methods, under

which one class of members is encouraged to accumulate savings in either regular or irregular installments to be loaned to another class at simple interest for the building or buying of homes.

This method, as exemplified by the largest society of this class in New York City, has produced and is producing most interesting results. The society in question has built or bought for its membership over 800 homes in the metropolitan district. It charges no entrance fees or premiums and imposes no fines upon borrowers. Any person with good security can join the society without formalities and get a loan to build or buy a home within twenty-five miles of the City Hall. Its borrowing members pay 6 per cent. and its investing members receive 5.

Loans are repaid in monthly installments that do not exceed \$1 per month upon each \$100 of loan, but may be more at the option of the borrower or less at the option of the society. Interest is deducted from the monthly payments, but calculated only upon the sum remaining due upon first day of each month. Thus, while the mortgage payment remains level and unchanged, unless the borrower wants to increase it, an increasing proportion of it every month goes to liquidate the principal of the indebtedness. The borrower paying \$1 per month per \$100 upon this system wipes out his indebtedness in a little more than eleven years and six months. He is at liberty at any time upon thirty days' notice to cancel the mortgage by paying the net balance of the debt as ascertained at the nearest previous monthly adjustment. This system, which originated with the society in question, has now been adopted by others of the co-operative home building associations of New York, and by means of it hundreds of homes are being created in the suburbs of the city.

There is apparently a great future for rightly-managed co-operative savings and home building institutions, and the reports and statistics of the Department of Banks, which supervises these institutions in New York State, indicates conclu-



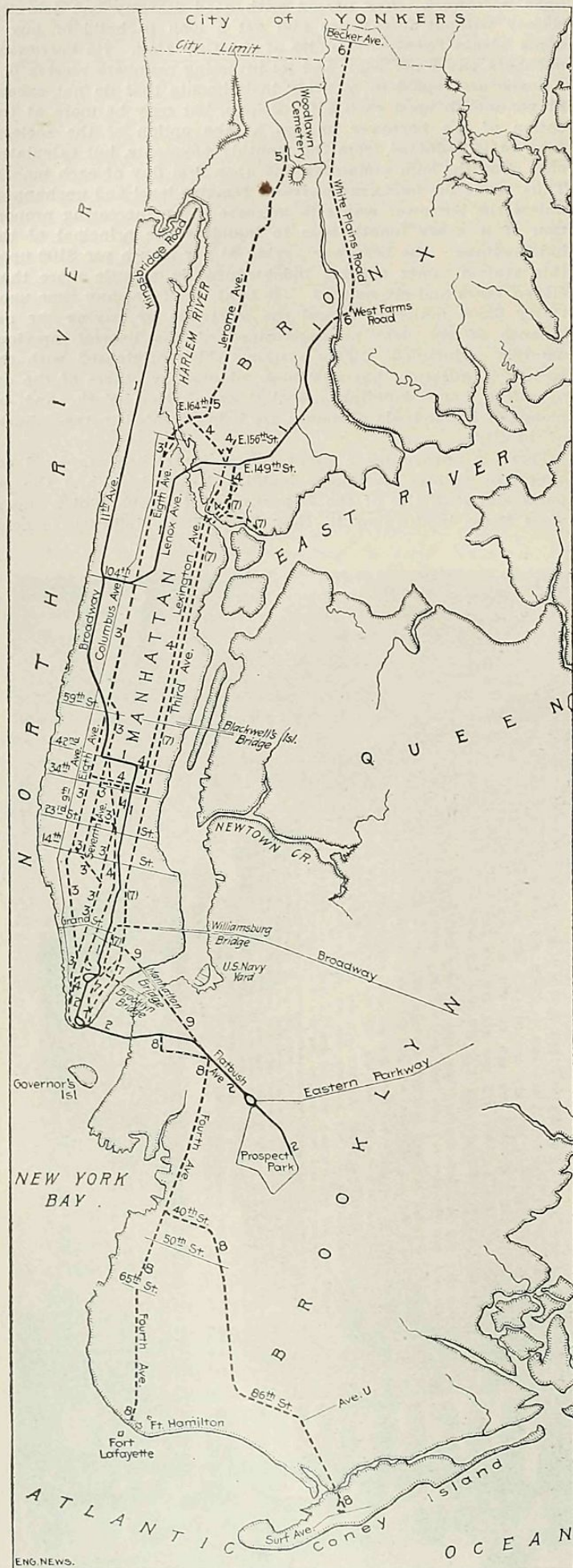
HUDSON RIVER TERMINAL BUILDING—CHURCH STREET VIEW

Geo. A. Fuller Co., Builder.

Clinton & Russell, Architects.

sively that all but a very few of them are fully worthy of public confidence. In this regard high credit should be given to the Banking Department for its persistent labors in recent years toward eliminating the bad and encouraging the good, toward closing up fraudulent and speculative institutions, and toward the enactment of stringent legislation to govern the administration and supervision of all co-operative associations that deal with savings and home building. For this unappre-

ciated public service, performed in the face of opposition, misunderstanding and sometimes slanderous criticism, honor is due to the retiring Superintendent of Banks, Mr. Kilburn, and not less to his conscientious and accomplished Deputy, Mr. George I. Skinner, who for nearly ten years has directed the departmental supervision of the co-operative building and loan associations of New York State. CHARLES O'CONNOR HENNESSY.



Routes of the Seven New Subways.

(1) Present New York Subway; (2) Brooklyn extension of present New York Subway; (3) 7th and 8th av route; (4) Lexington av route; (5) Jerome av route; (6) West Farms and White Plains route; (7) 3d av route; (8) 4th av and Bensonhurst route; (9) (7) and (8) Tri-Borough route. Descriptions of these routes have been heretofore printed. The list of stations will be found in the Record and Guide of Dec. 29, 1906.

Number and Estimated Cost of Buildings Proposed To Be Erected and Altered from 1868 to 1905.

COMPILED BY WILLIAM H. CLASS, CHIEF CLERK OF THE MANHATTAN DEPARTMENT OF BUILDINGS.

Year.	New buildings.		Alterations to buildings.		Totals.
	Num-ber.	Esti-mated cost.	Num-ber.	Esti-mated cost.	
1868	2,014	\$34,517,682	†	\$2,168,045	\$36,685,727
1869	2,348	40,352,058	†	4,228,174	44,580,232
1870	2,351	34,668,998	†	2,816,234	37,485,232
1871	2,782	42,585,391	†	4,351,981	46,937,372
1872	1,728	27,884,870	1,318	2,788,379	30,673,249
1873	1,311	24,936,535	1,311	3,496,995	28,433,530
1874	1,388	16,667,417	1,429	3,532,147	20,199,564
1875	1,406	18,226,870	1,258	3,200,438	21,427,308
1876	1,379	15,903,880	1,177	3,635,478	19,539,358
1877	1,432	13,365,114	1,308	3,215,125	16,580,239
1878	1,672	15,219,680	1,209	2,621,046	17,840,726
1879	2,065	22,567,322	1,373	3,300,110	25,867,432
1880	2,252	29,115,335	1,352	3,862,111	32,977,446
1881	2,682	43,391,300	1,497	4,132,070	47,523,370
1882	2,577	44,793,186	1,691	4,267,181	49,060,367
1883	2,623	44,304,638	1,870	4,540,436	48,845,074
1884	2,897	41,461,208	2,460	4,659,532	46,120,740
1885	3,368	45,374,013	2,506	7,594,825	52,968,838
1886	4,092	58,750,733	2,621	5,909,314	64,660,047
1887	4,344	67,069,570	2,287	6,397,985	73,467,555
1888	3,081	47,289,145	2,475	7,395,960	54,685,105
1889	4,207	69,504,872	2,515	6,407,944	75,912,816
1890	3,538	75,099,812	2,422	7,215,975	82,315,787
1891	2,817	56,156,631	2,388	7,457,131	63,613,762
1892	3,001	59,273,729	2,104	7,413,713	66,687,442
1893	2,275	54,859,318	2,107	6,942,967	61,802,285
1894	2,614	51,673,997	1,899	4,888,610	56,562,607
1895	3,870	85,528,017	2,202	6,998,202	92,526,219
1896	3,144	73,781,945	2,345	6,575,882	80,357,827
1897	3,554	86,456,664	1,790	7,462,083	93,918,747
*1898	8,489	91,518,643	5,981	7,709,181	99,227,824
*1899	10,970	156,843,321	7,413	10,149,107	166,992,428
Totals	98,280	\$1,589,141,894	62,308	\$167,344,361	\$1,756,486,255

*Greater New York.
†The number of alterations for these years is not on record.

BOROUGH OF MANHATTAN AND THE BRONX.

1898	3,592	72,887,146	2,308	5,597,481	78,484,627
1899	4,934	129,250,376	3,354	7,191,934	136,442,310
*1900	6,278	78,291,544	6,551	9,661,098	87,952,642
*1901	7,657	136,051,697	6,005	14,020,960	150,072,657
°1902	860	80,384,375	2,017	9,498,403	89,882,778
°1903	1,038	75,104,200	2,268	11,398,031	86,502,231
°1904	1,423	75,267,780	2,390	8,904,405	84,172,185
°1905	2,572	124,746,552	4,469	14,105,720	138,852,272
Total	118,108	\$2,158,988,042	86,008	\$234,932,978	\$2,393,921,020

°Borough of Manhattan.
*Greater New York.

BOROUGH OF MANHATTAN AND THE BRONX.

1900	2,032	58,123,263	2,912	7,002,685	65,125,948
1901	2,551	122,176,640	3,043	10,944,766	133,121,406

—Queer allegations about the real estate transactions of the Pennsylvania crowd are coming out, and they tend to strengthen the impression that the Pennsylvania company is either an enormous speculator in real estate not needed for its business as a common carrier, or that the "dummy" corporations and individuals supposedly acting for the railroad system are in reality speculating on their own account. As a matter of fact it is impossible for the ordinary eye to distinguish what transactions are for the sake of the company from those which may be for officers and employees acting as individuals but permitting the impression to go out either that they are acting for the main company, or that they have inside knowledge that the lands they purchase will increase in value, for reasons connected with the secret plans of the railroad. A remarkable amount of unnecessary secrecy is maintained by the Pennsylvania over its operations in this city, which seems strange to American ideas, even if it be not inconsistent with a straightforward policy. Allowing it is necessary in planning routes and terminals to exercise a certain amount of business acumen, it is at the same time clear that too much mystery gives play to boundless suppositions, of which advantage can be taken by persons thought to be in possession of official secrets. Thus, during the Queens boom frequent rumors have been printed of purchases by Pennsylvania officers on their private account, with the public left in darkness as to how much of each story is true, and what part can be attributed to the imagination of the rank outsiders.

Year's Building Material Market

Remarkable Increase Since 1900, but a Falling Off From 1905

Review of the Leading Departments to the Close of 1906



Hudson River Brick Trade.

BY THE PRESIDENT OF THE MANUFACTURERS' ASSOCIATION.

THE quantity of building bricks supplied to New York City from 1894 to 1902, being constantly in excess of demand, brought prices so low that proceeds of yearly sales were not adequate to cost of maintaining the plants and production of the goods. As capital was exhausted various plants were abandoned, and others to a greater or less extent curtailed their



WILLIAM K. HAMMOND.

quantity of output because of the impossibility of finding a market for their full capacity at any price. This condition, low price and reducing output yearly continued until 1903, when for a short time supply and demand were even, and prices steady. Demand increased and prices advanced to a paying basis for the manufacturers. In 1904 prices, owing to the unexpected and greater than ever known demand, ran up to the get-rich-quick expectation limit, so that promoters, prospectors and,

in a number of cases, old manufacturers believing this enormous demand would continue for many years, began the construction of new plants, increased the capacity of many of those already in operation, refitted and restored to use those which had been abandoned. During 1905 all these were in process of completion, and their output not ready for delivery until the latter part of this season, and in fact has not, as yet, been fully marketed.

This production is coming here, however, and supply is again superior to demand, which has fallen from the great demand of 1905 so that at this writing it has required 160,000,000 less from North River products than were supplied for the corresponding time last year. This great falling off has occurred since August 1 of this year, as prior to that, or from January 1, 1905, to August 1, 1905, and from January 1, 1906, to August 1, 1906, the demand and supply had not varied to any extent in amount of quantity on the spot here, but the prices of 1906 were affected to a smash by the avalanche of brick in process of manufacture, and the persistent efforts of the selling interests to get from under before full supply from these increased facilities should be forced on the market, with the makers' demands for immediate sale. In this business, demand and supply are the price makers, and as the facilities for manufacturing brick are so greatly increased, and so many men are ready to operate their plants to the limit of exhaustion of their capital, as has been demonstrated in the past, and history ever repeats herself, so as it is fair to assume that supply will be in excess of demand, therefore prices cannot reach a point high enough to cause owners of real estate or builders to take thought for a substitute for brick, as the low-priced building material, and as has for centuries been proved, the best ever used.

Bricks, i. e., the ordinary, old-fashioned clay and sand brick, are made of earth, air, fire and water, and none of these elements singly, or a combination of all, can destroy the hard-burned brick. Sunk beneath the surface of the earth, where either dry or moist air prevails at intervals, or used in construction above, where exposed to varying temperatures, the brick retains its properties and is imperishable from time's effects.

The millions of second-hand bricks which have been used in structures in this and adjacent cities during the past few years, and which were made, many of them, in the early part of the last century, proves, if proof be needed, that bricks never lose their basic qualities, as these bricks were used the last time in buildings of vastly greater value and importance than in those they first formed a part of. As to the never-wear-out quality it must be conceded that no building material is the equal of brick; and at any price, up to even the late high

water mark, time will prove it, for future as for past, the most economical, as fires cannot destroy, nor can water, or anything except pressure; and bricks have so far successfully sustained all weights which intelligent construction has placed upon them. What fire chief but knows how and where he may dispose his men in a building of brick construction; and what chief knows where he dare order his men in buildings of the other kind should fires occur, as occur they will. Bricks should not need a protector, nor any word spoken or uttered in their behalf as a building material, nor have they ever in building material history been asked to yield the first place of eternal service. Yet we now see would-be rivals for favor, with great promise for future economy, and no record of success, yet many failures in the very near past, putting up a bold demand for adoption, and accepted by some at a value which to those who know it would seem hope only can have supplied. As the solidity and safety of their new methods seem to depend so entirely on the ifs—if properly blended, if properly mixed, if properly everything, until finally the if seems to be the all of it, while certainty and security are the dependable qualities of the brick. Certainty of enormous supplies at prices which no other material can successfully maintain against, and security of the structures when bricks are the building material for strength and endurance.

WM. K. HAMMOND,

President Association Brick Manufacturers and Agents.
New York City, Dec. 27, 1906.

Prices of Common Brick During 1907.

The course of wholesale quotations for good brick during the year is included in the following list, the minimum quotation being given in each case:

Jan. 6.....\$10.00	May 5.....\$11.00	Sept. 1.....\$5.50
Feb. 3..... 11.00	June 2..... 11.00	Oct. 6..... 6.00
March 3..... 11.00	July 7..... 7.50	Nov. 3..... 5.50
April 7..... 10.75	August 5.50	Dec. 5.00
		Jan. 5, 1907... 5.50

Comparative Brick Prices on January 1.

	North River.	Pale.
1885	\$5.00@ \$6.25	\$2.50@ \$3.25
1895	5.25@ 5.37½	2.00@ 2.50
1898	5.00@ 5.12½	3.00@ 3.25
1903	6.25@ 6.50	3.00@ 3.50
1904	7.75@ 8.00	4.00@ 4.50
1905	7.50@ 8.25	5.25@
1906	10.50@ 10.00	—
1907	5.50@ 6.00	3.00@ 3.50

PRODUCTION OF COMMON BRICK IN THE HUDSON RIVER DISTRICT.

County.	1904.		Value.	Average price per Thousand.
	Number of firms reporting.	Quantity. Thousands.		
Albany	8	61,977	\$328,500	\$5.30
Columbia	5	70,200	466,000	6.64
Dutchess	16	150,997	850,030	5.63
Greene	4	37,551	241,444	6.43
Orange	8	92,643	552,064	5.96
Rensselaer	6	17,385	83,963	4.83
Rockland	32	219,263	1,400,016	6.39
Ulster	22	226,452	1,240,296	5.48
Westchester	7	52,250	310,025	5.94
Total for N. Y....	108	928,718	\$5,472,338	\$5.89
Bergen Co., N. J....	11	58,926	337,776	5.73
Total	119	987,644	\$5,810,114	\$5.88

County.	1905.		Value.	Average price per Thousand.
	Number of firms reporting.	Quantity. Thousands.		
Albany	10	71,992	\$496,029	\$6.89
Columbia	6	82,260	596,663	7.25
Dutchess	16	182,807	1,237,597	6.77
Greene	6	49,338	374,720	7.59
Orange	8	141,930	1,015,776	7.16
Rensselaer	5	17,200	89,900	5.23
Rockland	34	324,583	2,407,500	7.42
Ulster	23	278,556	1,806,691	6.49
Westchester	9	81,000	588,272	7.26
Total for N. Y....	117	1,229,666	\$8,613,148	\$7.00
Bergen Co., N. J....	12	67,723	450,605	6.65
Total	129	1,297,389	\$9,063,753	\$6.99

W. K. HAMMOND



*Manufacturer of the following
Standard brands of brick:*



These bricks are manufactured from the finest body of clay and sand to be found on the Hudson River. The best skill obtainable is engaged in their manufacture and selection, and consequently a first-class brick is produced whose quality and size will recommend it to every builder. These bricks are guaranteed to be 8 inches long by 3 1-2 inches wide by 2 3-8 inches thick, full measure.

Below is a list of the Largest Jobbers in New York, Brooklyn and immediate vicinity who handle these brands:

AMERICAN BUILDERS' SUPPLY CO.
Stagg St. and Morgan Av.,
Brooklyn, N. Y.
Phone, Williamsburg 2418.

ATLANTIC CEMENT CO.,
5 E. 42d Street, New York.
Phone, 38th St. 6785.

JOHN BELL CO.,
138th St. and Gerard Av., New York City
Phone, Melrose 3186.

THOS. BOWNE & SON CO.,
Westchester, N. Y.
Phone, Westchester 12.

BRAUN & HOWE,
692 Manhattan Av., Brooklyn, N. Y.
Phone, Greenpoint 365.

BRISLIN COMPANY,
Glenmore and Atkins Aves.,
Brooklyn, N. Y.
Phone, East New York 1082.

BROOKLYN BUILDERS' SUPPLY CO.,
Sixth St. and Gowanus Canal,
Brooklyn, N. Y.
Phone, South 2256.

WILLIAM V. BURROUGHS BRICK CO.,
Kent Av. and Hewes St., Brooklyn, N. Y.
Phone, Williamsburg 428.

M. M. CANDA,
3d St. and Gowanus Canal,
Brooklyn, N. Y.
Phone, South 331.

CANDEE, SMITH & HOWLAND CO.,
Foot of E. 26th St., New York City.
Phone, Mad. Sq. 3260.

AUDLEY, CLARKE CO.,
527 Smith St., Brooklyn, N. Y.
Phone, Hamilton 1024.

CLONIN & MESSENGER,
Astoria, L. I.
Phone, Astoria 8-b.

JOS. H. COLYER,
Foot Washington St., Brooklyn, N. Y.
Phone, Main 1284.

F. D. CREAMER & CO.,
Foot of 42d St., Brooklyn, N. Y.
Phone, Bay Ridge 900.

CRESCENT BRICK & SUPPLY CO.,
Foot of 27th St., Brooklyn, N. Y.
Phone, South 1500.

CROPSEY & MITCHELL,
Cropsey Av., foot of Bay 35th St.,
Brooklyn, N. Y.
Phone, Bath Beach 25.

RUFUS DARROW & SON,
47th St. and N. R., New York City.
Phone, Bryant 438.

EMPIRE BRICK & SUPPLY CO.,
874 Broadway, New York City.
Phone, Gramercy 6280.

CLAYTON S. GOSS & CO.,
S. W. Cor. 51st St and 11th Av.,
New York City.
Phone, Columbus 2912.

P. J. HEANEY CO.,
176th St. and West Farms Road,
New York.
Phone, Tremont 360.

WM. T. HOOKEY,
129th St. and 3d Av., New York City.
Phone, Harlem 1403.

F. W. JAHNS,
West 17th St. and Coney Island Creek,
Brooklyn, N. Y.
Phone, Coney Island 35.

THE JOHN P. KANE CO.,
287 Fourth Av., New York City.
Phone, Gramercy 3231.

THE JOHN H. MAHNKEN CO.,
632 Kent Av., Brooklyn, N. Y.
Phone, Williamsburg 3700.

THE MASONS' SUPPLIES CO.,
284-285 South St., New York City.
Phone, Orchard 37.

R. H. MATHEWS CO.,
135th St. and Harlem River, New York.

EDWARD J. McLAUGHLIN,
4824 3d Av., Brooklyn, N. Y.
Phone, Bay Ridge 153.

WM. H. MESEROLE,
784 Manhattan Av., Brooklyn, N. Y.
Phone, Greenpoint 963.

CLIFFORD L. MILLER,
125 East 23d St., New York City.
Phone, Gramercy 6091.

JOHN MORTON'S SONS CO.,
Carroll St. and Gowanus Canal,
Brooklyn, N. Y.
Phone, Hamilton 732.

MURTAGH & McCARTHY,
Foot of Rivington St., New York City.
Phone, Orchard 520.

MURTHA & SCHMOHL CO.,
14th St. and E. R., New York City.
Phone, Orchard 578.

OVERBAUGH-CAMP CO.,
Kingsbridge, New York City.
Phone, Tremont 59.

N. & W. J. PECK,
Foot of E. 48th St., New York City.
Phone, 38th 5787.

JOHN A. PHILBRICK & BRO.,
97th St. and E. R., New York City.
Phone, 79th St. 4067.

GEO. B. RAYMOND & CO.,
484 E 138th St., New York City.
Phone, Melrose 2914.

W. A. THOMAS CO.,
Foot E. 3d St., New York City.
Phone, Orchard 101 and 3475.

CHAS. WENZ,
2432 Atlantic Av., Brooklyn, N. Y.
Phone, East New York 386.

NATHANIEL WISE CO.,
79th St. and E. R., New York City.
Phone, 79-1567.

THEODORE C. WOOD,
157 Christopher St., New York City.
Phone, Spring 3610.

