THE

NEW YORK

FREAR STONE COMPANY,

MANUFACTURE ALL KINDS OF

BUILDING AND MONUMENTAL STONE,

OF ANY DESIGN,

KNOWN TO ARCHITECTURAL EXPERIENCE, REPRESENTING IN COLOR ANY OF THE

NATURAL STONE OF THIS COUNTRY,

AND SURPASSING THEM ALL IN

DURABILITY, STRENGTH AND BEAUTY.

ORDERS WILL BE PROMPTLY ATTENDED TO.

OFFICE, GRAND HOTEL BUILDING,

1238 BROADWAY.

WORKS, ON CENTRAL AVENUE, Between 10th and 11th Streets, LONG ISLAND CITY.

T. F. ATTIX, Supt. ~~AND TREAS.~~ C. K. GARRISON, PRESIDENT.

NELSON CLEMENTS, VICE-PRES'T ~~AND GEN'L SUP'T.~~

C. W. Darling, Secy. & Treas

THE FREAR

ARTIFICIAL STONE,

Stucco, Mastic Cement, Etc.

The want of a cheap, and yet elegant and durable building material has been long felt and appreciated by men of all classes. And it was to meet this want that the inventor and patentee, George A. Freer, Esq., of Chicago, patented February 4th, 1868, the combinations of certain chemicals with sand or gravel, which, when pressed, form a solid stone, equally as hard as limestone and more durable, as we shall show. The materials used are sand and gravel, which can be found in unlimited quantities all over the country. These are fastened together firmly by chemicals, which form a solid, insoluable stone, and is pressed in molds of any desired pattern or form, such as bricks of various sizes, ashlars, key-stones, corner blocks, water tables, door and window caps, sills, cornices, etc.

We have subjected these stones to the severest tests of frost

and heat, to determine their value as a building stone in resisting atmospheric influences. Various artificial and chemical tests have also been made, and exposure to the weather only hardens them.

For cheapness and durability for well curbs and walling under ground, for culverts or bridge abutments standing under ground or in the water, or cellar walls, there is no stone or brick work that equals the Frear Stone in value.

We can manufacture the stone of a color to represent perfectly the beautiful Nova Scotia stone used so much in the eastern cities, or the brown stone of New York and Philadelphia.

The minerals used render the color permanent and also solidifies the mixture.

A person purchasing the right to manufacture the stone will receive full instructions. The same material may be used as a mastic of any desired color, for covering the walls of old brick buildings, and is vastly superior; will cost less than half the ordinary oil mastic, and its color will never fade; and is also a durable fire-proof paint. To induce capitalists to invest their money in this valuable patent, we have also to satisfy them of the profit of the manufacture, which we can do to the satisfaction of any one. Building stone of any design can be afforded in cost much below any native stone, and at about the same cost of brick if put in bricks, and is vastly more durable than either.

The first building ever erected of the "Frear Stone" is the elegant dwelling of H. B. Horton, Esq., on Calumet Avenue, Chicago; erected in the summer of 1868, and shown herein by plate.

In further explanation of this valuable invention we refer with pleasure to the following notice from the Chicago *Chronicle:*

ARTIFICIAL STONE.

One of the chief needs of the country is a building material, durable, neat and cheap. While there are numerous quarries in our own and other States, from which is obtained excellent stone for building purposes, and beds of clay suitable for making good brick, these are not generally distributed throughout the country, and were they, the first is too expensive and the latter are generally of a poor quality. Of course, as our growth is rapid, we often build in a hurry, and therefore sacrifice, to some extent, strength and permanence, to the necessity for immediate shelter; but when no such necessity compels it, buildings are too generally of wood or other inferior material, and this not because we are naturally a shabby people, having no appreciation of what is proper and sensible in the erection of our homes and places of business, but because, really, except at great cost we cannot obtain better material.