*Architects, builders and owners outside of New York and Brooklyn desiring bricks
of this quality may address direct, W. K. HAMMOND,*

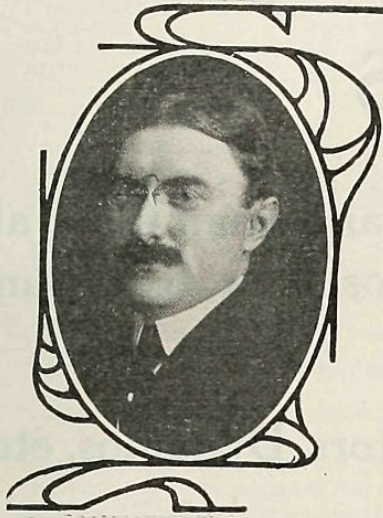
628 West Fifty-Second Street : NEW YORK CITY

PHONE, No. 2760 COLUMBUS

Front and Ornamental Brick.

PRICES REMAINED NEARLY STATIONARY—WIDENING FIELD OF THE MANUFACTURER—ADAPTABILITY OF BRICK TO NEW STYLES OF CONSTRUCTION.

THE special interest in front and ornamental brick by those interested in building construction, is derived from the fact that no other commodity has contributed more nor, in our opinion, as much to the pleasing effects produced in exterior walls in which, by the use of front bricks, utility, durability and beauty may be combined at moderate cost. And it is to the manufacturers of front bricks that much of the credit is due for the complete transformation in the external aspect of our city, so noticeable to strangers, whose visits are sufficiently infrequent to make the many changes for the better more strikingly apparent, than to us who observe them in their gradual though rapid development. In consequence, our observation is less sensitive and we fail to fully comprehend the metamorphosis that has occurred within twenty years or less.



HERBERT D. LOUNSBURY.

It is well within the easy recollection of even comparatively young men that the general appearance of our buildings, whether those of a commercial or residential character, was monotonous at least, in too many instances really ugly, and seldom attractive or beautiful. Block after block could be searched for an inviting facade of design and color only to find, with rare exceptions, mile upon mile of brown stone or red brick, treated with the iron-bound and uninteresting conventions of that period.

The monotony of color scheme then so noticeable was due very largely to the limited variety of material and colors possible to employ and which, therefore, confined an attempt at original treatment solely to design and detail, with little opportunity for the exercise of originality in color effects.

But now all is changed and instead, we have available such a variety of shades in facing bricks that almost any desired color effect is susceptible of successful development. The advent of the buff, white, gray, speckled, tan, old-gold and iron-spot brick, has relieved not only the tedious similarity of effect which formerly obtained in structures of the same class, but it has created a use, and therefore a value, for embellishing materials such as terra cotta and stone which they never before possessed to so great a degree.

This choice of shades in front brick, which the market now so abundantly affords is due to the more intimate knowledge of clays and the scientific manner of their burning in the kilns, which up to a few years ago, was not a highly developed art. It was not the discovery only of new clay and shale deposits, by which this evolution in making front bricks has been accomplished, but also by a most patient, thoughtful and expensive series of experiments, which followed these discoveries, and without which the raw material would have been of little value.

But notwithstanding the strides made in this industry and the remarkable advance in the knowledge of understanding and manipulating clays, it is a curious fact that it is quite impossible to produce a brick of precisely the same shade and texture at two separate brick yards, particularly in light colors, even though the clay may be of the same general character on each. This gives a certain distinction to each make of brick produced and whereas most other building materials are becoming more and more localized as to their markets, the sphere is becoming wider for the front brick maker, due to the variety of tastes and the fact that each brick yard has more or less of a unique product to offer.

This statement as to the constantly broadening market for this material, is attested by the fact that more front bricks in quantity, and more respecting variety of shade, are shipped to New York from a distance of four to eight hundred miles, than ever before in the history of the building industry, notwithstanding the local manufacturers have kept keenly abreast of the times. But the increasing diversity of tastes and desire for new and artistic effects creates the demand and hence a market, here in New York, for many makes of front brick which at first might seem too remotely made from this great building centre, to successfully withstand local competition. Yet it is done, and has been for some years.

The experience of recent years has also demonstrated the peculiar adaptability of front bricks to new styles of construction. These are the classes of work proceeding chiefly from our municipal, transit, railroad, lighting and other improvements and some of a less public character.

In much fine work such as the new subway stations, churches, court-houses and similar buildings, front bricks are being used for interior wall surfaces. Notable examples of this style of construction are the subway stations at City Hall, 181st Street and Broadway and at other points along the line both above and below ground; also the new Zoological Buildings in Bronx Park where this material both ornaments and supplies a finish for interior and exterior walls. This work was designed by Messrs. Heins & LaFarge who made a similar application of front bricks in the stair halls in the chapels at the Cathedral of St. John the Divine. Other good examples are the Fiss, Doerr & Carroll Horse Market in 24th and 25th Streets, east of Lexington avenue, the new power stations for the elevated and subway lines and the generating plants of local lighting companies, also portions of the Pennsylvania tunnel and many new court buildings, engine houses and schools.

Front bricks in interior walls supply at low cost a finish that is durable and sanitary with a surface that can be washed. Such walls require no after treatment because the texture and shade of the bricks produce the most attractive effects and also render plastering, painting and decorating unnecessary. Here is economy in cost of construction, in time and special utility too.

Another development in the consumption of light-colored bricks making rapid strides in recent years, is their use in side, rear and court walls for the purpose of finish and reflecting light. A glance at the new private houses in the upper Fifth avenue section will satisfy anyone on this point and specially notable examples are the Hotel Gotham and the new U. S. Express Company's building. Walls of this class provide a hard surface for the weather and are an additional protection to steel work. They will have an attractive finished look, whereas paint and other forms of veneer require frequent renewals at great cost.

Unlike many commodities which enter into our daily use and consumption, the majority of people are profoundly ignorant of the front brick industry and many even who are users of the material fail to grasp the marvellous change that has occurred within a few years, nor realize the extent of experiments, research and vast outlay of money, which have brought all this about. It was not very long ago that a brick plant was regarded as an enterprise requiring but a modest investment and attended with the solution of no intricate problems. It is this belief which has disastrously ensnared many capable but uninformed people who were not alive to the needs of a modern and well equipped plant.

Another item of interest worthy of mention is the stability of prices. Despite the trite remark of the last few years that "material is so high" and the violent oscillations which have accompanied quotations in many building materials, prices of front brick have remained nearly stationary, a variation of 10% being ample to cover the average change during the past six years or more.

Those of us who are identified with this interesting and ancient industry, dating almost from time immemorial, have a pardonable pride that ours is a lively and not a dead or lost art, unlike many contemporaneous arts which flourished in the early history of this old world, but long since perished. Ours has been preserved through the centuries with the greatest advances made in the last two decades, but probably, with greater ones to follow.

HERBERT D. LOUNSBURY,
(Of Fredenburg & Lounsbury.)

Imports of Cement—Roman, Portland and Other Hydraulic (Pounds Dutiable).

	1904.		1905.		1906.	
	Quantities. Lbs.	Values.	Quantities. Lbs.	Values.	Quantities. Lbs.	Values.
Imported from—						
United Kingdom	6,405,030	\$22,186	13,421,400	\$42,333	154,378,456	\$450,695
Belgium	129,378,379	398,691	111,075,721	350,644	188,070,223	624,870
France	11,307,692	38,369	5,811,400	20,930	12,084,872	39,675
Germany	168,929,680	572,207	131,350,903	447,040	242,112,433	782,715
Other Europe	2,695,047	10,265	240,659	609	298,253	920
British North America	226,450	1,179	165,110	1,591	3,331,073	23,453
Other countries	3,148,400	9,863	469,615	1,783	66,295,302	302,495
Total	322,090,678	\$1,052,760	262,534,808	\$864,930	666,570,612	\$2,224,823

PHONES
3256, 3257 Franklin
NIGHT
2217 Harlem

The
Maintenance
Company
General Offices
54-56 Franklin St., New York.

INCORPORATED
1897

DEPARTMENTS

MAINTENANCE---Regularly inspects, repairs and maintains all makes of Elevators, Pumps, Motors and Dynamos at a fixed sum per annum.

REPAIRS---All makes of Elevators, Pumps, Motors, Dynamos, etc.

INSPECTION---Electric installations inspected and tested for the purpose of detecting and removing fire hazards, leakage and other defects, causing increased current bills.

METER TESTING---Current supply meters tested, bills audited and rebates on fast registering meters secured.

CONSTRUCTION---Installations of Light and Power Wiring, Elevators, Motors, Dynamos, Pumps, etc.

Elevator Repairs and Cabling a specialty

MACHINERY PROTECTION

costs but a trifle and may be the means of saving you thousands of dollars' loss, aside from the hazard to life and limb.

Under our yearly contract YOU pay a small sum and WE assume complete responsibility for breakage and repairs.

1897 - 1907

TEN YEARS AGO we introduced the idea of machinery protection. We adopted the policy of stipulating a yearly sum for Examining and Keeping in Repair all kinds of Electric Motors, Dynamos, Pumps, Elevators, etc. The success of our business is the best possible example as to the merits of the policy set forth by us.

A POSTAL will bring our representative. He'll examine your machinery, meters, etc., explain our contract, and quote you our prices for protection.

Value of the Products of Clay in the United States in 1904 and 1905, With Increase or Decrease.

In the following table will be found a comparison of the several varieties of clay products marketed in 1904 and 1905, showing the actual gain or loss in each variety, together with the percentage of gain or loss:

Product.	1904.	1905.	Inc. in 1905.	% Inc., 1905.
Common brick	\$51,768,558	\$61,394,383	\$9,625,825	18.59
Vitrified paving brick or block	7,557,425	6,703,710	*\$853,715	*11.30
Front brick	5,560,131	7,108,092	1,547,961	27.84
Fancy or ornamental brick	300,233	293,907	*6,326	*2.11
Enameled brick.....	545,397	636,279	90,882	16.66
Fire brick	†11,167,972	†12,735,404	1,567,432	14.04
Drain tile	5,348,555	5,850,210	501,655	9.38
Sewer pipe	9,187,423	10,097,089	909,666	9.90
Architectural terra cotta	4,107,473	5,003,158	895,685	21.81
Fireproofing, hollow building tile or blocks, and terra-cotta lumber.....	3,629,101	4,098,793	469,692	12.94
Tile (not drain).....	3,023,428	3,647,726	624,298	20.65
Miscellaneous	3,669,282	4,209,543	540,261	14.72
Total brick and tile	\$105,864,978	\$121,778,294	\$15,913,316	15.03
Total pottery	25,158,270	27,918,894	2,760,624	10.97
Grant total.....	\$131,023,248	\$149,697,188	\$18,673,940	14.25

*Decrease.

†Stove lining included in miscellaneous.

This table shows in a most striking manner the lines of activity. It will be observed that only two varieties of wares showed a small decrease, namely, the vitrified paving brick products and the fancy or ornamental brick product, while every other brick and tile product and the pottery industry also showed increases, some of them quite large gains, the largest being in the products used as structural materials, and especially in those materials entering into the construction of fine buildings, such as front brick, architectural terra cotta, structural tile (including roofing, wall, and floor tile) enameled brick and fireproofing.

The largest actual gain, as has been the case for many years, was in the common brick industry, which showed an increase of \$9,625,825, as compared with a gain of \$1,236,483 in 1904, although the proportional gain—18.59%—was not the largest. The proportional gain of common brick in 1904 was 2.45%.

The vitrified paving brick industry is the only one of importance that showed a decrease. This product declined from \$7,557,425 in 1904 to \$6,703,710 in 1905, a loss of \$853,715, or 11.30%. This loss is one of the most astonishing features brought out by the canvass, as this product has been increasing in popularity, as shown by its enlarging sales. The only explanation of this decrease seems to be that the demand for common brick was so great that either paving brick were used and reported as common brick, or the makers of paving brick became makers of common building brick. In 1904 the paving-brick product increased \$1,103,576, or 17.10%. The value of the prod-

uct in 1905 was, notwithstanding the decrease, greater than in 1903 by \$249,861, or 3.87%.

The front-brick product showed the largest proportional increase in 1905, being 27.84%, the value being \$7,108,092 in 1905 as compared with \$5,560,131 in 1904, a gain of \$1,547,961. In 1904 front brick increased in value \$157,270, or 2.91%. Not only does this product show the largest proportional increase, but in actual increase it is exceeded only by common brick and fire brick.

Receipts of Common Brick.

The following is the record of receipts of common brick in this market from all sources. During the first part of the year 1906 cargoes were received, while the high prices prevailed, from various sources, not regularly contributing to this market.

1881...500,000,000	1887...960,000,000	1903...798,000
1882...600,000,000	1888...900,000,000	1904...958,000
1883...650,000,000	1889...1,000,000,000	1905...1,297,000,000
1884...600,000,000	1900...1,200,000,000	1906...1,100,000,000
1885...850,000,000	1901...—	
1886...962,000,000	1902...782,000,000	

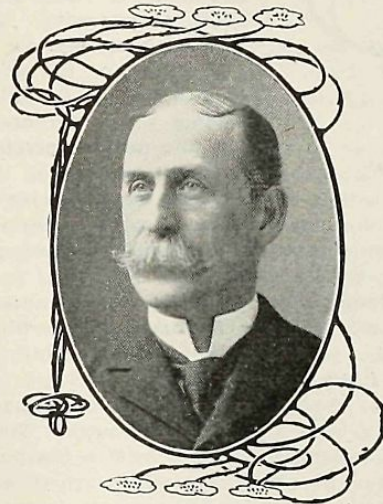
The number of large cargoes (not including sail vessels) received from Hudson River districts in 1906 were: From Haverstraw Bay, 845; Newburgh Bay, 963; Rondout and above, 1,214. In 1905: From Haverstraw Bay, 978; Newburgh Bay, 1,124; Rondout and above, 3,574. (These figures are from the record kept by Mr. W. K. Hammond, President of the H. R. Brick Mfrs. Association.)

Mason Material Trade.

THE SUDDEN STOPPAGE OF SPECULATIVE BUILDING NOT AN UNMIXED SOURCE OF EVIL.

IN taking a look backward I find in my letter to your popular journal of December, 1905, this item: "In view of the very high prices of some of the material, as shown above, and the advance in labor, I should advise consumers of material and those who employ skilled labor to do as little as possible until such time as the supply comes nearer to the demand on it, for

unless a halt is called I look for very serious trouble in the near future, more especially with the speculative section of the business." Again, on the 6th of August, I wrote you as follows: "As to the outlook for the rest of the year, while there is some large work under way and to be started, I do not imagine we shall see as many apartments and tenements built as early reports led us to believe, at least until the money situation clears and allows the builder some hope of placing his loans." In the light of



FRANCIS N. HOWLAND.

just what has transpired since the above was written, I certainly came very near the business situation as it is to-day.

As for a review of the mason material trade generally during this year of our Lord, 1906, I can start out by saying that it had the earmarks of a record-breaker as regards the amount of business done in sales of mason building material during any one year. No year in the memory of our oldest inhabitant has come near to it, with the exception of 1905, and that was a close second in the race.

As a matter of course, I am guided in my statements by the doings of the corporation I am connected with, as others may have done more or less as their individual ideas guided them; but on the whole I think my first statement as to 1906 carrying off the palm for greatest amount of business done in our line is the correct one.

Speaking as an individual, and with careful thought over the matter, I can with truth say that I never wish to experience just such another year as the past has been. Between the extremely high prices of common brick during the latter part of 1905 and the earlier part of this year and our desire to treat our customers fairly when making out our monthly bills, there was a feeling of distrust engendered that has taken many days of interviews and much labor and trouble on the part of dealers to make their customers realize that they (the dealers) were not responsible for the advance in prices and that it was owing entirely to the law of supply and demand, and that a fair and uniform price for material would have been far preferable to dealers and their profits at the close of the season much greater than has been the case under the existing state of affairs.

The sudden, and to some unexpected, stoppage of speculative building after the season had well advanced, owing to builders not being able to place their loans, and in some cases the withholding of loans already made, has not been an unmixed source of evil, and in the days to come, when a level has been reached



NORTHEAST CORNER 5th AVE and 19th ST. CITY INVESTING COMPANY, OWNER. LORD & TAYLOR, LESSEE.

NORTHEAST CORNER FIFTH AVENUE AND 19TH STREET. City Investing Company. Owner. Lord & Taylor, Lessee.

and the chaff in the shape of irresponsible builders blown away, we no doubt will be able to conduct our affairs in a safer and saner way and steer clear of the many pitfalls that have been in the path of those who desire to do business in a business-like manner.

FRANCIS N. HOWLAND,

(President of the Association of Dealers in Masons' Materials.)

Portland Cement Market

By ALBERT MOYER, Asso. Am. Soc. C. E.

THE history of the American Portland cement market for several years past has been a severe criticism against the manufacturers who by unfriendly methods pursued were disturbers of peace and price. As recent as 1903 and 1904 prices ranged between \$1.75 to \$0.65 per barrel, bulk, at the various mills. Cutting of prices swings the pendulum too far down,



ALBERT MOYER.

Mgr. Sales, Vulcanite Portland Cement Co.

thus creating an incentive to speculate, resulting in an apparent oversale; the pendulum then swings too far up, which checks sales and, to a certain degree, consumption, at which period down she comes again.

All this has occurred without reference to supply and demand, for results have shown that during the period I have in mind, with a declining market, the demand, if anything, slightly exceeded the American supply.

Fluctuation in price has the effect of influencing some manufac-

turers to oversell (and, strange to say, at low prices), placing them in the position of being unable to effect delivery at the period of the year when cement is most needed, causing loss to the manufacturer, dealer, consumer and real estate owners—a condition which is the reverse of mutual interest and advantage, striking at the very foundation of business.

In the past considerable damage has been done by manufacturers which reflected on price causing fluctuations, by what has been termed "selling ice in winter"; that is, selling in winter at winter prices for future delivery.

The proportion of cement used in winter is very small. Prices in winter have usually been at the lowest mark. Thus the manufacturer stores the cement without charge to the purchasers, but delivers it later in the year, when prices are higher. This has resulted in the dealers and consumers, imagining they had a bargain, contracting for far more cement than that for which they had actual use, indicating to the manufacturer an apparent shortage of supply, and consequently an unwarranted advance in price. Such years may not prove as good as the buyers had expected. They were unable to use all the cement purchased, and either had to stand a loss or rely on the good nature of the manufacturer to release them of a portion of their contracts, which, I am ashamed to say, a large number of manufacturers have done, thus throwing back on the market a quantity of cement which had to be resold in a short space of time at the close of the season at a much reduced figure, causing another fluctuation, disastrous to the whole trade in general.

The conditions of the Portland cement market during the season of 1906 were more satisfactory, brought about through a more perfect acquaintance, exchange of views and friendly relations between the various manufacturers. The price was more stable than in the past, with the exception of what proved an unwarranted advance of 25 cents per barrel in September, followed almost immediately by the consequent decline.

Uniformity of price as quoted by the various individual manufacturers and their stability is unquestionably of supreme importance to the building industry. Contractors equipped with shrewd, experienced buyers will have no advantage over the small contractor who cannot always pick his time to buy, and all will know the price on which they can safely base estimates. Dealers will not find the incentive for speculation; real estate owners will pay actually less for their building operations, the contractors not having to figure a margin for safety in their costs. The whole trade is benefited.

One of the anomalies of the season was the action of a number of the smaller mills who made strenuous efforts to obtain large contracts, which were taken at lower prices than that at which the larger mills were quoting. The small mills, which could least afford it, "sold ice in winter," while the large mills held a greater proportion than heretofore of their output for

sale during that portion of the year—August, September and October—when the largest shipments occur. A number of the smaller mills were sold up for the entire year before the season opened up, on April 1.

Price started in January, 1906, delivered in wooden barrels, lighter-load lots, New York harbor, at \$1.58-\$1.68, or in cotton sacks, including package, at \$1.63-\$1.73. There was an advance on May 1 of 10c. and another September 1 of 25c. per barrel more. It then dropped back to same figures as quoted in the beginning of the season. The unwarranted advance in September caused buyers to hold off, making the drop greater than would have otherwise occurred.

The threatened coal strike stimulated prices in the early spring, but the heavy snow in March caused the volume of business to fall off.

Practically every barrel of cement manufactured in the United States during the year 1906 was sold and consumed, the supply just about equaling the demand. But very little foreign cement was brought into the United States; in fact, the American cement exported was in excess of the foreign cement imported. The foreign cement market, both in Germany and England, was pretty well sold up before the first of May. Several American manufacturers who had oversold tried to buy four or five hundred thousand barrels of Portland cement, but were unable to do so.

Car shortage of August and September had some influence on what proved to be an unwarranted advance in price on the 1st of September. There was a slight falling off in volume of shipments during June and July. This is a peculiarity which is noted every year. Curves showing statistics as to shipments throughout the year invariably show this falling off during some portion of every June or July. It is possibly due to the fact that foundations for buildings have been erected in the spring, and steel frame construction is being used during that period, the cement work coming up a little later. I have so far heard no explanation of this phenomenon.

Prophecy at the end of 1905, both on the part of the dealer, consumer and manufacturer, was nearly all along the line of an overproduction of 1906. It was figured that as production had increased so enormously the demand would not increase proportionately. Those making these prophecies had failed to take into consideration the immense increase in the uses of Portland cement.

It has been stated that should building construction throughout the country remain merely normal the increased demand for Portland cement would still be very large, due to the fact that cement is daily supplanting other building material and that a wave is sweeping not only this country but in fact the entire civilized world—the wave of reinforced concrete construction.

The cement famine on the Pacific coast, partially due to the San Francisco earthquake and fire, had an effect on the Eastern market. A number of the Western mills shipped large quantities of cement to the Pacific coast. The Eastern mills therefore shipped a larger quantity than usual to the West, and some of the Eastern mills shipped cement to the Pacific coast via Cape Horn and the Panama routes.

In the sale of Portland cement it is as important to know when to restrict sales as it is when to solicit business. To illustrate this, a few of the conditions governing Portland cement manufacture are relevant. The expense of manufacture is heavy. A Portland cement plant practically has to be renewed on an average of every five years. A small plant, manufacturing about 3,000 barrels per day, requires an investment for initial cost of approximately \$1,000,000. The renewal of the machinery of this plant every five years is an item which is not usually considered by those not familiar with the details of manufacture.

A Portland cement plant runs twenty-four hours a day for 365 days a year. Unlike other industries, the manufacturer of Portland cement cannot produce more, and therefore has to regulate his sales so as not to oversell. Neither can he manufacture less without increasing the cost per barrel; for in closing down a portion of the plant the fixed charges of the plant remain the same. The capacity of a mill cannot be increased at will, as it requires to build a plant for the manufacture of 1,000,000 barrels of cement per annum, an expenditure of at least \$1,000,000 in money, and in time about a year and a half. It is therefore of prime importance that the production be regulated; that the wild promoter be discouraged, and that the matter be left in the hands of men who, by long experience, are better equipped not only to erect plants which will manufacture a satisfactory product, but to locate such plants in proper localities, and then only in sufficient number to take care of the increased use and demand.