This being the case, we judge that we shall be conferring upon our readers a great benefit, as well as paying deserved attention to a most important branch of manufacture by giving a portion of our space this week, to "Frear's Artificial Stone," now being extensively made in our city by the Frear Stone Manufacturing Company. In a previous issue we made reference to the same subject, and our comments thereupon having elicited considerable inquiry, for the purpose of satisfying our own curiosity, and enabling ourselves to satisfy that of others, we have made fuller and more thorough investigations.

The attempt to supply the market with building stone, by artificial processes, is one of great antiquity. In parts of Europe and Africa these processes are known to have been used for more than a thousand years. The Barbary Moors, have for many centuries, possessed the art of making a most durable concrete, and when they overran Spain, seven hundred years ago, introduced it to that country. There are now standing at Gibraltar a tower and several walls of buildings, constructed wholly of this material, and believed to have been erected by the Moors during some former invasion, when they succeeded in gaining a foothold, but were unable permanently to maintain it.

The antiquity of these relics cannot be less than a thousand years, and still they endure, apparently unimpaired by the disintegrating touch of time, and the storms which, for ten centuries, have beaten upon them. It has been suggested, and not without reason, that the huge blocks which form the Pyramids, and puzzle the curious of modern times with the query, "whence came we?" were not transported across the great desert, so many weary miles from distant quarries, but were made on the spot by some cunning process, the secret of which has perished with the wonderous race that builded them.

In modern times, numerous experiments have been tried for the making of artificial stones. Of these, the most successful of which we have any knowledge, is the process, patented a few years since, by Mr. Frear, who sold the right to his invention for this State to the Frear Stone Company, whose manufactory is located upon the Lake Shore, foot of 37th Street. It is sufficient to say of the process, that it is as near an imitation of the natural as is practicable. Precisely how, in her great laboratory and workshop, in the strata which makes the earth's crust, through cycles of ages, nature has been making her mysterious transformations, the geologist with his hammer and chemicals, has in vain sought to discover, although he has learned much in a general way. We know of the various sandstones, which form so large a portion of the known rock deposits, that they are in varying proportions, according to their several species, composed of clay, lime, silex, and iron; that originally they were soft, plastic deposits upon the then surface, deepening with the accumulation of material, and, as in the progress of ages, they became overlaid with a great mass of superincumbent matter, the immense pressure thus produced hardened them into stone.

Frear's artificial stone is formed of common sand, moistened with a chemical solution, which supplies the necessary cement. The compound is placed in molds, and subjected to a pressure of thirty tons to the square foot. The press was invented for this special purpose by Mr. Frear, and is an exceedingly ingenious contrivance, being a complicated systems of levers, which multiply a given weight to a most bewildering extent.

Mr. Frear seems, by his invention, to have successfully emulated Nature's efforts to produce pressure, and accomplished his purpose equally well, and in considerable less time than it took Nature to do her work. That the inventor of this manufacture has well learned the lesson of the rocks, and gleaned from the pages which have been upheaved in earth's great commotions the secret of Nature's handiwork, seems evident by a comparison of the artificial with the natural stone. In company with several other gentlemen, we carefully examined through a powerful microscope, two specimens, and were unable to discover the slightest difference in their apparrent composition and structure. We were not a little surprised at being informed that one of them was a piece of Portland Brown Stone, and the other of Frear's Artificial.

In one respect, Mr. Frear's product is the superior of Nature's, and that is, its less liability to disintegrate upon exposure to the atmosphere. It must be remembered that the natural stone is made down deep in the nether regions of the earth, away from atmospheric influences, and that when it is removed thence to the upper air, in obedience to the law of its structure, the tendency is gradually to become friable and wear away. Whereas, Frear's Artificial is made in the air, and with special reference to atmospheric influence; and, therefore, the tendency is to harden and strengthen with exposure.

This Stone has been made the subject of numerous very careful experiments to determine its qualities. Its capacity for resisting pressure, as compared with that of other material, has been thoroughly tested, as will be seen by referring to the certificate of the Ordinance Officer, at the Navy Yard, Washington. A single 1 1-4 inch cube sustained 6000 lbs. without cracking; a single surface foot of the Frear Stone will sustain 432 tons. This seems almost incredible, nevertheless it is a fact.