The objects thus to be obtained are intelligent ones, and not only work to the mutual advantage of all the manufacturers, but also to dealers, consumers and owners of real estate.

Without entering into prophecy, we can all see a more uniform, stable and reasonable price for Portland cement, an absence of disastrous fluctuations, a sufficient supply to meet the demand and the operation of all the plants every day in the year and a steady employment for labor.

Such conditions, I believe, have at last been brought about,

discouraging speculation on the part of both the dealer and the manufacturer. Instead of "selling ice in winter," Portland cement will be sold as it is needed at market prices prevailing from time to time for immediate shipment. Thus the large and small dealers are sure of a reasonable margin of profit and the contractor will pay a reasonable price without risk of suffering a loss due to not being able to buy at the right time.

The prices at present prevailing, delivery alongside lighter, New York harbor, are approximately \$1.63-\$1.68 in wooden barrels, or \$1.68-\$1.73 in cotton sacks, including the package. These are reasonable figures, and do not discourage concrete construction, but rather encourage, and at the same time cover the manufacturer by a reasonable profit.

This price is not so low as to offer an incentive to sacrifice quality by reduction of cost. It is sufficiently high to offer an incentive to raising the quality as science progresses which increases the use of Portland cement.

I trust that we have at last entered upon an era of conservative stable and business-like methods in harmony with good business principles which will lead to prosperity, and that the entire trade of this country which is affected by the Portland cement industry will be benefited in the same proportion as is the manufacturer.

ALBERT MOYER.

A Great Lime Year.

WE DOUBT if the public outside of the building trades has any idea of the amount of building that was done in Greater New York in the years 1905 and 1906. We doubt also if they have any idea of the vast amount of material used in construction for the years 1905 and 1906.

In ordinary times one thousand barrels of lime at one delivery to a material dealer would be considered a fair sized order. In the year 1906 six of the leading material dealers in New York purchased from the Rockland-Rockport Lime Company \$593,296.17 worth of our material. In the month of April one of these dealers received at one delivery 9,854 barrels, which would make between 65 and 66 carloads of 150 barrels to the car.

One of the above-named dealers in one month purchased 22,000 barrels of our lime. This we claim is the record for one delivery and for one month's business for any material dealer in the United States, and if we had not made preparations for the business, in other words, had not changed our transportation from sailing vessels, which carry from one to two thousand barrels, to a fleet of steel barges, which carry sixteen thousand barrels each, towed by powerful ocean-going tug-boats, we would not have been able to handle the business.

Of course, this holds true of all kinds of building material. We understand in the year 1905 there were twelve hundred million brick consumed in Greater New York, and in 1906 about one thousand million.

We are of the opinion that these two years will hold the record in the building business for some years to come, and there is no question but in some sections of the city the building business has been largely overdone, and it will take some little time to dispose of and rent the buildings, especially in the Bronx.

Lime is a product that requires careful attention, and we have been obliged to put on a force of men to try and educate and demonstrate how lime should be handled, mixed and applied, and we think it would be of interest to the builder to study the lime question thoroughly. In the first place, a barrel of lime sells for a barrel of lime, and, the weights not being specified, we understand we are the only manufacturers that guarantees the weight in each barrel of our product. Another important feature is that most of the sand is applied without being ewighed. The water and hair also are not measured, and we think the results would be much better if the builder would use care, as above stated. Another important feature is that the analysis of the lime is very uneven, some brands being high in magnesia, others containing no magnesia, some slow in slaking and others quick in slaking. The analysis of some lime would show that it was not fit for plastering, and yet it is used with poor results.

The hydrated lime department of the lime business is practically new, and it is claimed by some manufacturers that it is better than the barrel lime for the finishing coat. We do not agree to this, and we are of the opinion that finishing lime made into a putty and applied to the walls is the cheapest and best method for a first-class and durable finishing coat. Hydrated lime is used with great success in making all kinds of hard mortars, and it is also used largely in making all kinds of concrete mixed with Portland cement; it is also used in mixing cement concrete to make it waterproof. We find it is also used for agricultural and spraying purposes, but for ordinary building we think the old-fashioned barreled lime will continue to hold its own.

In most of the cities lime is sold and delivered in bulk. It has been attempted in this city, without success, and prac-

tically all the lime consumed in Greater New York is delivered to the jobs in barrels.

ROCKLAND-ROCKPORT LIME CO.

Marble and Mosaic Industry.

SIX MILLION DOLLARS WORTH OF WORK DONE IN NEW YORK LAST YEAR—THREE THOUSAND MECHANICS EMPLOYED.

THE YEAR 1906 has been remarkable to the New York manufacture of interior marble and mosaic work from three points of view, namely: The immense amount of work contracted for and finished, the scarcity of and difficulty in obtaining good imported marble, and the freedom from strikes.



JOHN H. SHIPWAY.

The amount of work completed in New York City by union manufacturers will approximate from six to seven millions of dollars. Notable examples of work finished are the Hall of Records, Knickerbocker Hotel, the United States Custom House, United States Express Building and the Title Guarantee & Trust Company's Building. The large work contracted for included the United States Realty and Trinity Buildings, the International Bank Company's Building,

Plaza Hotel and the Pennsylvania Railroad Terminal.

In these various buildings there has been installed work of the highest grade, necessitating the use of marble from all parts of the world. The greater part of the work finished in these monumental buildings is of foreign marbles which have been brought from such far away countries as Algeria, Istria, Italy, France, Norway, Germany, Japan, the Grecian Isles and Switzerland.

There are at the present time some three thousand men employed in the interior marble trade in the City of New York. These men are mechanics of the highest grade in their line. So great has become the fame of the New York marble worker that marble is being manufactured in New York at the present time for buildings in Chicago, San Francisco, Florida, Havana and the City of Mexico. The out-of-town architects find, that to be able to get high-grade interior marble work, it is necessary to engage New York manufacturers. This condition of affairs will grow and the marble manufacturers expect in the coming years to do the greater part of the fine interior work which is required outside of New York.

The great difficulty that has been experienced in obtaining the proper grades of imported marble, particularly the white Carrara marble, has caused serious delay to much of the work and many architects have been forced to use the cheaper grades owing to the impossibility of obtaining higher grades. This state of affairs in Italy has been caused by the enormous demand for white Italian marble throughout the world; by labor troubles and strikes of quarry workers and men employed in loading vessels at the marina, and by the fact that the Italian Government owning the railroads and miserably mismanaging the same, has been unable to furnish sufficient transportation facilities to quarry owners to forward their marble down from the quarries to the sea ports.

GREAT DEMAND FOR COLORED MARBLE.

The demand for colored marble has also been so great that many orders placed a year ago with the quarry agents are at the present time unfilled.

The imports of foreign marble into the Port of New York during the last year amount to from three to three and a half millions of dollars.

The labor market as it relates to the marble industry has been remarkable for its freedom from strikes. The agreements made with the men have been absolutely lived up to on both sides, thereby avoiding strikes and contentions. The agreements signed terminate January 1, 1908. The men are satisfied with their wages and are endeavoring to give satisfaction to their employers.

SETTLED BY ARBITRATION.

The mosaic trade has been disturbed during the past year by the fact of the mosaic workers making demands upon their employers for a large increase in wages. As no agreement could be arrived at between the employers and employees, the disputed question was submitted to arbitration. The Arbitration Board met, their decision was accepted by both parties

and a new agreement was made which expires January 1, 1909. The mosaic helpers were on strike for a short time to enforce their demands for a higher wage rate which was adjusted through the mosaic mechanics only after the helpers had returned to work. Their agreement signed through the mosaic mechanics expires January 1, 1909.

The marble and mosaic industry is apparently only in its infancy. The great complaint of the manufacturer is the shortness of time given to complete large contracts, and his hope is that the day may come when he will obtain better prices for his product. Competition was never so keen as it is at the present time. The prices obtained to-day for marble work are only 10 per cent. above what they were in 1895. The introduction of new labor-saving machinery has reduced the cost of production to such a degree that prices are kept low and the ability to furnish large contracts in little time has obtained. The only successful New York manufacturer is the one who "gets there" as to "time" and quality of material and workmanship.

JOHN H. SHIPWAY.

Granite Industries.

THE year 1906 will ever be remembered throughout the United States as a whole as one of the good years. The quantity of business has been equal to anything we have ever had, and, with the exception of a few cases, more especially locally, the prices have been very fair. Nineteen hundred and five was a good year, but, from the writer's point of view, 1906 has been better. The local manufacturers have all been busy, and at times were bothered to get men enough to conduct their business in such a way that there would be no delay on buildings which they were doing. This scarcity of men extended to the quarries in the Eastern States, and from all quarters came reports of more work than men.

Throughout it all good feeling has existed between the employer and employee, and the year has been marked for the fact that it has been entirely free from labor trouble of any magnitude. A few isolated cases of trouble have occurred on account of some local condition, but they have been settled immediately without any lengthy controversy.

The granite cutters of the United States can be classed with the bricklayers as being a very conservative body of men.

Several large granite contracts have been completed this year, notably the Custom House in New York. The work on the Pennsylvania Depot is very near complete so far as the manufacturing goes, and is ready at any time to begin setting in the building. The Cathedral on Morningside Heights is progressing, the granite portion being very well along.

Notably among the contracts for the year in the vicinity have been the new Chemical Bank, Union Square Bank, the chapel and Hamilton Hall at Columbia College, the Bronx Court House, White Plains Court House and Hall of Records, the interior work for the Pennsylvania Depot and the Bellevue Hospital, all of which require large quantities of granite and have been brought almost to a close.

Outside of New York there has been quite a number of large office and government buildings.

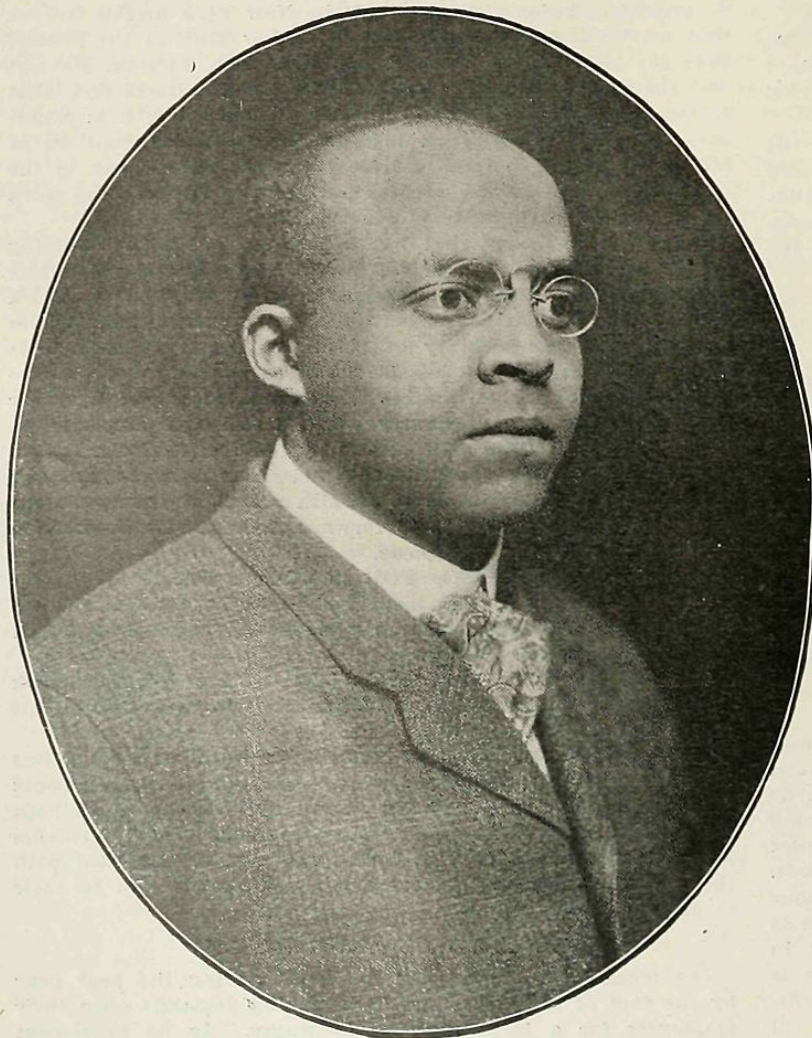
Our neighbors in Jersey City, just across the North River, are erecting a county building, all of granite. It is pleasing to the granite trade when they see the county officials, State officials and general government begin to awake to the fact that there is nothing like granite for a permanent building, and as years go by the tendency must lead to an increase in the demand for granite for this special purpose.

There are such a variety of granites that an architect can produce almost any effect that he desires by carefully selecting his color and the grain. One trouble exists which ought not, and that is the careless selection for finely carved and moulded work of coarse-grain granites, from which it is almost impossible to bring out the beautiful effect that can be produced from the fine-grain granite. For this class of work a fine-grain granite should be selected every time, and a small difference in price should never stand in the way. Otherwise the whole building is destroyed by the poor effect produced by the carving and mouldings. A study of this subject is worthy of attention of all architects.

From the fact of the large crops throughout the country, the amount of money that will be received for same, the healthy condition that exists at the present time in the trade, and the good will that exists between the men and their employers, it seems as if the granite industry for the year 1907 will equal that of the past year.

J. E. DUTTON.

COLORED TENEMENTS WANTED



OWNERS OF COLORED TENEMENTS:

Do you know there is a Colored Real Estate Agent in New York City making a specialty of managing "Colored Tenements"? Is it not entirely reasonable to suppose that I, being a Colored man myself, should meet with greater success along this line than any White agent? Surely, I should know the wants and peculiarities of my own people better than he. If you owned an "Italian Tenement," would you not get an Italian agent? Should not this same logical reasoning obtain also in this instance?

As a proof of my success in this specialty, I need only point to the fact that within the past five years I have built up an Agency Department of over 100 "Colored Tenements." When it is taken into consideration that this has been accomplished in the face of a fierce "White" competition, it speaks volumes.

I claim that I can manage a "Colored Tenement" better than any White agent in New York City. Bold as this statement may seem, there are dozens of my clients who stand ready to vouch for its correctness, and I am positive, if you will only allow me a fair trial, that I will soon be able to say the same of you.

PHILIP A. PAYTON, Jr.

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Main Office, 67 W. 134th St.

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A Prosperous Year in Lumber.

(By the President of the York Lumber Trade Association.)

THE year ending December 31, 1905, was perhaps the most remarkable year ever experienced by lumber dealers in the metropolitan district. It opened with the usual normal demand, but the early spring brought with it an extraordinary activity which continued throughout the full twelve months. At the beginning of the year the local yards were pretty well

stocked, but regardless of this fact most dealers soon realized that the usual trade conditions had so far changed that the question confronting them was rather how to fill orders than how to get them. The returns for the year 1905 have undoubtedly never been equaled in this market.

The year 1906 opened with a large volume of orders booked, with stocks of lumber in yards considerably depleted, but with very large purchases to be delivered. During the early months trade continued to be fully as active as it was the corresponding months of the



J. SHERLOCK DAVIS.

previous year, and this condition lasted well into the summer, when a reaction set in, resulting in a depression which was felt in a slight degree throughout the metropolitan district, and which in some localities was felt quite seriously. Despite this reactionary condition, which has continued to the present time, the year 1906 taken on the whole was a prosperous one.

At the present time the yards have fairly full and complete stocks, but the undelivered purchases of stock are small compared with what they were a year ago. Building and construction orders generally speaking are larger than usual at this time of the year. This can be accounted for by the great activity which now prevails in nearly, if not all, kinds of business, and which is naturally reflected to a certain extent in the lumber trade, and by the large operations that are now being carried on by the city and by the railroads. Had not the work of house construction received a considerable setback during the last six months, the result among other causes of the unfavorable loan market, this period would be marked by an even greater activity in the lumber trade.

Everything at the present time seems to point to a good healthy condition for the lumber business for the coming spring and summer with prospects of a supply somewhat inadequate to the demands. Current prices will be generally maintained and the prices of some of the leading kinds of lumber will undoubtedly be somewhat advanced. Considerable trouble is being had this winter in logging camps and saw mills, owing to the scarcity of common labor and to car shortage and bad weather; and there seems to be good reason to believe that as a result of these unfavorable conditions the cut of logs this winter will be no greater than usual, if as great. These facts, taken together with the further important fact that all over the United States, in almost every city and town and throughout the agricultural districts, there is a prevailing disposition to build, seem to justify one in the belief that there will be a brisk demand for lumber at good prices for several months to come.

J. SHERLOCK DAVIS.

Hardwood Flooring.

THE marked increase in the consumption of hardwood flooring during the past two years is significant. It indicates that the builders are made aware of the wishes of the housewife, who has always shown a decided preference for the harder and better floors, and it establishes the fact that the competition of the more progressive builders is having its effect upon the building business generally.

In former years, the relative values of the harder oak, maple and beech flooring, and the softer woods, have been such as to induce the builder to make his choice where money would carry farthest. In the last two years, however, the advance in value of both yellow pine and North Carolina pine have been so marked that there is but slight difference to-day between the hard and soft woods. These conditions have all had their effect in the reconstruction of things generally, and the result has been most gratifying to homeseekers who must live in flats and tenements.

Previously, when the values of oak, maple and beech have been so considerably more than yellow pine, practically the only buildings that consumed the former were private dwellings and the better class of apartment houses. To-day the cheaper construction consumes the hardwood flooring much to the extreme

satisfaction of the dweller, and with the higher prices of yellow pine pretty firmly established and but comparatively small advances made simultaneously on the oak, maple and beech flooring, there is excellent reason for the prediction that the builder in Greater New York and vicinity has made up his mind to continue the use of the better and harder flooring.

It is needless to make comment upon the relative merits of the two floors, for even a casual observer can discern between the hard and soft wood trim in the interior of buildings, and assuredly if the hardwood is preferable as trim it must follow that floors of the same material are the more desirable. And it may be added that even where softer woods are used for interior trim, it is not unreasonable to demand the hardwood flooring. The customary usages of the housekeeper of this day calls almost entirely for the exclusion of carpets, and the use of rugs instead. The borders of the harder flooring can be kept in far better condition than the softer wood, and the natural color of the wood is preserved and made to embellish the surroundings rather than to detract from them. There is nothing prettier for a border than plain oak, with its ever-changing design in grain, and the glossy appearance it makes when well oiled and waxed.

The rapid progress made by the builders of wood-working machinery has played no small part in the advancement of hardwood flooring interests. In years past when the lighter and cheaper machines were in use it was a difficult problem to produce a flooring smoothly and carefully milled from hardwood lumber. The process of kiln-drying is such as to case-harden the woods and unless extreme caution and care is observed, the planer knives become dull and do not perform the work of dressing and matching smoothly. In olden days—five or six years ago—it was customary to feed hardwood strips to the flooring machines at not to exceed 40 to 50 linear feet per minute and secure good results. To-day, machinery is so made that the average speed is about 75 to 80 linear feet per minute. It would seem as though everything has conspired to place the hardwood flooring within the reach of even the tenement-house dweller, and it is not unlikely that still further improvements in methods of production, together with increased supply will have the good effect of keeping the prices within reach of requirements for any and all classes of construction.

Annual Lumber Cut of the United States.

VALUES in the metropolitan lumber trade have been maintained with remarkable firmness for a period of years, during which the official prices have steadily moved upward. The exceptions to this general remark have been few. Though not in every case has it been possible to enforce the maximum official price immediately, selling prices have ultimately reached the high mark. Toward the close of 1906 modifications in items of the second grade were noticed in a few lines, and the Building Department's recent indictment of short-leaf yellow pine will presumably have the ultimate effect of altering the fortunes of the line so far as the New York market is concerned. But whatever the minor fluctuations may be, the general public has slight interest in them compared with the one general rule of steadily advancing quotations, which in the course of ten years has doubled the price of hemlock, and added greatly to the cost of most lines of lumber, with the effect of adding very much to the cost of suburban dwelling-house construction. For a long period of years, beginning with the panic of 1893, there was almost a suspension of frame private-house construction outside of Manhattan and Brooklyn, caused in the first instance, it is true, by the financial inability of the people, but in the latter years by the height to which values leaped after 1898. It is difficult to reconcile the public to the thought that never again will there be cheap lumber, and in spite of expert affirmations to the contrary, there still lives a gleam of hope for a return to the basis of values prevailing in the nineties. This hope springs from an old belief that the lumber tracts are in hands too strong to be compatible with natural competition, and natural supply and demand, and something of this belief seems to have entered the mind of the U. S. Congress and inspired the passing of the resolution to investigate the cause of the high prices of lumber in the various stages of manufacture and sale. The Secretary of Commerce and Labor is instructed to conduct the investigation with the particular object of ascertaining whether or not these high prices have resulted in whole or in part from any contract, agreement or combination in the form of trust or otherwise, or from a conspiracy in restraint of commerce among the several States or with foreign countries. Further, the Secretary is to investigate whether the prices of lumber have been manipulated in whole or in part by any corporation, joint-stock company or corporate combination engaged in commerce among the several States or with foreign nations, and if so to investigate the organization, capitalization, profits, conduct and management of the business of such corporations and make early report of his findings according to law.

A subject affecting so closely the cost of home-building as does the price of lumber must necessarily receive a great deal of public attention when the scale of values mounts so high



Lighted by **LUXFER**

*Sidewalk Prisms
and Floor Lights*

**TIFFANY &
COMPANY'S
New Fifth Ave. Store**

*The Famous New
Home of a Famous
Old House*

LUXFER PRODUCTS

I*N all modern building operations, whether construction, remodelling or improvement, The LUXFER System of Prism Lighting plays an increasingly important part.*

The day has passed when architects or builders looked upon *LUXFER* installations as experiments.

LUXFER has proven its worth and efficacy in solving daylighting problems, whether involving overhead or underground illumination.

Another development is equally marked. *LUXFER* no longer is confused with so-called "glass prisms," but stands alone as a dependable medium for the transmission and scientific diversion of daylight to a given point to supply an evident deficiency.

LUXFER is a "prism" and *LUXFER* is "glass," but no "glass prism" other than our own is "*LUXFER*." The difference is the difference between *results* and *dissatisfaction*, between *science* and *guess-work*; which fact most architects and builders are fully aware of.

AMERICAN LUXFER

General Offices: HEYWORTH BUILDING,

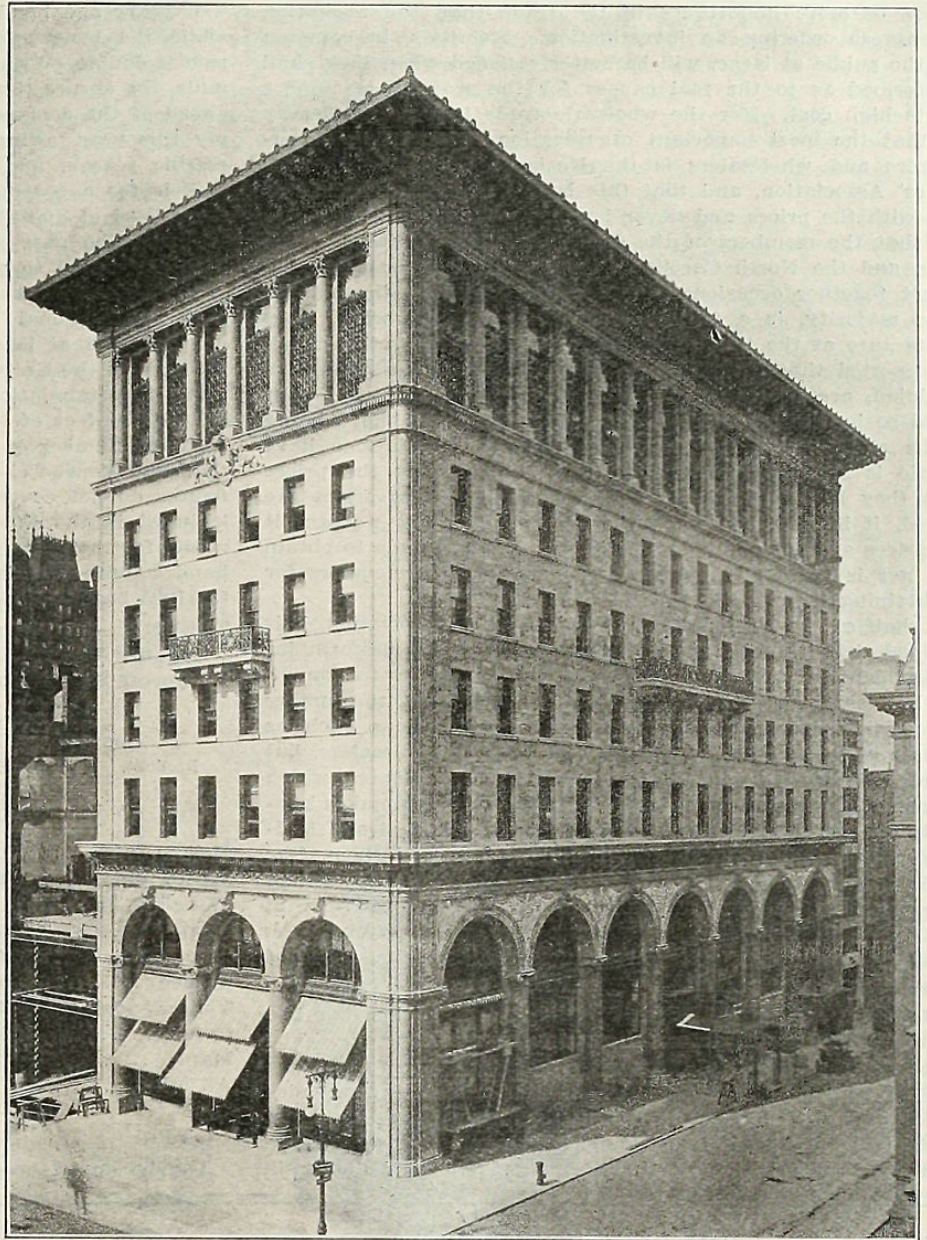
BRANCHES: New York Boston Philadelphia San Francisco Kansas City

Lighted by LUXFER

Sidewalk Prisms

GORHAM Mfg.
COMPANY'S
New Fifth Ave. Store

*A landmark in New
York's Architec-
tural advance*



ARE NECESSARY

LUXFER PRODUCTS consist principally of the following items, all of which are employed in all important building operations that come under the designation "modern."

LUXFER Sheet Prisms are large sheets suitable for glazing full sash in factories, office buildings, etc., by which rooms on any floors or in any surroundings may be flooded with sunlight.

LUXFER Transom Prisms are the form used for securing adequate daylight, generally in stores or smaller buildings where light may be "annexed" only from front and rear or the side.

LUXFER Floor Prisms are used (as in the buildings illustrated) to secure full and complete illumination throughout.

LUXFER Sidewalk Prisms are used (as in the buildings illustrated) for the complete illumination of basements, subfloors and all underground spaces.

The two latter are used in connection with the best forms of reinforced concrete construction.

Full information and estimates furnished from any of our offices.

PRISM COMPANY

CHICAGO, Cor. Madison St. and Wabash Ave.

St. Paul Cleveland St. Louis Cincinnati Baltimore New Orleans Milwaukee

as to make the possibility of getting a house more difficult for the average man, and hence no occurrence of the year was deemed of more importance in the trade than the resolution of Congress ordering an investigation. Retailers, in common with the public at large, will be better satisfied when they shall be informed as to the real causes for the scarcity of lumber and its high cost. For the wholesale trade it is semi-officially said that the most important organization representing manufacturers and wholesalers is the National Wholesale Lumber Dealers' Association, and that this body has nothing whatever to do with the prices and never has had. It is admitted, however, that the members of the Georgia-Florida Saw Mill Association and the North Carolina Pine Association, Incorporated, do "get together occasionally and decide what, in the opinion of the majority, is a fair price for the products which they manufacture at the time of manufacture." On the other hand, it is asserted that the prices so made are merely a consensus of opinion, are not arbitrary in any sense, nor are they considered so by the members of the associations. If the demand for the stock which the members of these associations have for sale is sufficient to warrant them in charging the prices which they have agreed are reasonable, then those prices are charged, it is said, but when the demand does not warrant it such prices are not obtained, nor is any attempt made to obtain them, nor is there any punishment meted out to members for not obtaining them.

In behalf of the National Hardwood Lumber Association, it is explained that its chief aim in life is to operate a uniform inspection bureau, and to provide for uniformity of treatment. Then besides these superior organizations there are, the lumber trade officials inform us, various local organizations such as are maintained among the Buffalo and Albany wholesalers, but in those sections no schedule of prices is ever adopted which are operative, except the prices which the demand makes possible to charge. Then there are operating in the East and Middle West numberless retail associations. Some of them, like the New York Lumber Trade Association, are very strong and comprehend practically the entire trade in the territory in which they operate; but "none of these ever meddle with prices in any way, shape or manner whatsoever," is the word of testimony.

Contributing to the costliness of lumber during the year has been the increased wages of labor and the car shortage. The transportation service is the worst that ever confronted the trade. With the enormous demand from railroad companies for ties and new cars, it is conceivable how there can be a scarcity in yellow pine almost sufficient alone to be responsible for the current prices. "More necessary to house building is

hemlock," which is particularly in "strong hands," and the trade prediction is that prices will continue firm during 1907. Ten years ago hemlock was selling on a basis of \$11 per M., while the base price that has prevailed for several months past is double. With the almost insatiable demand for wood pulp mills, the spruce timber supply will not be allowed to run much ahead of the demand. White pine is said to be in shorter supply this year, owing to low water in some regions during the rafting season, and taking the situation as a whole the outlook is for a continued large volume of business at about the same level of quotations.

During the past year the U. S. Forest Service for the first time attempted to gather detailed statistics of the lumber cut of the United States. This task was undertaken in co-operation with the National Lumber Manufacturers' Association, whose members cut at least one-third of the lumber annually manufactured in the United States.

The final tabulation shows that 11,666 establishments cut 30,502,961,000 feet of lumber in 1905. According to these figures both the number of establishments and the total cut are lower than the Census showing for 1899 and for 1904. The Census figures do not cover custom mills, while a few such mills are included in the Forest Service reports. In Table 1 the statements for the three years are printed side by side. In the right-hand column of this table is given the ratio which the figures for 1905 bear to those of 1904.

TABLE 1.—Comparison of Census figures upon the lumber cut of the United States in 1899 and 1904 with those of the Forest Service for 1905.

Product.	Census, 1899 (23,053 estab- lishments).	Census, 1904 (19,127 estab- lishments).	Forest Serv- ice, 1905 (11,666 estab- lishments).	Ratio of Serv- ice figures for 1905 to Census figures for 1904 (estab-lish- ments 61.0 per cent).
Yellow pine...	10,231,140	12,812,307	9,760,508	76.0
White pine....	7,349,108	5,253,846	5,106,783	97.3
Douglas fir...	1,725,968	2,929,534	4,319,449	147.2
Hemlock	3,285,045	3,268,787	2,804,083	85.8
Oak	3,848,363	2,902,855	1,833,769	63.2
Spruce	1,409,333	1,303,886	1,165,940	89.7
Yellow poplar..	1,042,380	853,554	582,748	68.3
Cypress	492,761	749,592	753,369	100.5
Maple	605,654	587,558	608,746	103.7
All others	3,475,098	3,473,220	3,567,566	102.8
Total	33,464,850	34,135,139	30,502,961	89.0

The incompleteness of the returns for 1905 does not wholly

WE manufactured, erected and finished the interior
woodwork in the TRINITY BUILDING, and have
recently imported 1,000,000 feet of mahogany for the
interior woodwork in the TRINITY ANNEX, the UNITED
STATES REALTY BUILDING and THE TRUST COM-
PANY OF AMERICA BUILDING : : : : : :

The Batavia & New York Wood Working Co.

1612 Flatiron Building
103 East 125th Street

NEW YORK CITY

FACTORY: BATAVIA, N. Y.

explain the lower figures for that year, especially as to the number of establishments. The cut of 1905 in the Forest Service figures is 89.0 per cent. of the Census figures for the cut of 1904, but the establishments reporting to the Service numbered but 61.0 per cent. of those given in the Census. The establishments which failed to report to the Service were, however, mainly small ones. Thus, though the failure of many establishments to report has necessarily kept the given total cut below its true figure, the delinquent reports, if obtained, would not raise the given total cut proportionately.

A second fact to be borne in mind is that the actual number of establishments is on the decline. This is borne out by the Census figures of 1899 and 1904, which show a falling off of nearly 4,000 in the number of establishments during the period. During the same period the total cut increased, though not greatly. Had the number of establishments reporting to the Service in 1905 borne the same relation to those reporting to the Census in 1904 as the latter bore to those reporting to the Census in 1899, the Service figures for total cut would doubtless have shown a similar, perhaps a greater, increase.

TABLE 2.—Kind and quantity of lumber cut in the United States in 1905 by 11,666 mills.

Kind.	M feet.	Per cent.
Yellow pine	8,771,966	28.8
White pine	4,868,020	16.0
Douglas fir	4,519,479	14.2
Hemlock	2,804,083	9.3
White oak	1,210,216	4.0
Spruce	1,165,940	3.8
Western yellow pine.....	988,542	3.2
Cypress	753,369	2.5
Red oak	623,553	2.0
Maple	608,746	2.0
Poplar	582,748	1.8
Redwood	411,689	1.3
Cedar	363,900	1.2
Red gum	316,588	1.0
Basswood	258,390	.9
Birch	240,704	.8
Cottonwood	236,000	.8
Elm	227,038	.7
Chestnut	224,413	.7
Beech	219,000	.7
Ash	159,634	.5
Sugar pine	123,085	.4
Western white pine.....	115,678	.4
Hickory	95,803	.3
Other kinds	294,512	1.0
Mixed.....	519,865	1.7
Total softwoods		81.3
Total hardwoods		18.7
Grand total		100.0

The Bluestone Trade.

SURPLUS BLUESTONE STOCK USED UP IN 1906.

THE trade in North River bluestone is as sensitive, if not more so, to general trade conditions than any other kind of stone, as it is an old and tried material used in both building construction of all kinds, from the cheapest to the most expensive, and for all classes of street work.

The season of 1906 has been a busy one, mills and quarries having been kept going to full capacity. Although falling behind the two previous years in some lines, others have increased so as to bring the total business up to about the same as last year in quantity. The increased demand of 1903 and 1904 stimulated production so that the season of 1905 closed with quite a stock of some kinds on hand, particularly street curbing and bridge. This fact made itself felt in prices on this class of stone all this season, but the demand has again caught up with the production and surplus stocks have been practically all cleaned up. With a normal demand for the season of 1907, prices should strengthen to about 1905 prices.

While the falling away of the demand for stone used by speculative builders in New York City has been felt by retail

concerns catering to this class of trade, it has not been felt by the wholesale trade quite so much on account of the activity in other parts of the country.

Collections have not been so good as last year, particularly during the latter part of the season. Contractors who had been receiving banking favors and had been discounting and paying their bills promptly have found it difficult to pay when due, and in many cases have had to have paper extended, bankers who had sought their business in the past having taken advantage of the demand for money in Wall Street or of people who could pay more for it than the contractors.

The amount of losses sustained from failures, etc., amount to more than last year, but have not been as heavy as might have been expected in view of the great amount of speculative building and development of property. These losses, however, may be much larger if money keeps scarce and things do not move again soon.

It is somewhat early to forecast this year's demands, but indications at the present moment are bright for the season of 1907.

C. C. BULL.

Fireproof Construction.

GOOD WORKMANSHIP AND MATERIALS DEMONSTRATED THE WISDOM OF EMPLOYING THEM.

UNTIL a few years ago there were doubts in the minds of many as to the possibility of making buildings fireproof. The partial and total failure of some of the earlier attempts at fireproof construction were responsible for these views. The behavior of some of the more recent examples of fireproof buildings that have passed through the supreme test is, how-



A. L. A. HIMMELWRIGHT.

ever, highly satisfactory, and proves that buildings can now be designed that will be actually fireproof. Every great conflagration, although it involves enormous property losses, teaches new lessons in fire-resisting construction. The Baltimore and San Francisco conflagrations have contributed greatly to our previous knowledge of the fire-resisting qualities of different methods and materials.

Unfortunately, architects and contractors are very slow to recognize the importance of the lessons taught by

the great conflagrations, and on every hand are to be seen the repetition of the same mistakes that were glaringly exposed both in Baltimore and San Francisco.

It is a matter for congratulation that good workmanship and materials, wherever they have been tested in conflagrations, have clearly demonstrated their superiority and the wisdom of employing them. In numerous instances the false economy of slighting some of the important fireproofing details, and which only represented amounts of from 2 to 5 per cent. of the cost of the building, have resulted in such serious damage to the structure when attacked by fire as to involve almost entire reconstruction.

In the light of our present knowledge of this subject, architects and contractors should consider it a moral duty to their clients to design and build structures that represent the best known methods and practice, and for the sake of their own future reputations shun all that is flimsy, unsuitable and inefficient.

Correct and reliable reports of recent conflagrations are now available to everyone. A few days' study will in nearly all cases be sufficient to inform the average person thoroughly as to the developments and lessons of these conflagrations. Consequently THE FAILURE IN THE FUTURE OF BUILDINGS THAT HAVE BEEN DESIGNED TO BE FIREPROOF WILL ONLY SERVE TO REVEAL THE INCOMPETENCY OF THE DESIGNER AND THE IGNORANCE AND NEGLECT OF THE BUILDERS.

The best modern practice in the design of the foundations, the exterior walls and the steel skeleton structure of fireproof buildings is, generally speaking, entirely satisfactory. A few details can be improved, but these features of the tall buildings fulfill the requirements.

The problem of making buildings fireproof has now been narrowed down to a single important detail—that of protecting the openings in the exterior walls and roofs.

Had these openings of the fireproof buildings of San Francisco been protected with metal or metal covered frames, sash and doors, and wire glazing of only fair efficiency, there is no doubt but that the contents of most of them would have been wholly



C. C. BULL.

preserved. The efficient protection of these openings so as not to mar the artistic beauty of the facades is at the present time the one important problem for architects and engineers to solve. Its successful solution will be the crowning event of fifteen years of intelligent effort to produce fireproof buildings.

A. L. A. HIMMELWRIGHT.

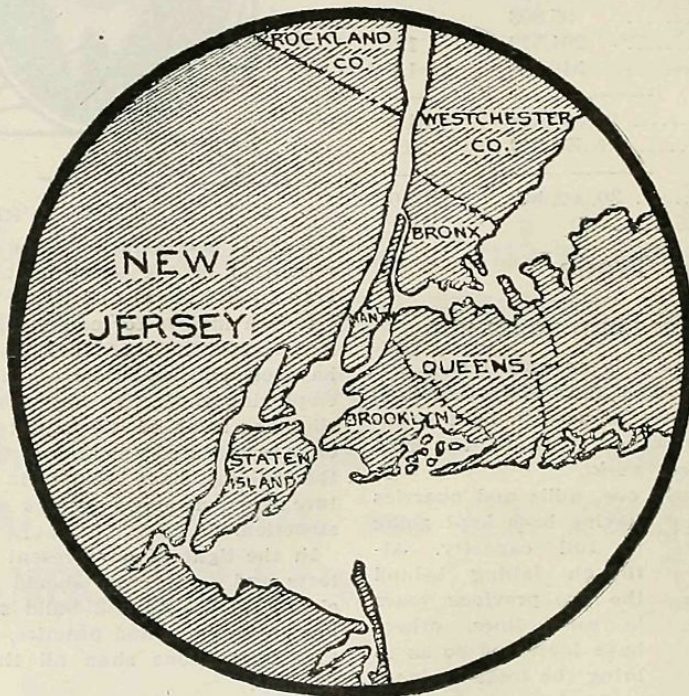
Production of Electrical Machinery and Supplies.

ELECTRICAL machinery has, in recent years, advanced several numbers in the list of manufactures contributory to building construction and equipment, and has now to be reckoned with as much as brick, stone, wood, iron, cement, plaster or glass. Electrical apparatus enter into the construction or equipment of office buildings, hotels, factories and apartment houses of the first class, as parts of the arrangement for light, power, ventilation and telephoning. The following sets forth statistics of the manufacture of electrical machinery, apparatus and supplies—products by kind, quantity and value in the United States for the year 1905, compared with 1900:

STATISTICS OF ELECTRICAL MACHINERY.

Products, total value	\$159,551,402	\$105,831,865
Dynamos:		
Number	15,080	10,527
Value	\$11,084,234	\$10,472,576
Horse-power	1,328,243	770,832
Dynamotors, etc	\$1,740,534	\$379,747
Transformers	\$4,468,567	\$2,962,871
Switchboards, etc	\$3,766,044	\$1,846,624
Motors, all kinds	\$22,370,626	\$19,505,504
Direct and alternating:		
Number	79,877	35,604
Value	\$13,120,948	\$7,551,480
Horse-power	678,910	515,705
For fans:		
Number	102,535	97,577
Value	\$1,168,154	\$1,055,369
Horse-power	30,796	12,766
For electric elevators:		
Number	1,333	.....
Value	\$638,473	\$2,523,901
Horse-power	13,398	.....

Miscellaneous:		
Number	8,481	7,913
Value	\$2,340,471	\$613,883
Horse-power	36,820	11,392
Batteries, incl. parts and supplies...	\$4,243,893	\$3,679,045
Storage	\$2,645,749	\$2,559,601
Primary	\$1,598,144	\$1,119,444
Carbons	\$2,710,935	\$1,731,248
Lighting	\$1,050,971	\$1,263,732
Furnace	\$172,454	\$10,974
Miscellaneous	\$1,487,510	\$456,542
Arc lamps	\$1,574,422	\$1,827,771
Open:		
Number	1,748	23,656
Value	\$29,989	\$276,481
Closed:		
Number	193,409	134,531
Value	\$1,544,433	\$1,551,290
Searchlights, etc.:		
Number	1,924	8,283
Value	\$114,795	\$225,635
Incandescent lamps	\$6,953,205	\$3,515,118
16 candle-power:		
Number	83,333,285	21,191,131
Value	\$4,608,034	\$2,910,023
Below 16 candle-power:		
Number	19,779,834	2,906,817
Value	\$1,132,011	\$308,626
Above 16 candle-power:		
Number	9,598,439	1,222,250
Value	\$568,204	\$223,534
Decorative and miniature lamps:		
Number	1,584,495	397,432
Value	\$644,906	\$72,935
Electric light fixtures	\$5,305,466	\$4,344,599
Telephone apparatus	\$15,865,698	\$10,512,412
Telegraph apparatus	\$1,111,195	\$1,642,266
Insulated wires and cables	\$34,519,699	\$21,292,001
Electric conduits	\$2,416,245	\$1,066,163
Annunciators	\$185,870	\$224,885
Electric clocks, etc	\$373,926	\$132,149
Fuses and lightning arresters.....	\$1,455,203	\$595,497
Rheostats and resistances	\$1,328,752	\$1,186,878
Circuit fittings	\$3,525,446	.....
Amt. recd. for cust. wk. and repairing	\$2,798,922	\$2,063,736



Telephone Progress

WITHIN the circle lies the Metropolitan area. In this area and points adjacent thereto, reached by the lines of the Metropolitan telephone system, there were in service and under contract December 31st, 1906, 389,000 telephones. The gain during the past year has exceeded any previous year.

TELEPHONES IN SERVICE AND UNDER CONTRACT

	At End of Year	Yearly Gain
1901.....	125,378	28,078
1902.....	167,792	42,414
1903.....	210,981	43,189
1904.....	255,993	45,012
1905.....	321,890	65,897
1906.....	389,000	67,110

We assure our patrons and the public of our intention to continue a policy of expansion by furnishing, at reasonable rates, the best service possible and making the telephone system of New York and vicinity invaluable to every member of the community.

NEW YORK TELEPHONE COMPANY
 15 Dey Street, NEW YORK
 40 So. Fifth Avenue, MT. VERNON, N. Y.

THE NEW YORK AND NEW JERSEY TELEPHONE COMPANY
 81 Willoughby Street, BROOKLYN, N. Y.
 160 Market Street, NEWARK, N. J.

Present Problem in Hardware Is to Secure Deliveries When Needed.

BUILDERS' HARDWARE, while one of the lesser divisions of the building trades, has fully shared in the unprecedented activity which prevailed during 1906, and the manufacturers of it enter upon the business of 1907 with well-filled order books, in most cases with depleted stocks, and with every prospect for a demand for their products during the new year



HENRY R. TOWNE.

even greater than during the year just closed. While the quantity of hardware used in a building may not have increased, the quality now demanded is far higher than in earlier years, and this implies an increase in cost additional to the increase in volume due to the growth of the country. It is not surprising, therefore, that the manufacturers have not been able fully to keep pace with the increased demand on their facilities arising from this dual influence. The improvement in builders' hardware, both in mechanical details and in artistic qualities, which has taken place during recent years has been very marked and on every ground is to be welcomed. It is typical of the tendency in nearly every branch of the building trades in America to utilize quickly and fully all the possibilities of our increasing knowledge in applied science and the arts, not merely to reduce the cost of production, but at the same time continuously to elevate the quality of the product. This national trait is in marked contrast to the more conservative tendency which prevails in older countries.