Another test was applied to determine the relative endurance of the stones when subjected to lateral pressure, which was conducted in the following manner: A piece of each variety, three feet long by six inches wide, and four inches in thickness, was suspended by three inch bearings on either end; the pressure

was applied to the centre, with this result in the several instances,—Frear's Artificial sustained a weight of 1,106 ℔s.; the Cleveland sand stone of 621 ℔s.; Canaan marble of 640 ℔s.; Portland stone of 759½ ℔s.; Athens marble of 971 ℔s.

There is one consideration in connection with the Artificial Stone which is of importance in comparing the degree of resistance which it affords to the pressure, with the same quality in other stones. In building with ordinary stones, it is customary, in order to secure the utmost possible strength, to lay them with their lines of stratification perpendicular to the horizon; the Artificial has no lines of stratification, but is molded solid, and when removed from the molds, dries from the inside outward, so escaping the liability to break, from flaws, when used for building purposes.

The pillars of the Pantheon, at Paris, support a weight of 60,000 pounds to each superficial foot. The piers which uphold the great dome of St. Paul's, in London, are subjected to a pressure of 33,000 pounds on each square foot; and those beneath the arched roof of the world-renowned St. Peter's, at Rome, bear up, per superficial foot, 33,000 pounds. As shown by the certificates herein, and above referred to, Frear's Artificial will sustain a weight exceeding 860,000 ℔s. upon each foot of surface. So that it might be safely employed in heavier architecture than that of those massive and stately piles.

Experience shows that the same natural stone disintegrates more rapidly from atmospheric influences in some places than in others. For example, a certain Magnesian lime stone, designed to be employed in the construction of the British Houses of Parliament, was thought to be extremely well adapted to that purpose, from the fact that the same material used at Southwell Minster had been exposed for eight hundred years, and was, so far unimpaired as to still show every mark made by the workmen's tools. Yet, the same stone in London buildings was found to be seriously injured. This is accounted for as the effect of the sulphuric acid in the dense smoke of the city, which is a very powerful disintegrant. To decide whether the Artificial Stone was liable to decay from from a like cause, it was determined to test it. Accordingly, specimens were put to soak in

sulphuric acid, not the ordinary acid of commerce, but the manufacturers' concentrated article, which is very much stronger, and no perceptible change was wrought; the stone came out from its bath as firm and solid as when it took the plunge. Athens marble—accounted the best building stone in the West—when subjected to this same test, was entirely dissolved. It would seem as if this trial was decisive of the question whether Artificial Stone may be greatly injured by city smoke. The sulphuric acid bath, as a disintegrant, may be deemed more than an equivalent for all the noxious acid contained in an unbroken column of smoke rising from all the chimneys of Chicago, and reaching the zenith.

Another specimen of the stone was boiled for fifty-five minutes in a solution of twenty ounces of concentrated potash to three quarts of water, and was entirely unaffected by the process; and the same result followed from testing it with various acids, which were found sufficient to dissolve Athens marble. During the severe weather of the past four winters, King Frost has had full opportunity to try his nipping fingers at the Frear Stone, but has failed to produce the slightest injurious effect, and, in fact, the stone seems to have hardened and solidified under the exposure.

There are some peculiarities of this building material, other than those already noted, which especially adapt it for general use. Among these is its cheapness. It can be made at a cost much less than that of the natural stone from the quarry. Moreover, the most beautiful architectural designs may be executed in it with a finish and perfection which the most skillful workmen, with the chisel, cannot equal. Then, too, it may be furnished in different colors to suit the taste of the purchasers. This being stated, it is superfluous to add that the Artificial Stone may be used for all the purposes to which native stone is now applied. The difference in the cost between the Frear and the natural is so great as to ensure a ready sale and large profits to the manufacturer.

We are glad to learn that the Company are doing a thriving business, and rapidly introducing the product of their works into general use. We regard their enterprise as one of the most

beneficial ever undertaken in the West, not only because it is an important addition to our Manufacturing Industry, but because it promises to give to our builders a cheap material for conversion into elegant, substantial and permanent structures.

From the Chicago Republican.