Under our present practice a certain antagonism of interests arises in the matter of builders' hardware (and also in greater or less degree in certain other classes of materials) which is regrettable, and which without great difficulty is preventable. This arises from merging hardware with the general contract in a manner which, although attempting to secure its selection by the architect or owner, leaves it largely to the discretion of the contractor. The latter is not to be criticised if, under these conditions, he seeks to protect himself by economies at the expense of the owner, for the invitation to do this is extended to the contractor as to all material in the selection of which he

is permitted any latitude. This condition is inherent in the contract system. One remedy, largely utilized in industrial construction, is to compensate the contractor by a fixed commission on cost, the materials being purchased by the owner or for his account. Another remedy consists in omitting from the general contract items which, like finishing hardware, involve the elements of taste and decoration, and reserving these for selection and purchase by the owner or architect, a practice which is increasingly resorted to and on all accounts to be encouraged.

American buildings for commercial and public uses are in many respects the finest in the world, especially in their mechanical equipment. In them the rule should be to utilize the latest and best, not the cheapest, material, especially in the item of hardware, which, although constituting an almost insignificant percentage of total cost, is an important factor in convenience, security and decoration. In the selection of structural material the architect takes no chances, but specifies absolutely what shall be used. Frequently he intends to do likewise as to minor details, such as builders' hardware, but at the finish is pressed for time, is urged to close up his work in order to place it under construction, and ends by including this minor, but important, detail in the general contract. In doing this he is only postponing trouble, by creating the antagonism of interests above referred to. A far better plan is to omit the hardware, and frankly to reserve it for later selection. If, having done this, he will then take it up **SOON AFTER CONSTRUCTION IS COMMENCED**, make his selection deliberately but definitely, and then order the hardware, he will be sure of having it delivered when wanted, and that, when delivered, it will be in harmony with its surroundings, creditable to his taste and permanently satisfactory to the owner. In the case of modern residence work, especially of the palatial type, the argument for this method is even stronger and practically is unanswerable.

The present problem in hardware, as in almost every kind of material, is to secure deliveries when needed, and this emphasizes the importance of placing orders long in advance. The factories are all taxed, apparently to their limit, and the demand continues to increase. Under these circumstances, and in view of the fact that the cost of iron and steel has increased one-third, and of copper one-half, within the last two years, it is not surprising that some advances have been made in the prices of builders' hardware, nor improbable that other advances will follow if these conditions are maintained. Even at present prices builders' hardware of nearly every kind is cheap, and yields but a moderate profit to the manufacturer, in view of the large amount of capital invested in its production, the vast variety of the product, and the skill and experience required in the conduct of the business, and the buyer who expects to require builders' hardware during 1907 will make no mistake in placing his orders as far in advance as possible.

HENRY R. TOWNE,
(President Yale & Towne Mfg. Co.)

Interior Wiring.

FIVE THOUSAND jobs of electrical construction or alteration are under way at the present writing. Every year this comparatively new industry, which saw its birth as a trade scarcely twenty years ago, is growing enormously. Ten thousand more applications for inspections were made at the Department of Water, Gas and Electricity in 1906 than in 1905, when there were six thousand more than in 1904. About 58,000 more incandescent lamps were added to the number in the city, making 679,584 in all. The number of motors covered by certificates shows an increase of 6,529 during 1906, as compared with an increase of 2,051 in 1905, and 224 generators in 1906, as compared with 231 in 1905. For these statistics the Record and Guide is indebted to the Department of Water, Gas and Electricity, but the figures for the year 1906 are approximate and not complete.

Permits for single wires in 1906 numbered 4,988, to compare with 3,961 in 1905; for electric lighting, 5,740, to compare with 4,161 in 1905; underground conductors, 4,368; subsidiary connections, 9,212; for subways, 1,441, as against 1,502 in 1905.

In comparing the number of generators installed for private plants with the number reported for inspection last year, it will be noted that a decrease of six units is shown, which may be partially attributed to the reduction in maximum rate from fifteen cents to ten cents per kilowatt hour, which the illumi-

nating companies now charge, the change of rate having gone into effect July 1, 1905, according to statute.

The inspectors frequently find wiring and appliances installed within buildings which have not been reported to the department for inspection, such work in nearly every instance having been installed by incompetent workmen, unfamiliar both with the rules governing the installation of such equipments and the necessity of inspection before introduction of current, although it is estimated that less than two per cent. of the fires occurring in this city are caused by electricity, in many instances serious results have followed such practice.

It is gratifying to quote in part from an exhaustive report made by a Committee of Twenty, appointed by the New York Board of Fire Underwriters to investigate conditions affecting the fire and conflagration hazards in this city:

"Both the Municipal and Underwriting Inspection Departments are well organized and are doing good work. An inspection by the National Board of Engineers of nearly 1,000 equipments brought to light no cases of incompetency. The situation with respect to old work, however, reveals the need of more speedy reinspection. The Municipal Code is excellent, being practically the same as the National Code, and well enforced on new work, the underwriters enforcing the National Code fully well. Conditions with respect to outside wiring are generally satisfactory. Wiring is generally underground in Manhattan, but high potential overhead circuits are frequent in the Bronx. Electrolysis is not appreciably felt."

APPLICATIONS, INSPECTIONS AND CERTIFICATES FOR INTERIOR WIRING, 1898-1905.

	1898.	1899.	1900.	1901.	1902.	1903.	1904.	1905.	1906.*
Applications for inspections....	11,363	14,949	15,693	15,903	18,443	21,113	21,722	24,704	35,300
Certificates issued	10,842	13,509	14,352	14,226	16,736	20,501	20,692	23,524	33,096
Complaint notices issued	1,564	2,136	3,238	3,396	3,078	5,674	5,703	5,377	....
Complaint notices attended to..	1,459	1,779	3,095	3,337	2,832	6,122	5,760	5,151	....
Work Covered by Certificates.									
Incandescent lamps	394,715	115,625	504,365	440,662	424,232	443,914	604,061	621,611	679,584
Arc lamps	3,840	3,887	6,411	3,123	4,030	7,226	7,662	5,564	7,832
Motors	3,234	4,663	4,743	5,147	5,933	7,393	9,962	11,013	....
Horse power of motors.....	14,999	17,934	17,135	15,302	20,328	25,002.57	29,553	29,141	35,660
Generators	131	94	115	160	166	246	284	231	234
Kilowatt capacity of generators	7,587	11,912	5,475	8,249	60,516	30,653.714	66,988	50,895	26,880
Electric heaters							170	314
Inspections made	27,367	41,240	50,663	48,832	58,015	70,965	79,939	80,134

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NEW YORK

Architectural Metal Work.

REVIEWED BY THE PRESIDENT OF THE HECLA IRON WORKS.

At present the metal work for buildings is divided into two distinct branches—the structural steel work and the architectural metal work—and these two branches have in the last twenty-five years made immense strides, practically revolutionizing the mode of construction of first-class buildings.

The architectural metal work has done much to make the buildings more fireproof by substituting metal for wood, most particularly in stairways, elevator cages, elevator enclosures, windows, doors, etc.; but it has also done much to improve the appearance of both the interior and the exterior of buildings, and it is generally conceded that this country is far ahead of other countries in making both practical and artistic metal work for buildings. That has been brought about mainly by the good will of the architects in coming in close contact with the leading members of this particular branch of the business, and by both studying together how to produce the best results. The result is that while twenty-five years ago there were but one or two concerns that made a special effort in this direction, there are now, for the reason given above and because the work has become so popular, hundreds of concerns giving particular attention to this class of work, and all of them find plenty to do.

In awarding the contract for architectural metal work in our first-class buildings the owners and the architects should not be compelled to always give the work to the lowest bidder, but should choose among the different bidders according to their ability to execute the work. That is already being done to a great extent, but it is not done as often as it should be. In bidding for work where it is known that the lowest bidder is to get the contract, the better concerns cannot figure for first-class work, because they would never be the lowest bidder.



N. POULSON.

But to be perfectly fair all around, it should be known that the owners and the architects will use their own judgment and award the contract to the firm whose bid and whose ability to execute the work will be to their best advantage.

There is at present a greater demand for architectural metal work than there are skillful mechanics to supply it. It is a business that is very much on the increase, and I hope the good feeling that architects have shown in former years toward architectural metal work will continue, because by both parties coming in close contact the best results will be gained.

N. POULSON,

Imports and Exports of Iron and Steel for First Ten Months of 1906-1905.

Commodities.	Exports		Imports	
	1906. Gross tons.	1905. Gross tons.	1906. Gross tons.	1905. Gross tons.
Pig Iron	65,463	41,212	265,665	170,891
Scrap.	9,931	6,560	11,203	12,604
Bar iron	46,950	26,591	28,754	29,186
Wire rods	5,677	4,836	15,080	14,458
Steel bars	25,144	18,070	.....	.....
Billets, ingots, blooms	180,632	179,880	.....	.....
Hoops	4,169	3,359	9,962	2,467
Steel rails	273,009	249,941	.....	.....
Iron sheets and plates	13,264	6,420	.....	.....
Steel sheets and plates	77,409	53,360	2,886	1,882
Tin plates and terne plates	11,057	6,929	43,846	58,778
Structural iron and steel	93,460	63,401	26,625	9,903
Wire	144,193	110,244	20,218	17,559
Cut nails	6,799	7,204	.....	.....
Wire nails	41,608	30,593	.....	.....
All other nails, in- cluding tacks	4,369	3,478	.....	.....
Pipes and fittings....	123,362	.....	.....	.....
Totals	1,126,496	812,078	429,923	331,331

—The European and American National Bank of New York, which was recently incorporated, with a capital of \$200,000, will be located on the northeast corner of Dey and Greenwich sts. The following are the incorporators: Messrs. Frank Zotti, of Frank Zotti & Co., bankers and realty; Liman McCarty, of the Baltimore & Ohio Railway; Chas. S. Lee, of the Lehigh Valley Railway; Frank A. Marsh, S. F. B. Morse and Wm. G. Brown.



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Vice-President.

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Imports of Lumber and Manufactures of.

Ten Months Ending October—

	1904.		1905.		1906.	
	Quantities.	Values.	Quantities.	Values.	Quantities.	Values.
Unmanufactured—						
Cabinet woods—						
Mahogany (M feet, free)—						
Imported from—						
United Kingdom.....	6,091	\$634,985	6,575	\$768,916	10,142	\$1,039,473
Central America.....	12,344	591,523	8,344	422,936	8,089	329,446
Mexico	11,166	385,863	6,076	285,469	9,462	442,823
Cuba	2,428	151,270	1,174	70,959	2,812	143,856
Other countries	3,153	178,593	2,302	124,638	4,608	266,673
Total	35,182	\$1,942,234	24,471	\$1,672,918	35,113	\$2,222,271
All other, free		973,587		\$1,072,521		\$1,266,861
Logs and round timber, M feet, free	75,973	572,315	95,062	714,355	82,360	729,065
Pulp wood (a), cords, free.....					260,797	1,153,002
Lumber—						
Boards and other sawed lumber (M feet, dutiable)—						
Imported from—						
British North America.....	511,068	\$7,659,655	635,162	\$9,702,516	841,591	\$13,665,648
Other countries	2,499	112,723	5,118	157,018	6,103	292,202
Total	513,567	\$7,772,378	640,280	\$9,859,534	847,694	\$13,957,850
Shingles, M dut.....	610,790	\$1,280,213	672,657	\$1,417,086	721,749	\$1,517,495
Other lumber, dut.....		1,414,018		1,694,792		2,367,635
All other unmanufactured, free....		3,512,601		3,223,445		2,999,377
All other unmanufactured, dut....		38,559		193,633		68,187
Total unmanufactured		\$17,505,905		\$19,848,284		\$26,281,743
Manufactures of—						
Cabinet ware or house furniture, dut.....		\$533,995		777,157		886,749
Wood pulp (tons, dutiable)—						
Imported from—						
Germany	7,072	\$322,720	6,366	333,472	8,097	419,976
Norway	20,683	761,005	15,168	828,465	15,032	842,745
Other Europe	6,915	372,024	12,396	575,673	9,343	410,288
British North America.....	94,944	1,809,415	93,315	2,027,380	103,892	2,144,121
Total	129,614	\$3,265,164	127,245	\$3,764,990	136,364	\$3,817,130
All other, dut.....		\$1,762,726		\$1,982,923		\$2,413,733
Total manufactures of		\$5,561,885		\$6,525,070		\$7,117,612
Total wood, and manufactures of		\$23,067,790		\$26,373,354		\$33,399,355

The Sheet Metal Trade.

EVERY important line of finished steel product except structural material was advanced in price during the last quarter of the year. Tin plate was set ahead ten cents a box on Dec. 12, which was the second action of the sort within the period stated at Pittsburgh. Further illustrative of the unprecedented state of circumstances in the sheet and tin plate trade is the report from Pittsburgh that, while it is customary to close many mills at this season, yet, as a general statement, it can be said they are still being operated as fully as the short supply of steel will permit. The only idle works are: Humbert at Connellsville, Pa., 6 mills; Morewood at Gas City, Ind., 7 mills, and Anderson at Anderson, Ind., 8 mills. These plants have not been on the operative list for eighteen months, and no effort is being made to put them in condition, as it is difficult to get the steel needed to supply the plants already running. The independent producers of tin plate and sheets are only prevented from operating to capacity on account of inability to get steel, but most of them are operating in fairly good shape.

The leading interest and many independents are booked up on sheets to April 1 and into the second quarter. In tin plate sales have been made through the second and into the third quarter. It has been the practice in former years to store tin plate at this season for the usual brisk spring trade, but while production is as large if not greater than ever before, stocks are not being accumulated. Specifications on old contracts during the last few weeks have been unusually heavy and shipments would have been greater but for the shortage of railroad cars.

As most of the sheet and tin plate mills are operated under the sliding wage scale of the Amalgamated Association of Iron, Steel and Tin Workers, it is likely the workers will participate in the higher prices. The present tin plate scale is \$3.40 a box and wages are advanced 2 per cent. with every increase of 10 cents a box in the base price.

In New York City particularly the sheet metal trade has had of recent years, and especially the last two, a remarkable revival of interest and expansion of business. If the fathers who followed the old tinsmith trade and suffered the reverses of twenty-five or more years ago, when factory tinware first came into use, if they are alive to-day, they are seeing this grand old trade resuming its former importance, though with new features and principles, and with higher wages than for a long period, and more work to do. But the tin-pan and pail work the factory still holds fast; steam-heating has taken away much of the stove-setting and hot-air pipe-work, and the plumbers have taken away another share of the old tinsmith's business; but he has added many new lines, and the uses to which his material is being put are increasing in number every day.

General remarks in allusion to the remarkable growth of the sheet metal industry have been frequent during the year, and one of the reasons for the advancing prices of sheets and tin plate is this growth of business and enlargement of demand.

Reports indicate that the gas, oil and heating stove trades have made record purchases of sheets, and naturally the demand for galvanized sheets for cornice and other exterior work and for black sheets for roofing and corrugated work in the active building campaign of the past two years will be credited with a considerable proportion of the added tonnage. Also due to the building movement, but emphasizing a preference for steel sheets where wood has been used heretofore, is the large consumption this year of metal lath, metal ceilings and interior decorations of pressed steel. Expanded metal has had an increasing vogue. Shaped sheet steel in combination with concrete has likewise made its contribution to the new tonnage. Prominence should be given in the list of new developments to the enlarging use of sheet steel furniture and office and library equipment.

Prices of sheets in December, 1906, were firm as follows: Blue Annealed Sheets, No. 10 gauge and heavier, 1.80c.; Nos. 11 and 12, 1.85c.; Nos. 13 and 14, 1.90c.; Nos. 15 and 16, 2c.; Box Annealed, Nos. 17 to 21, 2.35c.; Nos. 22 to 24, 2.40c.; Nos. 25 and 26, 2.45c.; No. 27, 2.50c.; No. 28, 2.60c.; No. 29, 2.75c.; No. 30, 2.85c. Galvanized sheets were quoted as follows: Nos. 10 and 11, 2.55c.; Nos. 12 and 14, 2.65c.; Nos. 15 and 16, 2.75c.; Nos. 17 to 21, 2.90c.; Nos. 22 and 24, 3.05c.; Nos. 25 and 26, 3.25c.; No. 27, 3.45c.; No. 28, 3.65c.; No. 29, 3.90c.; and No. 30, 4.15c. We quote No. 28 gauge Painted Roofing Sheets at \$1.85 per square, and Galvanized Roofing Sheets, No. 28 gauge, \$3.15 per square for 2-in. corrugations. These prices are for carload lots, jobbers charging the usual advances for small lots from store.

IMPORTS OF TIN.

The following table shows the imports for consumption of tin in bars, blocks and pigs (free) into the United States for the calendar years from 1898 to 1905, inclusive:

Year.	Quantity.	Value.	Year.	Quantity.	Value.
1898	31,374	\$8,770,221	1902	42,522	21,263,337
1899	35,624	16,748,107	1903	41,567	22,265,336
1900	34,995	19,458,586	1904	41,472	22,356,895
1901	37,280	19,024,761	1905	44,188	26,316,023
			1906*	41,487	30,178,650

*10 months.

During 1905 the United States imported 44,188 short tons, about 43 per cent. of the total visible output, valued at \$26,316,023, giving an average price of 29.77 cents per pound. This is, however, considerably below the price at which tin sold in New York City during the year. The price of tin at the opening of the year was 29.05 cents, and it gradually rose with slight fluctuations until about the middle of December, when it went above 36 cents, closing at about 37 3-8 cents. During the first half of 1906 the price rose greatly, reaching at one time £215 per long ton on the London market, and 48½ cents per pound on the New York market. But in June it had fallen to between 38 and 40 cents per pound.

In November, 1906, statistics, as compiled by C. Mayer, sec-

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A Block of Real Homes.

A BLOCK of private houses recently completed for the Clark estate (Mr. Frederick Ambrose Clark), is situated in West 74th st, New York, numbers 18 to 52. In that the houses are to be leased instead of sold, the scheme marks a new departure in

real estate investment which cannot but be of advantage to the community in general. In these houses it is the aim to provide a better abode than can be obtained for an equal rental in an apartment hotel; to provide something which shall be a home in fact, a place where there may be real family life as it used to exist before the city grew to proportions that forced real estate values up so high that now only the wealthy can live in houses.

The block presents the appearance of a composite whole well studied in its entirety for silhouette fenestration and general composition.

The houses, though parts of a whole, preserve the individual quality that the prospective tenant of such a house would expect. Mr. Percy Griffin has varied the individual facade treatments to give to each house a distinctive character, yet to preserve in its composition certain lines, which allow it to properly take its place in the block. Each house occupies a plot of about 25x85 ft., and has a 3-sty rear extension, making a fairly roomy establishment of seventeen or nineteen rooms. By building these houses at one time it has been possible for the owners to obtain at a reasonable expenditure, many conveniences that to the one-house builder would be prohibitive in price.

Speaking of the architectural scheme as a whole, an appreciation in the *Architectural Record* for November says it is a laudable one, and if one did not know how it came about, he would be agreeably surprised to see in New York a repetition, with certain local modifications, it is true, but a repetition, nevertheless, of what the Parisians consider the proper treatment of dwelling-house facades. Perhaps the idea will appeal in the future, not only to estates and the like, who, thanks to them, have done the good work in this instance, but to men of moderate means, who can afford to build themselves modest city houses. If people in this frame of mind can, by this successful experiment be interested sufficiently to co-operate before building, so that some kind of uniformity of architectural treatment may result, then the experiment of the Clark estate will have accomplished a very important step in the direction of rational and good architecture in New York and other large American cities. But this is perhaps looking somewhat into the future, and the law will, no doubt, have to acknowledge the practical as well as the artistic necessity of such a step before any definite results can be expected.



THE CLARK ESTATE HOUSES, VIEW LOOKING WEST.

West 74th Street, Manhattan.

Percy Griffin, Architect.

retary of the New York Metal Exchange, were favorable to holders of the metal, as the total visible supply on October 31, 11,162 tons, was 1,650 tons below that of the corresponding date last year and 1,037 tons below that of a month ago. Stocks in the United States were 3,260 tons, against 3,020 tons at the end of September. In the middle of December sales were being made at between 42 and 43 cents. Taking into consideration the almost universal habit of allowing stocks to decline during December, in preparation for stock taking, the amount of business then prevailing was considered satisfactory. The London market is higher to-day, closing at £196 10s. for spot and £196 for futures.

There has been good reason for tin to rise in price, for, although the production of 1905 was about the same as that of 1904, the consumption increased considerably, and stocks have materially diminished. Nevertheless, the highest prices are probably due largely to speculation, from which cause the price of tin has suffered violent fluctuations through many years. In tin plates the increase last year over the record of 1905 was not so pronounced as in sheets. The roofing demand has been larger, probably 15 to 20 per cent., due almost entirely to an increased use of the better grades of plates.

Only 43,846 tons of foreign tin and terne plates came over during the first ten months of 1906, as compared with 58,778 in 1905. The present yearly rate is in sharp contrast with importations of 329,435 tons in 1890, and an average of 280,000 tons in the five years preceding. The contrast becomes more marked when it is considered that the importations in the years mentioned practically represented the full domestic de-

mand at that time. To-day more than double the above tonnage is being worked up in the United States each year, as indicated by a home production in 1905 of 493,500 tons and an importation of 65,740 tons.

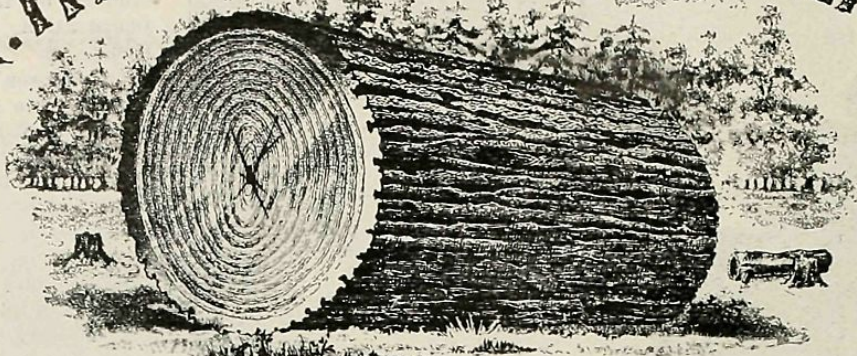
The production of sheets and tin plates by the United States Steel Corporation in 1906 has been estimated at 1,200,000 gross tons, which compares with 924,439 tons in 1905, 735,482 tons in 1904, 763,670 tons in 1903 and 699,621 tons in 1902. The difficulties outside producers of sheets and tin plates had had throughout the year in securing a supply of steel would indicate that the output of such mills has at least not expanded, and it is known that the building of new independent mills in these lines has not thrived in recent years.

THE ZINC MARKET.—Like all the metals, spelter enjoyed the advantages of greatly stimulated consumption during 1906, with prices at a fair level. At the opening of the year the price was 06.62½ cents (New York) to compare with 06.10 cents in January, 1905, and in the middle of December, 1906, we find it quoted at 6.65, in cargo lots for prime western. Prices generally ran on a higher level in 1906 than in the previous year.

—May a parlor in a flat house be constructed under the law so that an alcove without windows may be curtained off and used as a bedroom? This question will go before the Court of Appeals some time within the next two weeks, and will be argued by Corporation Counsel Ellison and lawyers representing speculative builders of tenement houses.

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CAREER OF AN OLD TIN-PLATE HOUSE.

IN these days of huge corporations and organized companies representing widespread interests in every branch of business, it is of distinct interest to record at least one case where an old-time house, established nearly a century ago, has steadfastly maintained its independence and individuality, still continuing in the same line of business as a private firm.

The record of the house of N. & G. Taylor Company has been one of continuous, signal success in the tinplate industry. The business has been handed down from father to son—no less than four generations of Taylors having been connected with the firm. No reference to the roofing-tin industry of this country would be complete without mention of this house. Since the early days of the roofing-tin industry they have consistently advocated the use of good tin, and have shown greater activity than any other house in presenting the advantages of good roofing tin to roofers, contractors, architects and property owners themselves. As a natural result, they have built up a business that has made them the largest manufacturers of high-grade roofing tin in this country.

The house was founded in 1810 in Philadelphia, by William Taylor, grandfather of the present members of the firm, who with his brothers, George Taylor and Tracy Taylor, embarked in the venture of selling tinplate, tinware, metals and kindred articles of all kinds—a venture that was destined to meet with such marked success. In 1830 the firm sold the first terne plates for roofing purposes ever made. We quote from the United States Census Report for 1902:

"In that year (1830) small quantities of lead-coated sheets were made in an establishment located on Market st, Philadelphia, and used for covering roofs. The plates made in the Philadelphia establishment were 10x14 inches, the standard commercial size in those days. Imported English tinplates were used instead of blackplates. They were first put together and run through a bath of molten lead, the tin on the plates serving as a holder for the lead. The plates were sold for roofing purposes, and were of excellent quality. The quantity produced, however, was not very large.

"Regarding the sale of these plates, the N. & G. Taylor Company, of Philadelphia, says: 'News of the sale of so novel an article soon found its way across the water, and terne plates commenced to be made there.'

"The manufacture of terne plates did not become an important

branch of the tinplate industry until America began to use this material for covering roofs."

In 1845 the father of the present members of the firm, Nathan Taylor, together with his cousin, George E. Taylor, a son of George Taylor, were admitted to the firm—the old people retiring a few years later. The present company has in their possession old catalogues published about this time, which are of remarkable value to those who are interested in the practice and customs of former days. It is evident from one of these catalogues, published in 1857, that the company already occupied an important position in the industry, as we note a record of premiums being awarded them at the following exhibitions: The American Institute, 1843, '47, '48, '49, '50, '51, '52 and '53; Hartford County Agricultural Society, September, 1843; October, 1847, and October, 1848; Maryland Institute, October, 1848, and 1851; Massachusetts Mechanics Fair, Boston, 1850; New York State Fair, 1850; the Exhibition of the Industry of All Nations at the Crystal Palace, London, England, 1853.

The tools and machines used by tanners in the early days were crude and rough in design, and improved forms were designed by the company about this time, many of which are still in use at the present day, the rights of manufacture having been transferred to the makers of tanners' tools and supplies. Many of the awards mentioned above were made for these improved tools. These tools were lighter, neater and of far more practical use than the heavy, clumsy tools of English make.

Nathan Taylor died in 1861, leaving his partner, George E. Taylor, who, with his brother, William Y. Taylor, continued the firm of N. & G. Taylor, adding the word "Company" to the title, making the present title date from that time.

About this time, catalogues and circulars published by the firm mention the facilities offered by the new Atlantic Cable in importing supplies of tinplate promptly from the English works. As a matter of interest, the first code word adopted by the company was the word "pleasure," indicating that "tinplates are advancing." The charge for this single word at that time was five dollars.

A catalogue published in 1868 calls particular attention to the new size for roofing tin just introduced by this house, namely 28x20 inches. Frequent mention is made of this latest novelty, and its distinct advantage to the roofer, in N. & G. Taylor Co.'s advertising at that time. In this same catalogue is found a description of another novelty, namely—Bessemer steel tinplates

for stamping purposes. The catalogue states that "these steel tinplates are altogether a novelty, and originally introduced by ourselves; they are well suited for stamping, requiring a thinner gauge than if they were iron."

The company's products were awarded premiums at the Paris Exposition in 1867. An elaborate catalogue published in 1875 devotes even more space to the use of good roofing-tin as a durable, fireproof, weatherproof material for covering buildings. We learn from this catalogue that:

"When we introduced our 28x20 roofing we hardly thought it would so popularize itself as to drive 14x20 out of the market, but it was so well adapted for rapid and perfect roofing that we have never been able to fully keep pace with the demand.

"28x20 bright tinplate originating with ourselves, is now coming into general use for all kinds of tinware, and in fact taking the place of the old sizes. A greater variety of patterns can be cut from it. Its use saves labor, solder and material, and we have always in stock the largest possible variety of brands suitable for all kinds of work; IC thickness to D 5X.

"At the Franklin Institute Exposition of 1874 we exhibited the largest sheet of tinplate ever made, also samples of the first leaded plate ever made, taken from a roof in Philadelphia, where they had been for forty years, and as perfect as when put on. This was the leaded tin made in Philadelphia in 1831, before it was ever made in Wales. Other curiosities exhibited were samples of No. 40 sheet iron, shown under glass, the thinnest ever made. Also ordinary articles of tinware made of 6X and 8X tinplate, and replated by being dipped into molten tin. Also very valuable drawings from a work published in 1720, showing the method of making tinplates at even an earlier period."

These old catalogues constantly urge roofers and manufacturers to favor American industries wherever possible. American built ships used for the imports of tinplate, and when Philadelphia Russia iron was first made, Messrs. N. & G. Taylor Company were the first to sell it. They were the first houses therefore that ever sold American tin-plate and sheet-iron, introducing it through Eastern Pennsylvania and New York City. One of our advertisements of this American Hammered Russia Iron contains the significant prophetic inquiry—"Why go to Russia for iron when we have mountains and mountains of it here?"

This catalogue of 1875 mentions some buildings in Philadelphia "covered with tin during the latter part of the last century, and the roofs have not been repaired since. One was covered in 1796 and the roof to-day is in as excellent condition as when put on. Throughout Canada it is a common thing for a tin roof to be in perfect condition after the lapse of a century."

George E. Taylor died in 1882, when the present members of the firm, together with George W. B. Taylor (deceased 1899) have continued the business up to the present time. After the McKinley protective tariff went into effect they were among the first to commence the manufacture of roofing-tin in this country. This was in 1891. A year or two later an extensive tract of land was secured in the southern portion of the city, and the present tinplate works erected there. The company also operates its own furnaces, rolling mills and blackplate plant at Cumberland, Maryland, thus having control of all the processes of manufacture from the pig-iron and pig-metals to the finished sheet. The works are able to give careful, personal attention to all the intricate processes of manufacture.

In a private industry of this nature a deep-rooted family pride exists, which is too often lacking in large industrial corporations and stock companies. The business is under the direct personal management of the members of the family, and the old-time reputation for fair dealing and good value in their tinplate is carefully guarded and valued.

Their "Target and Arrow Old Style" brand, formerly known as "Taylor Old Style," has established so widespread a reputation for satisfactory service on the roof, that as a matter of common business judgment the company is bound to maintain the former high standard of that brand at all hazards. This they have done, steadfastly refusing to cheapen the quality of the tin to meet price competition.

In the present movement for better conditions among the trade the house has taken its usual leading part—Hollinshead N. Taylor of the company, having submitted two of the six prize essays recently selected in competition for advancing the interests of tin roofing.

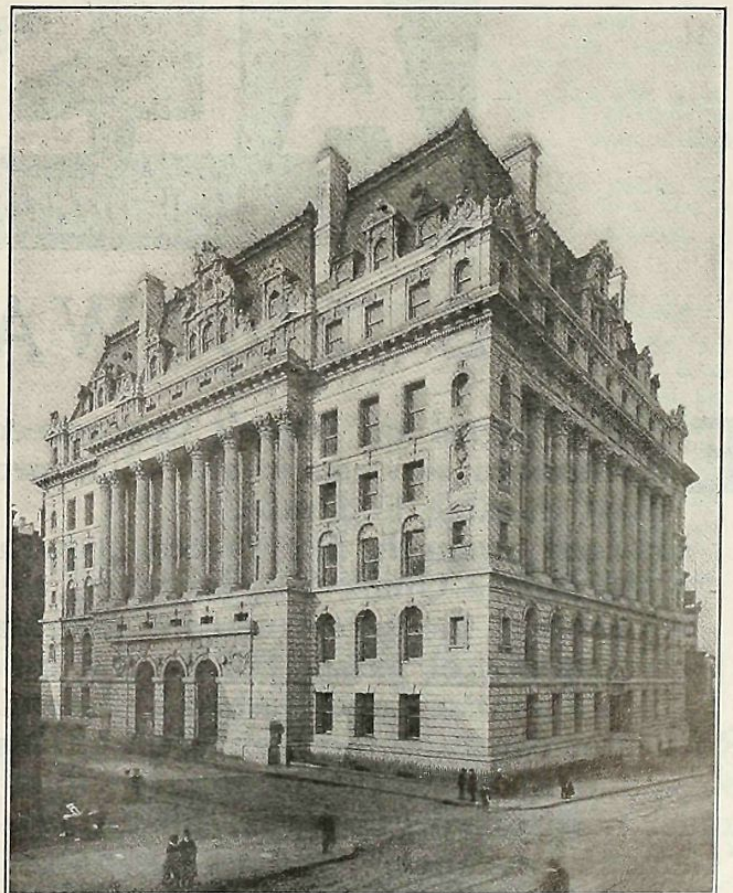
Prospective Building.

The following is a continued list of building enterprises for Manhattan and Bronx that may be expected within the year 1907. For some, plans are now under way; for others, no architects have yet been selected; and in some cases the sites have not been secured. The first name is the owner's; the second, that of the architect; the third, the contractor's; the date is the date of announcement in the Record and Guide.

OFFICE, STORE AND LOFT BUILDINGS.

- Madison av, s e cor 24th st, 46-sty tower building. Metropolitan Life Ins Co, 1 Madison av; ar'ts, N Le Brun & Sons, 1 Madison av; b'r, The Hedden Const Co, 1 Madison av, Steel, Post & McCord, 24 E 23d st. June 9, 1906.
- 24th st, Nos 425-435 E, 11-sty loft building. Joseph J Little, 2

- Astor pl; ar'ts, Townsend, Steinle & Haskel, 29 E 19th st. No contracts let. June 24, 1905.
- 17th st, Nos 138-140 West, 10-sty store and loft building. E J Galway Building Co, 156 5th av; ar't, Geo H Anderson, 156 5th av; b'r, Galway Building Co. Dec 1, 1906.
- Broad st, Nos 70-72 5-sty office building. American Bank Note Co, 86 Trinity pl; ar'ts, Kirby, Petit & Green, 37 W 31st st; b'r, The Hedden Const Co, 1 Madison av. Nov 17, 1906.
- Maiden lane, junction Liberty and William sts, 16-sty office building; The German-American Ins Co, 35 Nassau st; no architect selected; no contracts let. Nov 17, 1906.
- Broad st, s e cor Beaver st, 4-sty stock exchange; Consolidated Stock & Petroleum Exchange, 60 Broadway; ar'ts, Clinton & Russell, 32 Nassau st; Geo A Fuller Co, b'r; no sub-contracts let. July 7, 1906.
- 4th av, Nos 330-332, 11-sty loft building. Mrs Phillipine Friedberg, 2304 Bassford av, Bronx; ar't, Francis H Pfluger, 32 Union sq. Nov 24, 1906.
- 36th st, Nos 542-546 West, 8-sty loft building. Thonet Bros, 866 Broadway; ar't, Fred W Wentworth, Paterson, N J; b'r, Turner Const Co, 11 Broadway. Oct 6, 1906.
- Morton st, Nos 10-12, 11-sty loft building; P J Coleman, 219 W 22d st; ar't, B W Levitan, 20 W 31st st; Mr Coleman is general contractor. Oct 27, 1906.
- 5th av, Nos 556-558, 16-sty office building, The 556-558 Fifth Avenue Co; ar't, Oscar Lowinson, 18-20 E 42d st. No contracts let. Nov 17, 1906.
- Greenwich st, Nos 114-122 | extensive alterations to 7-sty loft building; Equitable Life Assur Soc, Albany st, No 2 | 120 Broadway; ar'ts, Jardine, Kent & Jardine, 1262 Broadway. Dec 8, 1906.
- Amsterdam av, s w cor 162d st, 2-sty store and office building. F W Woolworth, 990 5th av; ar't, C P H Gilbert, 1123 Broadway. Dec 8, 1906.
- 5th av, s w cor 16th st, 12-sty loft building. Hudson Realty Co, 135 Broadway; ar'ts, Buchman & Fox, 11 E 59th st. No contracts let. Jan 12, 1907.
- William st, No 118, 6-sty mercantile building. Albert and Joseph Plant, 120 William st; ar'ts, Maynicke & Franke, 298 5th av. No contracts let. Jan 12, 1907.
- Crosby st, Nos 101-103, 7-sty loft building. Mildred Realty Co, 103 E 125th st; ar'ts, Bernstein & Bernstein, 24 E 23d st. No contracts let. Jan 12, 1907.
- 9th av, No 85, 6-sty store and loft building. Joseph Beck, 145 Chambers st; ar't, Nathan Myers, 238 Washington st, Newark, N J. No contracts let. Jan 12, 1907.
- Franklin st, n s, 100 w Hudson st, 3-sty store and loft building. Ida May Powell, 326 W 72d st; ar't, Henri Fouchaux, Broadway and 162d st. No contracts let. Jan 12, 1907.
- Broadway, No 149, 41-sty tower building. Singer Mfg Co, 149 Broadway; ar't, Ernest Flagg, 35 Wall st. Steel, Milliken Bros, 11 Broadway. Foundations, The Foundation Co, 32 Nassau st. Dec 28, 1901.
- East Broadway, No 91, 7-sty loft building. L Levy & Son, 13 Catherine st; ar'ts, Sommerfeld & Steckler, 19 Union sq. Nov 24, 1906.
- Broadway, s w cor 55th st, 2-sty store and loft building. Mary A Fitzgerald, Litchfield, Conn; ar'ts, Hunt & Hunt, 28 E 21st st.
- 5th av, n e cor 14th st, extensive alterations to 6-sty bank and loft building. Fourteenth Street Bank, on premises; ar't and b'r, Garfield Building Co, 156 5th av. Sept 22, 1906.
- Grand st, s e cor Wooster st, extensive alterations to 4 and 5-sty store and loft building. Samuel Eisemore, 71 Grand st; ar't, T J Van der Bent, 160 5th av. Dec 15, 1906.



HALL OF RECORDS.
John Peirce Co., Builder. John R. Thomas, Horgan & Slattery, Architects.

HIGH-GRADE BUILDING PAPERS

"VENETIA SHEATHING"---Highest quality Red Rosin Sized Sheathing.

"OLD HICK" FIBROUS RED ROPE SHEATHING AND INSULATING---Strongest Building Paper made.

U. S. FIBRE PLASTER BOARD---A paper substitute for plaster; can be painted, varnished or kalsomined. 36-in. rolls, 500 square feet each.

RED HAWK RED ROPE WATERPROOF ROOFING PAPER.

BLACK HAWK WATERPROOF SHEATHING---One, two, three and four-ply.

"NO NOISE" FELT---Made from selected wool stock. The best material used between double floors for sound deadening and damp-proof purposes.

C. B. HEWITT & BROTHERS

*Wholesale Dealers and Manufacturers of
PAPER, BOARDS AND GLUE
Headquarters for Woodworking Glues*

48 Beekman Street - - - New York City

Agents Metropolitan territory for "Congo" Never Leak Roofing.

Write for Samples and Price List.



THE SIDEWALK CEMENT

EVERY barrel of Alsen's guaranteed to exceed "Standard Specifications." A medium slow set cement has proven in practical tests, in all countries, most durable and safe.

Forced strength, like forced growth, is dangerous to ultimate results.

We supply Quick Set, however, to special order for special work.

Alsen's is the safest cement manufactured, as analyses prove.

Every barrel passes boiling test before shipped. Every barrel is matured.

The Panama Canal award by Isthmian Commission, the 70,000 bbl. City of Rochester contract, the Key West extension, expected to take a total of 300,000 bbls., and many works of nearly equal importance, without a single rejection under most exhaustive tests, substantiate every assertion made for this Portland "Cement Insurance."

Location directly on Hudson River gives great advantages in freights and prompt deliveries.

- Fletcher st, Nos 34-38, 8-sty loft building. Rogers & Pyatt, 129 Front st; ar'ts, Ludlow & Valentine, 1 East 27th st; b'r, The Turner Const Co, 11 Broadway. Dec 8, 1906.
- 30th st, Nos 110 and 112 W, 7-sty loft building. Reliance Const Co, 203 Broadway; ar't, Geo Fred Pelham, 503 5th av. Dec 22, 1906.
- Broadway, No 449 | extensive alterations to 5-sty store and loft
Mercer st, No 26 | building. Chas E Hess, 322 Reid av, Brook-
lyn; ar'ts, Israels & Harder, 31 W 31st st. Nov 24, 1906.
- Broadway, No 179, extensive alterations to 5-sty office building.
Geo E Keith, 299 Broadway; ar't, H G Knapp, 112 W 42d st.
Dec 15, 1906.
- 3d av, Nos 54 and 56, 3-sty loft and store building. Luder Rein-
ken, 124 E 62d st; ar't, L Giller, 416 Broadway. Dec 15, 1906.
- Broadway, No 1550, extensive alterations to 4-sty studio and
store. Julia P Outcault, 114 W 71st; ar'ts, Webster & Videto,
160 5th av. Nov 17, 1906.
- Wall st, No 74-76, extensive alterations to 5-sty savings bank
and office building. Seamens Bank for Savings, 74 Wall st;
ar't, Ernest Greene, 5 Beekman st.
- 72d st, No 176 West, extensive alterations to 5-sty store and
office building. David S Brown, 102d st and Riverside Drive;
ar't, Danl T Webster, 160 5th av.
- 11th av, Nos 687-689, extensive alterations to 2-sty store and
loft building. Albert Smith, 685-687 11th av; ar't, Frederick
C Browne, 143 West 125th st.
- 5th av, n w cor 8th st, extensive alterations to 4-sty studio
building. Mina M Edison, Orange, N J; ar'ts, Kafka & Linden-
meyer, 34 W 26th st.
- 18th st, No 8 West, extensive alterations to 4-sty store; Dr F
Le Roy Satterlee, 6 West 56th st; ar't, E L Satterlee, 1123
Broadway. No contracts let. Dec 1, 1906.
- 5th av, No 75, extensive alterations to 4-sty store and office;
Harriet D Potter and Elizabeth S Jones, 11 East 42d st; ar't,
H W Howard, Jr, 39 East 42d st.
- Wall st, No 7, extensive alterations to 12-sty office building;
ow'r and ar't, W Wheeler Smith, 7 Wall st; b'r, James C Hoe's
Sons, 10 Liberty st. Nov 24, 1906.
- 5th av, No 582, extensive alterations to 4 and 6-sty mercantile
building; Trustees of Columbia College, City of New York,
Morningside Heights; ar't, W W Bosworth, 527 5th av.
- Madison av, n e cor 125th st, extensive alterations to 3-sty store
and office; Augustus Salomon, 51 E 125th st; ar't, Gustave
Erda, 795 Manhattan av, Brooklyn.
- 54th st, Nos 233-237 West, 4-sty garage. Kips Bay Realty Co,
137 Broadway; ar't, Clarence True, 729 6th av.
- Webster av, w s, 125 n 200th st, 2-sty garage. Alfred B Hall, 1
Beech Terrace; ar't, Albert E Davis, 494 E 138th st.
- 89th st, No 121 West, extensive alterations to 2-sty garage;
Countess de La Valette, Paris, France; ar'ts, J B Snooks Sons,
73 Nassau st.
- 1st av, n e cor 45th st, extensive alterations to 4-sty storage,
Schwartzschild & Sulzberger Co, on premises; ar't, C E Huntley,
476 East 77th st. Dec 22, 1906.
- 35th st, Nos 510-512 West, extensive alterations to 4-sty storage
building. Jonas & Naumberg, 516 W 35th st; ar't, Harry
Allan Jacobs, 320 5th av; b'r, John T Brady & Co, 4 E 42d st.
Dec 29, 1906.
- Monroe st, Nos 303-307, extensive alterations to 5-sty stable;
Wm Koster, 301 Monroe st; ar't, Wm Kurtzer, Spring st and
Bowery. Jan 12, 1906.

VARIOUS BUILDINGS.

- Randalls Island, north end, opposite East 121st, extensive altera-
tions to five 3-sty dormitories; City of New York, foot of East
26th st; ar't, Wm Flanagan, Jr, foot East 26th st.
- Greenwich st, Nos 683 and 685 | 5-sty sub-station, New York &
Christopher st, No 137 | Jersey Railroad Co, 111
Broadway; ar'ts, Robins & Oakman, 27 E 22d st.
- Rivington st, n s, 50 e Goerck st, extensive alterations to 3-sty
public bath; City of N Y, City Hall; ar'ts, Bernstein & Bern-
stein, 24 E 23d st.
- 36th st, No 303 East, 3-sty public library. N Y Public Library,
City of N Y; ar'ts, McKim, Mead & White, 160 5th av.
- 233d st, n s, 103.11 e Napier av, two 1-sty greenhouses. Mrs
Augusta Butz, on premises; ar't, Paul C Hunter, 203 Broadway.
- Independence av, w s, from 248th to 252d st, 1-sty greenhouse.
Geo W Perkins, Riverdale; ar'ts, Heins & La Farge, 30 E 21st
st.
- Central Park, opposite East 105th st, eight 1-sty greenhouses and
palm house. New York City, Dept of Parks; ar'ts, Bernstein
& Bernstein, 24 E 23d st.

ELEVATOR APARTMENT HOUSES.

- Riverside Drive, n e cor 95th st, 6-sty elevator apartment house.
Geo W Levy Building Co, 2784 Broadway; ar'ts, Schwartz &
Gross, 35 W 21st st. Sept 1, 1906.
- Riverside Drive, s e cor 138th st, 12-sty elevator apartment
house. Samuel Trood, 616 W 137th st; ar't, Louis C Maurer,
22 E 21st st; no contracts let. No 17, 1906.
- St Nicholas Terrace | 10-sty elevator apartment house. Manhat-
Convent av | tan Leasing Co, 587 Lenox av; ar'ts name
129th and 130th st | withheld. Oct 27, 1906.
- Broadway, e s, bet 158th and 159th sts, two 8-sty elevator apart-
ment houses; The Hudson Realty Co, 135 Broadway; ar'ts,
Schwartz & Gross and B N Marcus, 35 W 21st st; no contracts
let. Nov 17, 1906.
- Broadway, s e cor 135th st, 6-sty elevator apartment house; ow'r,
and b'r, Francis A Clark, 129th st near 7th av. Nov 17, 1906.
- 7th av (location withheld), 9-sty elevator apartment house; ow'rs
name withheld; ar't, Maximilian Zipkes, 147 4th av. Oct 27, 1906.
- Lexington av, s e cor 67th st, 11-sty elevator apartment house.
East 67th Street Apartments, 27 William st; ar'ts, Rossiter &
Wright, 110 E 23d st; b'r, Wm J Taylor, 5-7 E 42d st. Oct
13, 1906.

DWELLINGS.

- 79th st, Nos 67 to 71 East, 5-sty dwelling. Mrs Sara Rives, 14
W 38th st; ar'ts, Carrere & Hastings, 28 E 41st st; b'r, E E
Paul & Co, 289 4th av. Nov 24, 1906.
- Mt Hope pl, s s, 115 w Walton av, five 3-sty dwellings. Solomon
Realty Co, Solomon Mayer, 299 Broadway, Pres; ar'ts, Neville
& Bagge, 217 W 125th st.

73d st, n s, 205 e Park av, 5-sty dwelling. Mary d'Antignac
Lilienthal, 766 Madison av; ar'ts, Buchman & Fox, 11 East
59th st. Oct 6, 1906.

Briggs av, w s, 307 n 194th st, eight 2-sty dwellings. Wm H
Wright & Son, Inc, 192d st and Valentine av; ar't, Louis
Koenig, 608 East 150th st.

Lafayette av, n w cor Hunts Point road, 2 1/2-sty dwelling. Jas
F Meehan, 1020 Longwood av, ow'r and ar't.

Bainbridge av, w s, 26.9 s 196th st, 3-sty dwelling. Stubenvoll
Bros, 196th st and Briggs av; ar't, Wm T La Velle, 1145 Free-
man st.

172d st, s s, 80 e Audubon av, 2 1/2-sty dwelling. Washington
Heights United Presbyterian Church, Audubon av and 172d st;
ar't, John E Scharsmith, 1 Madison av. Dec 29, 1906.

73d st, No 25 East, 5-sty dwelling. V Henry Rothschild, 4 E
67th st; ar'ts, Schwartz & Gross and B N Marcus, 35 W 21st st.
No contracts let. Jan 12, 1907.

38th st, No 110 East, extensive alterations to 4-sty residence;
Dr Warren S Adams, 252 Madison av; ar't, Ed S Betts, 18 E
17th st; b'r, Fulton & Best, 544-546 W 45th st. Jan 12, 1907.

CHURCHES AND SCHOOLS.

47th st, n s | 325 e 9th av, 4 and 5-sty school. City of New York,
48th st, s s | City Hall; ar't, C B J Snyder, 500 Park av.

26th st, Nos 428-438 E | 6-sty training school for nurses. The
25th st, Nos 435-447 E | City of N Y; ar'ts, Parish & Schroeder,
5 W 31st st; John H Parker Co, at \$498,975, was lowest bidder.

120th st, s s | 175 w 7th av, extensive alterations to 4-sty
119th st, n s | school; City of N Y, City Hall; ar't, C B J Sny-
der, 500 Park av.

224th st, s s, 105 e Barnes av, 1-sty church. Trinity Baptist
Church Corporation, John Lynch, 154 223d st, treasurer; ar'ts,
Ducker & Co, 277 Broadway.

Aqueduct av, n e cor University av, 2-sty church. University
Heights Presbyterian Church, C P Bliss, 150 Nassau st, Pres;
ar'ts, Bannister & Schell, 69 Wall st.

Oak Terrace, s s, 61 e Crimmins av, 1-sty church. Concordia
Lutheran Church, H Pottberg, 356 Crimmins av, pastor; ar'ts,
Chas Baxter & Son, 360 Alexander av.

Undercliffe and Aqueduct avs, Washington Bridge and 174th st,
1-sty chapel. Academy of the Sacred Heart, Madam Mahoney,
on premises, superior; ar'ts, T H Poole & Co, 13 W 30th st.

. FACTORIES AND WAREHOUSES.

135th st, s s, 225 e Lincoln av, 1-sty factory. Clemens & Grill,
531 East 134th st; ar't, Clement B Brun, 1 Madison av.

50th st, Nos 619-625 W | 6-sty factory. Wm Waldorf Astor, 23
51st st, Nos 614-624 W | W 26th st; ar'ts, Ross & McNeil, 39 E
42d st.

39th st, s s, 275 e 9th av, extensive alterations to 4-sty factory;
D Auerbach & Sons, 334 W 39th st; ar't, Frank H Quinby, 99
Nassau st.

14th st, s s, 138 w Av D, 2-sty factory. Mrs Emily T Kent,
Tuxedo Park, N Y; ar't, Frank H Quinby, 99 Nassau st.

Leggett av, junction Garrison and Cabot sts, 5-sty factory.
Pease Piano Co, 128 W 42d st; ar't, Frederick E Hill, 1 Broad-
way.

136th st, Nos 1133 and 1135, extensive alterations to 2-sty fac-
tory. Mugler Iron Works, on premises; ar'ts, Pfluger &
Tomaselli, 32 Union sq.

Tinton av, n w cor 145th st, 2-sty factory. Sanders & Barnett,
64 W 135th st; ar'ts, Bernstein & Bernstein, 24 E 23d st.

Southern Boulevard, s s, 3d to Lincoln av, 1-sty storage building.
Central R R Co of N J, 143 Liberty st; ar't, Jos O Osgood,
Jersey City.

GARAGES AND STABLES.

Brook av, w s, 338.2 n 163d st, 2-sty stable and storage;
Adolphus Busch, 425 11th av; ar'ts, Widmann & Walsh, Wain-
wright, St Louis, Mo, and Buchman & Fox, 11 E 59th st.

Brook av, w s, 150 s 156th st, 2-sty stable; Peter and Adam Her-
lich, 3026 3d av; ar't, Rudolph Werner, 4192 Park av.

85th st, s s, 166.8 w Park av, 2 and 3-sty stable and garage.
W W Fuller, 1072 5th av; ar't, C P H Gilbert, 1123 Broadway.

173d st, s s, 95 w Washington av, 3-sty stable. Francis Shine,
East 141st; ar't, Chris F Lohse, 627 Eagle av.

Independence av, w s, from 248th to 252d st, 1-sty garage. Geo
W Perkins, Riverdale; ar'ts, Heins & La Farge, 30 E 21st st.

German pl, s e cor Rae st, 3-sty stable. Mary Schuester, on
premises; ar't, Chris F Lohse, 627 Eagle av.

Valuation of Manhattan Real Estate.

ANNEXED are statistics from the assessment rolls in the
Department of Taxes and Assessments. As will be seen
by the tabulation, there was a general falling off in new build-
ings last year, which is particularly marked in Sections 6 and 7.
The only section of Manhattan which shows a gain in the
number of new buildings erected is Section 3, which exhibits
an increase of 32 new buildings for 1906. The middle part of
the Borough, Section 4, leads in increase improvements, show-
ing a gain of more than six million dollars. The statistics are
for each of the eight sections into which the city is divided for
assessment purposes.

Section 1 (all that part of the borough south of Watts and
Grand sts.)—Assessment roll, 1906, \$685,400,440; new buildings,
43; increased improvements, \$12,006,800; decrease, \$1,915,630;
net increase, \$46,457,670; annual record, Jan. 8, 1907, \$731,-
858,110.

Section 2 (all that part of the borough bounded north by 14th
st and on the south by Watts and Grand sts.)—Assessment roll,
1906, \$485,542,910; new buildings, 105; increased improvements,
\$5,620,200; decrease, \$441,500; net increase, \$28,478,200; annual
record, Jan. 8, 1907, \$514,021,110.

Section 3 (between 14th and 40th sts.)—Assessment roll, 1906,
\$805,626,550; new buildings, 127; increased improvements, \$16,-
477,000; decrease, \$1,560,000; net increase, \$40,729,600; annual
record, Jan. 8, 1907, \$846,356,150.

(Continued on page 217.)

CANAVAN BROTHERS CO.

Excavators and House Shorers

Great engineering feats involving skill, indefatigable labor and unique machinery and appliances are being performed every day in New York in the excavation and building of foundations, which are unseen and unnoted except by those directly interested.

The work of the excavator demands special appliances—pneumatic and electric drills, derricks, and a hundred others. Rocks must be blasted, old foundations must be removed, and adjoining buildings shored and kept in their places, and all this without the least injury to these buildings. Gangs of rough excavators are necessary in this work and skillful management is by no means one of the least difficulties of the master excavator.

An interview with a representative firm of excavators and house shorers, Canavan Brothers Company, whose extensive plant lies at the foot of West 56th Street, on the Hudson River, soon convinced the writer that the man who excavates or prepares the way for the foundation building is a most important factor in the construction of a building. When this same firm does the shoring necessary in connection with these large contracts for excavating, the owner or general contractor not only economizes in the cost of the excavation, but he saves considerable time, which is all important to-day in the construction of modern buildings. This is accomplished by Canavan Brothers Company through the combination of their two important departments, excavating and house shoring, both under the same management.

Architects and Contractors are well aware of this from their experience; hence, their care in selecting the excavators who do their work. The rapidity with which the excavations are done in these advanced days means skill, proper tools, machinery and a sufficient number of men on the job who are steady, experienced and reliable.

This is the secret of Canavan Brothers Company's success. Their motto is "Never procrastinate—do the work to-day," and their record as we look over it is one brilliant chain of successes. They have just completed an arduous undertaking in the excavations for the "Apthorp" Apartment House, for the Astors, at 78th and 79th Streets, Broadway and West End Avenue. This contract was completed in five months—quicker than the contractors expected, as it was thought to be a year's work. They also did the excavations for the Brunswick Building, in Madison Square and 26th Street, one-fifth of which was solid rock, but the entire work was performed in ten weeks. So we might enumerate indefinitely the excavations and shoring work accomplished by these indefatigable brothers, David P., John F. and Maurice J. Canavan, who have been engaged in this work for the past twenty-five years.

518 West 56th Street : : : NEW YORK CITY
Phone, 4500 Columbus

CHARLES H. DARMSTADT

Plumbing Contractor

229 West 116th Street

The following are but a few of the large plumbing contracts recently placed with us:

SPENCER ARMS, 79th Street and Broadway	<i>Completed</i>
THE LORINGTON, 70th Street and Central Park West	
THE NEW SINGER ANNEX, 149 Broadway	<i>In</i>
HENDRIK HUDSON CO. BLDG., Riverside Drive, 110th and 111th Streets	<i>Course</i>
PHIPPS' No. 1 MODEL TENEMENT, 31st Street, near 2d Avenue	<i>of</i>
Office Building, S. W. corner 47th Street and 5th Avenue	<i>Construction</i>

Section 4 (between 40th and 96th sts, west of 6th av and Central Park.)—Assessment roll, 1906, \$490,165,800; new buildings, 79; increased improvements, \$11,692,950; decrease, \$249,500; net increase, \$36,291,600; annual record, Jan. 8, 1907, \$526,457,400.

Section 5 (between 40th and 96th sts, east of 6th av and Central Park.)—Assessment roll, 1906, \$748,165,460; new buildings, 178; increase improvements, \$14,724,800; decrease, \$2,396,000; net increase, \$32,293,590; annual record, Jan. 8, 1907, \$780,459,050.

Section 6 (north of 96th st and east of Lenox av to East and Harlem rivers.)—Assessment roll, 1906, \$223,879,900; new buildings, 230; increase improvements, \$11,518,200; decrease, \$1,011,000; net increase, \$18,871,200; annual record, Jan. 8, 1907, \$242,751,100.

Section 7 (between 96th and 155th sts and west of Lenox av to Hudson River.)—Assessment roll, 1906, \$316,917,211; new buildings, 331; increase improvements, \$18,834,900; decrease, \$235,700; net increase, \$26,533,800; annual record, Jan. 8, 1907, \$343,451,011.

Section 8 (all that part of the borough north of 155th st.)—Assessment roll, 1906, \$66,686,310; new buildings, 160; increase improvements, \$5,752,500; decrease, \$389,900; net increase, \$8,661,410; annual record, Jan. 8, 1907, \$75,347,720.

Real estate total assessment roll, 1906, \$3,822,384,581; new buildings, 1,253; increase improvements, \$96,627,350; decrease, \$8,199,230; net increase, \$238,317,070; annual record, Jan. 8, 1907, \$4,060,701,651.

In each of the foregoing items, by subtracting the figures for increase improvements from the net increase of valuation the remainder will be the increased valuation on property unaltered since the last assessment was made, and from that the average per cent. of increase can be figured for each district.

Real Estate Advertising

By CHARLES W. HALLER

THE natural way to begin to talk about advertising real estate is to consider advertising simply as salesmanship.* If you employ a salesman you want him to be clean, neat, becomingly dressed, easy of manner and convincing of speech; your advertisement should be the same. An advertisement that is poorly designed, badly written or cheaply illustrated is one of the most expensive drains to which a business can be subjected. Another point that should be kept well in mind is that the best salesmen seldom take orders on the first call. Never expect an advertisement to do more than a trained human being. It is said that 62-2-3% of American advertisers give up after a single trial. About the only element of difference between those that succeed and the failures is the persistency shown by the winners.

The man who views advertising as a gamble need not be seriously considered. While advertising has not become an exact science, it is recognized as a positive business force. Applied rightly to a sound proposition it cannot fail. Regarded as a gamble it is pretty certain to turn out that way.

The advertising you did a year ago will not do the work you want done to-day, so, as one of our largest advertising agents says, "Keep everlastingly at it." It is a too prevalent opinion among real estate dealers that they can only advertise at certain seasons when the weather is particularly favorable. The few who have gotten away from this idea are making a lot of money. A moment's thought will show you that in the winter time when it would be entirely unfavorable to show property a great many people are most approachable and open to the suggestion that another year they will have a home of their own, or a better home in another locality. To follow out another old advertising agency maxim, "The time to advertise is all the time." The better your proposition is the more advertising it will stand.

The public forms an estimate of advertised business by reading its statements. False notes are easily detected and unless an advertisement rings true a positive injury has been done to the business, and the advertiser is in danger of being regarded as insincere and unreliable in other things as well as advertising. An instance of this was shown in another line of business which you will recall. People were urged to write a personal, confidential letter to Mrs. Lydia Pinkham. Not long afterwards it became generally known that Mrs. Lydia Pinkham died years before, and that a man with a heavy beard was answering the personal and confidential letters addressed to her. As a result Pinkham's Compound and patent medicines generally received a black eye, from which they are unlikely to recover.

It is evident, then, that an advertiser should use the utmost care in preparing copy. Under no circumstances should he attempt to mislead or deceive in any way. Next to being truthful, an advertisement should be interesting and suggestive, and

*From a lecture before the Real Estate Class of the West Side Y. M. C. A., Manhattan. Mr. Haller is a member of the firm of George P. Rowell & Co., advertising agents.

most important of all, the advertisements must contain the information the public wants; otherwise the chief aim of advertising will be missed and there should be no surprise if results show unsatisfactory.

The general policy of your business will determine the kind of advertising you do. The first and most important step therefore is to decide what part of your business policy is to be served by advertising and then to use this powerful influence for the greatest possible good. This may be to create prestige for your firm name; it may be to secure direct prospects for certain sales; it may be to secure the handling of additional estates; in any event your advertising is (or should be) an extension of your personality. If you are a good salesman just be your natural self when you write an advertisement and it is pretty certain to be a good salesman, too. Above all things avoid a literary style.

Keep constantly in mind that your one fixed purpose is to fill the reader with the desire to buy, and this cannot be done by filling the advertisement with your desire to sell. Of course, the more attractively written it is the better it will be, but after all the most important thing is the information it contains. You must make the people believe that your offerings are right and your terms are right, then you will have no trouble in making a sale and the price is usually the most important thing in the consideration of those who want to buy. To come back to the point of persistency, you cannot expect to convince the skeptical nor win the attention of the uninterested by once telling your story.

Whenever the character of an advertisement allows, a good illustration adds much to its effectiveness. A handsome design draws attention to an advertisement and renders it more attractive and usually makes it more readily understood. It must be good and it must illustrate, otherwise the space could be used to better advantage. A safe rule is to only use an illustration when it will say more in explanation of its subject than could be said by filling the same space with type. A judicious use of white space also draws attention to an advertisement and frequently produces a better effect than an illustration. Borders are also effective in displaying an advertisement.

Good typesetting may make or mar an advertisement. The effects of the well-written announcement may be entirely destroyed by a bad selection and arrangement of type. A well-balanced advertisement is a work of art requiring genius as well as skill, and there are many men who have spent the better part of a life-time mastering the possibilities of this art.

The benefit a business may derive from good advertising can scarcely be overestimated. Unfortunately all advertising is not good advertising. There is therefore a possibility that some of your advertising may be an injury rather than a benefit. This again emphasizes the necessity of great care and judgment in the preparation of copy, the selection of mediums and the typographical appearance. Naturally as an advertising agent I believe that any advertiser is safer under the guidance of the right kind of an advertising agent than he can be alone; however experienced he may be. The advertising agent does nothing but advertising; he has records of hundreds of other people's experience, including their successes and failures. He can tell you without your paying for the experience what the result has been in similar cases. He has people working for him who do nothing but study the best points to make in an advertisement. He has all the statistics in regard to all the publications; he knows the number and kind of readers who will see your announcement in each. His illustrators are at your service and the crowning part of the advantage of dealing with an advertising agent lies in the fact that his work for you is paid for by the publication, so his expert knowledge is yours without cost. If this sounds like an advertisement of my own business I have no defence to offer, as it is what I believe, and besides, why should I talk to you about good advertising without doing a little myself?

Changes in Topographical Map.

Rapid progress is being made in the mapping out of Queens Borough, and Engineer Robert Crowell states that he expects to have the entire remaining portion of Newtown completed and ready for adoption by the Board of Estimate by the middle of February. Work is being pushed rapidly also on that portion of the town of Jamaica extending south from Liberty av and South st to Jamaica Bay in the expectation of having a map ready for adoption before the end of next summer.

To assist the developers in laying out their property in safety, tentative maps have been given out, such as are likely to be adopted by the city.

The plans as prepared under the advice of Chief Engineer Nelson Lewis, of the Board of Estimate, in all the level or slightly undulating sections of Queens that have thus far been adopted has been that of rectangular blocks with avenues running the longest way through the various section from 80 to 150 ft. in width, and the cross streets 60 ft. in width. The other level sections in the towns of Jamaica and Flushing will undoubtedly be laid out on the same plan, taking into consideration also the grades required for an efficient sewer system. It is recognized that the thousands of acres of Queens will in the main be occupied by families of moderate means who cannot afford to buy lots in expensive park residence sections.

P. A. GEOGHEGAN

REAL ESTATE
Agent, Broker, Appraiser

464 Eighth Avenue, Near 34th Street

NEW YORK

Conducts a General Real Estate Business, Including Entire Charge of Estates, Purchases, Sale, Rental, Mortgaging and Insuring of Property. Have a Complete List of Property For Sale in the Vicinity of the New Pennsylvania Railroad Depot.

Expert Testimony in Legal Proceedings

Highest References Furnished on Application

C. H. WALLAS

Housewrecker

I wish to call your attention to my work in pulling down the old buildings on the site of the Consolidated Stock Exchange, corner of Broad and Beaver Streets. These six 6-story buildings occupied an area 120 x 100 feet. I demolished them and removed everything, including dirt and rubbish, leaving the cellars broom clean, ready for the contractors, in 15½ clear working days. The leading experts in wrecking estimated from 23 to 33 days. There were no accidents, no damages and no trouble from any source. I took possession November 8th and turned it over to the George A. Fuller Co. November 30th. Among the large contracts for razing which I have completed in record time and at the lowest possible cost are the *Old Trinity Building*, 111 Broadway; *Boreel Building*, Broadway, Cedar Street, Thames Street and Trinity Place; *old Lord & Taylor Department Store*, on Grand Street.

I give personal attention to the small contracts as well as to the large, and am always ready to furnish estimates *promptly* and *reasonably*. Am equipped to execute any work at a moment's notice and guarantee satisfaction.

C. H. WALLAS

255 West 148th Street

NEW YORK CITY

Phone, 5607 Morningside

Mineral Products of the United States Used in the Building Trades.

PRODUCTS.	1896.		1901.		1902.		1903.		1904.		1905.	
	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.
Metallic.												
Pig iron (a) (spot value b), long tons (c).....	8,623,127	\$90,250,000	15,878,354	\$242,174,000	17,821,307	\$372,775,000	18,009,252	\$344,350,000	16,497,033	\$233,025,000	22,992,580	\$382,450,000
Copper, value at New York City, pounds, 460,961,430		49,456,603	602,072,519	87,300,515	659,508,515	76,568,954	698,044,517	91,506,006	105,629,845	901,907,843	139,795,716	28,690,000
Lead (f), value at New York City, sht. tons	188,000	10,528,000	270,700	23,280,200	270,000	27,000,000	282,000	27,520,000	307,000	26,402,000	302,000	24,000,000
Zinc, value at New York City, short tons..	81,499	6,519,920	140,822	11,265,760	156,927	14,625,596	159,219	16,717,995	186,702	18,670,200	203,849	24,054,182
Aluminum, value at Pittsburgh, pounds..	1,300,000	520,000	7,150,000	2,238,000	7,300,000	2,284,590	7,500,000	2,284,900	(h) 8,600,000	2,477,000	(h) 11,347,000	3,246,300
Antimony (i), value at San Fisco, sh. tons	2,478	347,539	2,639	539,902	3,561	634,506	3,128	548,433	3,057	505,524	3,240	705,787
Non-Metallic (Spot Values b).												
Structural Materials:												
Clay products (n).....		63,110,408		110,211,587		122,169,531		131,062,421		131,023,248		149,697,188
Cement, barrels (o).....	9,513,473	6,473,213	20,068,737	15,786,789	25,753,504	25,366,380	29,899,140	31,931,341	31,675,257	26,031,920	40,102,308	35,931,533
Lime, short tons.....		6,327,900		8,204,054		9,335,618		9,255,882	2,707,809	9,941,680	2,984,100	10,941,680
Sand-lime brick.....		2,746,205		4,787,525		5,696,051		6,256,885		5,617,195		5,496,207
Stone (p).....		23,965,229		47,284,183		54,798,682		57,433,141		58,765,715		63,798,748
Fuels:												
Bituminous coal (l), short tons.....	137,640,276	\$114,891,515	225,828,149	\$236,422,049	260,216,844	\$290,858,483	282,749,348	\$351,687,933	278,659,689	\$305,397,001	315,259,491	\$334,877,963
Pennsylvania anthracite, long tons.....	48,523,287	81,748,651	60,242,560	112,504,020	36,940,710	76,173,586	66,613,454	152,036,448	65,318,490	138,974,020	69,339,152	141,879,000
Petroleum, barrels (m).....	60,960,361	38,518,769	69,389,194	66,417,335	88,766,916	71,178,910	100,461,337	94,694,050	117,080,960	101,175,455	134,717,580	84,157,399
Chemical Materials:												
Borax, pounds.....	13,508,000	675,400	5,344	697,307	17,404	2,447,614	34,430	661,400	45,647	698,810	46,334	1,019,154
Gypsum, short tons.....	224,254	573,344	633,791	314,811	2,600	91,000	1,041,704	3,792,943	940,917	2,784,325	1,043,202	3,029,227
Marls, short tons.....	60,000	30,000	99,880	124,880	12,439	12,741	34,211	22,521	18,989	13,145	38,026	16,494
Pigments:												
Barytes (crude), short tons.....	17,068	46,513	49,070	157,844	61,668	203,154	50,397	152,150	65,727	174,958	48,235	148,803
Mineral paints (s), short tons.....	43,894	459,089	52,209	636,145	60,191	745,227	56,262	500,922	52,336	493,434	56,599	724,933
Zinc white, short tons.....	20,000	1,400,000	46,500	3,720,000	52,645	4,016,499	62,962	4,801,718	63,363	4,808,482	68,603	5,520,240
Miscellaneous:												
Asbestos, short tons.....	504	6,100	747	13,498	1,005	16,200	887	16,760	1,480	25,740	3,109	42,975
Asphaltum, short tons.....	80,503	577,563	63,134	555,335	105,458	765,048	101,255	1,005,446	108,572	879,836	115,267	758,153
Fuller's earth, short tons.....	9,872	59,360	14,112	96,835	11,492	98,144	20,693	190,277	29,480	168,500	25,178	214,497
Glass sand, short tons.....					943,135	807,797	823,044	855,828	858,719	796,492	1,030,334	1,083,730
Graphite, crystalline, pounds.....	535,858	48,460	3,967,612	167,714	3,936,824	182,108	225,554	225,554	5,681,177	321,372	6,036,567	318,211
Graphite, amorphous, short tons.....	760		809		4,739		16,591		16,927		21,953	
Magnesite, short tons.....	1,500	11,000	3,500	10,500	2,830	8,490	3,744	10,595	2,850	9,298	3,933	15,221
Manganese ore, long tons.....	10,088	90,727	11,995	116,722	7,477	60,911	3,146	25,335	3,146	29,466	4,118	36,214
Mica, sheet, pounds.....	49,156	65,441	360,060	98,859	373,246	619,600	619,600	118,088	668,358	109,462	851,800	185,900
Mica, scrap, short tons.....	222	1,750	2,171	19,719	1,400	35,006	1,659	25,040	1,096	10,854	856	15,255
Quartz (flint), short tons.....	12,458	24,226	34,420	149,297	36,365	144,209	55,233	156,947	52,270	100,590	51,145	104,109
Sand, molding, building, etc., and gravel, short tons.....												
Total value of non-metallic mineral products, specified and unspecified.....		\$388,098,702		\$660,965,450		\$722,152,668		\$907,451,393		\$859,383,604		\$921,024,019
Total value of metallic products, specified and unspecified.....		251,445,519		480,006,859		599,916,009		583,433,948		501,099,950		702,453,108
Estimated value of mineral products, specified and unspecified.....		1,000,000		1,000,000		1,000,000		1,000,000		400,000		400,000
Grand total.....		\$640,544,221		\$1,141,972,309		\$1,323,068,677		\$1,491,885,341		\$1,360,883,554		\$1,623,877,127

(a) Production of iron ore. 1896: 16 005,449 long tons; value at mines, \$22,788,069. 1897: 17 518,046 long tons; value at mines, \$18,953,221. 1898: 19 433,716 long tons; value at mines, \$22,060,887. 1899: 24,683,173 long tons; value at mines, \$34,999,077. 1900: 27,553,161 long tons; value at mines, \$66,590,504. 1901: 28,887,479 long tons; value at mines, \$49,256,245. 1902: 35,554,135 long tons; value at mines, \$65,412,950. 1903: 35,019,308 long tons; value at mines, \$66,328,415. 1904: 27,644,330 long tons; value at mines, \$43,186,741. 1905: 42,526,133 long tons; value at mines, \$75,165,604.

(b) By "spot" value is meant value at the point of production.

(c) By "spot" value is meant value at the point of production.

(d) Value of iron ore. 1896: 16 005,449 long tons; value at mines, \$22,788,069. 1897: 17 518,046 long tons; value at mines, \$18,953,221. 1898: 19 433,716 long tons; value at mines, \$22,060,887. 1899: 24,683,173 long tons; value at mines, \$34,999,077. 1900: 27,553,161 long tons; value at mines, \$66,590,504. 1901: 28,887,479 long tons; value at mines, \$49,256,245. 1902: 35,554,135 long tons; value at mines, \$65,412,950. 1903: 35,019,308 long tons; value at mines, \$66,328,415. 1904: 27,644,330 long tons; value at mines, \$43,186,741. 1905: 42,526,133 long tons; value at mines, \$75,165,604.

(e) Value of iron ore. 1896: 16 005,449 long tons; value at mines, \$22,788,069. 1897: 17 518,046 long tons; value at mines, \$18,953,221. 1898: 19 433,716 long tons; value at mines, \$22,060,887. 1899: 24,683,173 long tons; value at mines, \$34,999,077. 1900: 27,553,161 long tons; value at mines, \$66,590,504. 1901: 28,887,479 long tons; value at mines, \$49,256,245. 1902: 35,554,135 long tons; value at mines, \$65,412,950. 1903: 35,019,308 long tons; value at mines, \$66,328,415. 1904: 27,644,330 long tons; value at mines, \$43,186,741. 1905: 42,526,133 long tons; value at mines, \$75,165,604.

(f) The product from domestic ores only.

(g) Consumption in 1904 and in 1905.

(h) Consumption in 1904 and in 1905.

(i) Includes antimony smelted from imported ores and antimony contained in hard lead.

(j) Including brown coal and lignite, and anthracite mined elsewhere than in Pennsylvania. Coke, 1902: 25,401,730 short tons; value at ovens, \$63,339,167. 1903: 25,274,281 short tons; value at ovens, \$66,498,664. 1904: 23,661,106 short tons; value at ovens, \$46,144,941. 1905: 32,231,129 short tons; value at ovens, \$72,476,196.

(k) Of 380 pounds net.

(l) Including limestone for iron flux, but not including grindstones.

(m) Of 280 pounds net. Value is for net product exclusive of cost of packages.

(n) Value of clay (all other than brick). 1896: \$800,000. 1897: \$978,448. 1898: \$1,384,766. 1899: Census returns \$1,645,328. 1900: \$1,840,377. 1901: \$2,576,932. 1902: \$2,061,072. 1903: \$2,594,042. 1904: \$2,320,162. 1905: \$2,768,006.

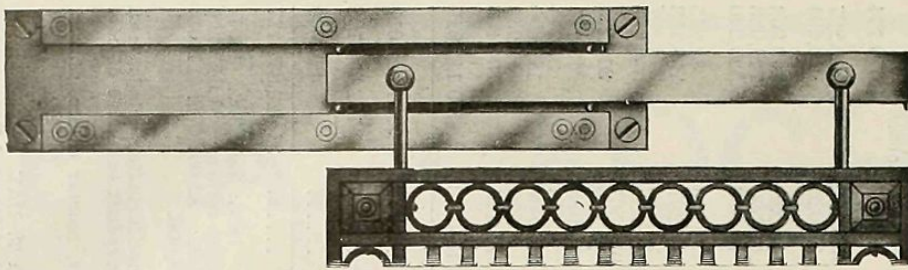
(o) Of 380 pounds net.

(p) Including limestone for iron flux, but not including grindstones.

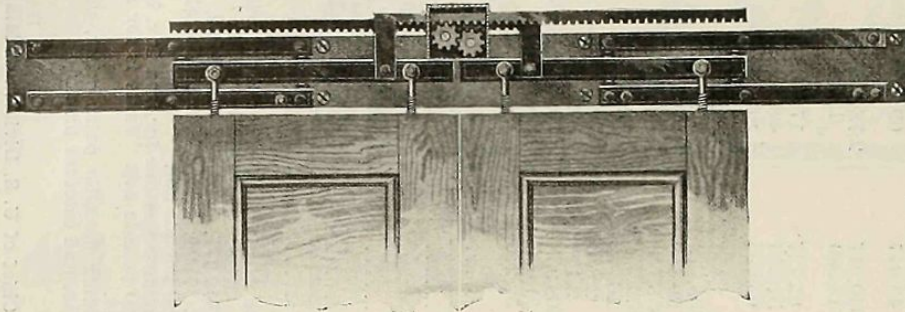
(q) Of 280 pounds net. Value is for net product exclusive of cost of packages.

(r) Including metallic paint, ochre, umber, mortar colors, sienna, ground slate, and mineral black.

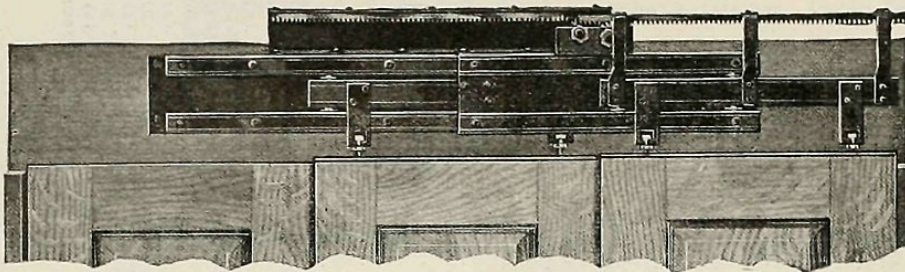
DAVID T. DAY,
Chief of U. S. Division of Mining and Mineral Resources.



Single Hanger, Showing Door Open



"Double Gear" Device for Moving Two Doors in Opposite Directions at the Same Time



"Double Speed" Device for Moving Two Doors in the Same Direction. One at Double the Speed of the Other

Used In

- U. S. Express Building
- Plaza Hotel
- Brunswick Building
- U. S. Realty Building
- New York Custom House
- Evening Post Building
- Metropolitan Building
- Mutual Life Building
- 60 Wall Street Building
- Tiffany Building
- Gorham Building
- Trinity Building
- Prince George Hotel
- Hotel Astor
- Knickerbocker Hotel
- Engineers' Club
- McCreery Store
- Lord & Taylor Store
- Trust Company of America Building

Condensed Catalogue in "Sweet's Index"

RELIANCE BALL-BEARING DOOR HANGER CO.

No. 1 Madison Avenue

NEW YORK

"Our Dumb Waiters Standard of the World for Over 50 Years"

We are now building Electric Dumb Waiters, Mechanical or Electrical Control, for Direct and Alternating Current

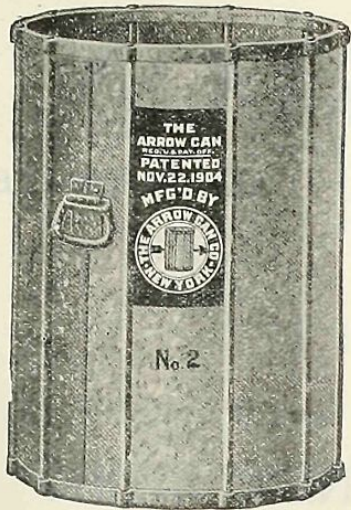
A Few Recent Installations of this nature

Geo. Jay Gould Residence	Lakewood, New Jersey
"Altman" Building	34th Street and 5th Avenue, New York City
"Huyler's"	No. 1145 Broadway, New York City
"Chemical Bank"	No. 270 Broadway, New York City
"Martinique" Hotel	No. 56 West 33d Street, New York City
"Trinity" Building	No. 111 Broadway, New York City

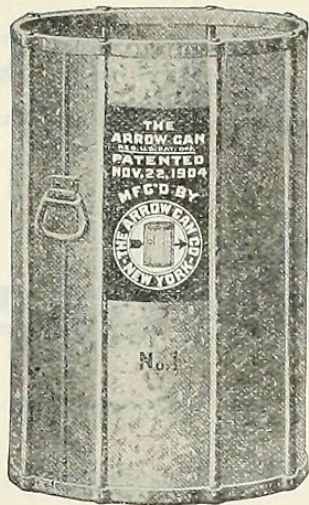
Electric Passenger and Freight Elevators

JAMES MURTAUGH COMPANY

202-4 East 42d Street, NEW YORK CITY



No. 2. 17 x 24



No. 1. 15 x 24

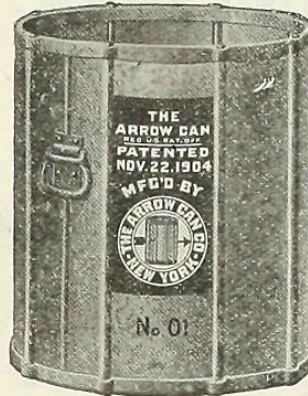
Trade Mark, Reg. U. S. Pat. Office
“THE ARROW CAN”

Patented November 22, 1904

An Improved Pressed Steel
**ASH AND
 GARBAGE CAN**

Has No Rivets to Pull Out
 Linked Hoops to Pull Off
 or Thin Bottom to Rust Out

**REINFORCED
 GALVANIZED**



No. 01. 15 x 18

“The Arrow Can” is a neat heavily reinforced galvanized Ash and Garbage Can, which cannot be collapsed, broken or pulled apart. It is scientifically designed and constructed to give the greatest amount of strength at points of greatest strain, and will stand any amount of rough handling.

The side reinforcement of flutes, made in the body of the can itself, cannot be bent sideways or torn off, as in the case of wooden slats or metal pieces riveted to the outside of the can with small rivets. When emptying the can, two of the reinforcing flutes always rest on the side of the cart, taking the whole strain.

The entire can is made of sheet steel in its natural state, and is heavily galvanized inside and out after it is all assembled, which adds two gauges to the thickness of the metal and greatly strengthens the can. This is a very important feature, as it prevents rust and corrosion from eating out the bottom and is greatly superior to any form of japanning or painting.

Only the best malleable iron drop handles are used, with heavy clips. These cans are protected by patents. No can genuine without our registered trade marks and red label. The Arrow is also stamped in the bottom and cast on the handles.

For full details of construction write

THE ARROW CAN CO., Pressed Metal Specialties
 35 WARREN ST.

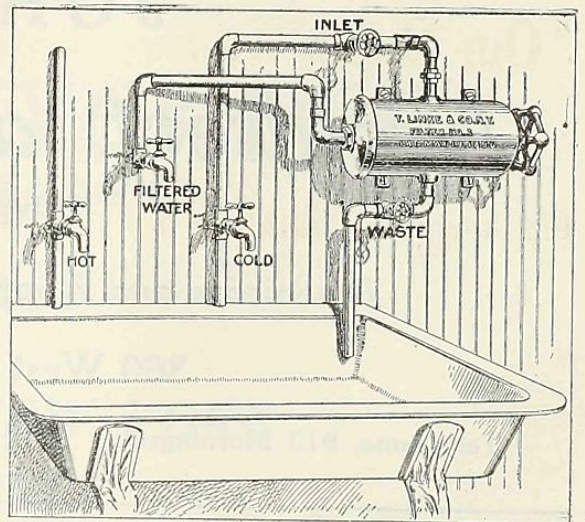
Telephone, 3993 Bryant

**LINKE, ACORN & ADVANCE
 Filter Mfg. Co.**

SELF CLEANING,
 GERM PROOF,
 STONE TUBE FILTERS

1555 Broadway, Near 47th Street.

NEW YORK



F. B. HANSON

CHARLES RHODES
 Formerly with Newman & Capron

HANSON & RHODES

MANUFACTURERS OF

Builders' Hardware and Ornamental Bronze Work

Bank, Office and Stoop Railing, Bronzing, Gold, Silver and Nickel Plating

Manufacturers of THE HANSON IMPROVED HYDRAULIC RAM

Telephone, 257 Madison Square

157 West 29th Street, NEW YORK

DENNIS & PRESTON

INCORPORATED

Real Estate

258 Broadway, - - - - NEW YORK

SALE AND MANAGEMENT OF PROPERTY

HIGHEST REFERENCES

CHARLES S. KOHLER

Real Estate

906 Columbus Avenue - at 104th Street

TELEPHONE, 5504 RIVERSIDE.

ESTABLISHED 1887.

Member of the Real Estate Board of Brokers.

JOHN HAUSER

Architect and Superintendent

EXPERT AND SPECIALIST IN

Tenements and Apartments, Private Residences and Hotels

360 West 125th Street, New York City

Telephone, 913 Morningside

A Complete Real Estate Information Service

THE RECORD AND GUIDE is completing arrangements for a *Complete Real Estate Information Service*, which will cover every item of real estate news required for real estate transactions of any kind. The requirements of Brokers, Auctioneers, Owners, and others have been very carefully investigated, and the leading members of the real estate profession are unanimous in their opinion as to the need that exists for a really complete, prompt and accurate service.

The RECORD AND GUIDE will be glad to receive suggestions as to requirements from any of its readers.

The purpose of the contemplated service is entirely professional, and is aimed to assist the working of Brokers' offices, perfect existing methods and reduce operating expenses.

If the information required affects real estate, the RECORD AND GUIDE hereafter by its new service will supply it.

Further details of plan and scope will be announced shortly.

*Established 1852***ASHFORTH & COMPANY***Real Estate*

11 East Forty-second Street

Telephone 142 and 143, 38th Street.

Cable Address---Edforth

*Management of Property a Specialty.***REAL ESTATE IN ALL ITS BRANCHES**

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Myers Building, 47 & 49 Maiden Lane, Erected in seven months. Robt. T. Lyons, Architect.

Automobile Garage, northeast corner Broadway and 57th Street, erected in three and one-half months. Oscar Lewenson, Architect.

Temple Israel, northwest corner Lenox Avenue and 120th Street. Arnold W. Brunner, Architect. And many others.

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Projected Buildings in Other Cities.

BOSTON, Mass.—The International Fibre Co. will erect a plant, main building, 125x350 ft., two wings, 100x650 ft., two buildings, 100x350 ft. All these buildings will be 6-stys high. Fred. S. Hinds, 19 Milk st, has been engaged as Consult. Arch. and Mechanical Engr.

HAMMOND, Ind.—A new station to cost \$150,000 will be erected by the Michigan Central R. R. Co. George H. Webb, Detroit, Mich., is Ch. Engr.

SOUTH BEND, Ind.—Bids are asked by the School Trustees until Feb. 5, for erecting and completing school building, to be known as the "Kaley School."

INDIANAPOLIS, Ind.—Merchants Building Co. has been incorporated with a capital of \$500,000 to erect a 14-sty store and office building at Washington and Meridian sts.

BRISTOL, Tenn.—Theodore Swann, Henry Roberts and associates will erect a hotel, to cost \$100,000, 5-stys, 100x300 ft.

NEWMAN, Ga.—The Water and Light Commission has purchased site on which to erect proposed electric light plant.

CHICAGO, Ill.—Holabird & Roche, Monadnock Building, are preparing plans for an office building, to be erected at Michigan av and Van Buren st, for the Vendome Co., 12-stys. Estimated cost \$800,000.

EVANSTON, Ill.—George W. Maher, of Chicago, Ill., is preparing plans for a theatre to be built at Evanston for the Evanston Theatre Co.; 3-stys, steel construction, estimated cost \$125,000. Work probably will be begun in the spring. Charles A. Wightman, of Evanston, is representative.

DETROIT, Mich.—Plans are being prepared for the extension of the Majestic Building. Cost about \$500,000. E. H. Doyle and Waldo Avery are owners.

MONTGOMERY, Ala.—The Gay-Teague Realty Co. will erect a 10-sty office building at Bibb and Commerce sts, 80x100 ft., cost about \$250,000. W. M. Teague, Mayor, is interested.

FAIRVIEW, Pa.—Plans are being prepared by J. C. M. Shirk, 421 Chestnut st, Philadelphia, for the State Hospital for Criminal Insane, consisting of a group of buildings. Cost, \$1,500,000.

PITTSBURGH, Pa.—Philip Hamburger is arranging to erect an 8-sty mercantile building at 140 6th st. Charles Pickel, 524 Penn av, is architect. Cost, \$125,000.

BUFFALO, N. Y.—A 1-sty brick carhouse, on Broadway, will be erected by the International Ry. Co., Elliott sq. Cost, \$1,000,000. T. W. Wilson is Gen. Mgr.

JAMESTOWN, N. Y.—The Public Building Committee of the Board of Supervisors will advertise for bids for the construction of a new court house. Bids will be received in about two weeks.

BOSTON, Mass.—Charles R. Evans, 33 Equitable Building, will erect an apartment hotel at Deerfield st and Bay State road, to cost \$350,000.

SPRINGFIELD, Mass.—Plans are being prepared for the Chateau apartment building to be converted into a hotel building. Cost, \$175,000. Edward T. Davis is interested.

WATERLOO, Ia.—The Waterloo, Cedar Falls & Northern Ry. Co. will erect a new power house at Waterloo this year. Estimated cost, \$100,000. C. D. Cass is Gen. Mgr.; A. I. Woodring is Ch. Electrician.

FREEMPORT, Ill.—Charles E. Gregory, Adams and Clinton sts, Chicago, Ill, is applying for a franchise for a new gas and electric lighting plant in this city.

BANGOR, Me.—The Bangor Ry. & Electric Co. will rebuild the Bangor and Brewer bridge. Estimated cost, \$75,000. W. H. Snow, Bangor, is Supt.