The great modern problem, which has offered for a solution, the grandest prize to the inventive genius of the country, has been the production of a new building material, to be composed of elements widely distributed and easily obtainable; the manufacture to be simple and cheap; the resulting product to be in the highest degree durable, capable of being easily shaped into desired architectural forms, and to possess in color and texture a beauty at least equal to that of the common materials used in the construction of houses.

With the solution of this problem would begin the golden age of architecture, and the ownership of houses by men becomes the rule instead of the exception. * * * *

The claimant to the honor of this invention has lately appeared in one of our own citizens, Mr. George A. Frear, and in stating our belief that Mr. Frear has succeeded in filling all of the required conditions, and that the long-wished for material has been discovered, we do so, influenced as little as possible by the opinions of professional architects, to whom we shall, however, give the credit of having been among the first to recognize its merits, and what is unusual in great discoveries, for having given, as will be seen from their certificates below, unqualified approbation to what their art has been unable to or indifferent to create.

The base of the composition is sand and gravel, which are distributed so extensively all over the country; these are firmly bound together by chemicals, the most expensive of which are used in quantities and proportions that do not largely increase the cost of the mixture over that of sand and gravel. The latter, with hydraulic cement, are first mixed together and are then moistened with the chemicals. The dampened mixture is then placed in a mold, a mixture of finer sand to form the ornamental

face of the stone, is placed on top, and the whole is subjected to an immense pressure, from fifteen to twenty-five tons, in a machine which is also the invention of Mr. Frear. On being taken from the mold, the stone is allowed to dry for two or three days, and is then again dampened and exposed to the atmosphere, becomes rapidly hard, and is soon fit for use.

The result is a stone much harder and capable of resisting a much greater pressure than the Portland brown stone, Connecticut limestone, Athens marble, or the best pressed brick. That such is the undeniable fact, the severest tests have shown. The excellence of a material for building, as is well known, must depend much upon its ability to resist the disintegrating power of moisture and heat, and the expansive action of frost. Yet we are shown specimens of this artificial stone that have been exposed to frosts for months during the extreme weather of last winter, and which were again subjected to the intense heat, but which are harder and firmer than before the experiments were commenced. The artificial stone seems absolutely impervious to the action of the elements. Its hardness and uniformity of structure were shown when it became necessary to cut the corners of several heavy brackets. Stones whose material was almost pure silica, offered no greater resistance to the cold chisel than the solidified sand and gravel in which they were embedded.

At the factory of the Artificial Stone Company we are shown not simply specimens, but cords of stone which, in absolutely permanent color and in texture, it would be difficult to distinguish from the beautiful brown stone so much used for fronts in New York; others perfectly resembling Nova Scotia stone, and even common limestone, and these not in the rough state, but in the form of ashlars, key stones, corner blocks, water tables, door and window caps and sills, corners, etc., not plain only, but in elaborate designs and delicate coral work.

It is in the question of expense, however, that one is most liable to become enthusiastic over this new material. If we mistake not, the time is at hand when architectural beauty shall no longer be monopolized by wealth, a suggestion which discloses an immense field of thought relative to the cultivation and extension

among the people of correct principles of taste in building, when the means of gratifying it shall have thus been brought within their reach. Cornices, brackets and head-blocks that cost in brown stone from thirty to forty dollars, will be furnished for one-half that sum. A single stone carved in coral work costs from eight to ten dollars; in artificial stone, one-third that sum. Brown stone ashlars, worth one dollar and thirty cents a square foot, in the new material cost sixty cents a foot—and the same proportion exists, to whatever architectural use the material is put.

From the American Builder.

THE FREAR STONE.

This new building material seems growing in favor; the opinion every day gaining ground in building circles is that we have at length found a perfect substitute for natural stone; unsurpassed in beauty, cheapness and durability.

There is no doubt as to its beauty, for in this particular it is adapted to the highest architectural effects; and this can be said of only a small portion of the natural stone used for building purposes in this country. There is no noticeable difference in this respect between the Connecticut brown stone and the Frear stone, in fact the keenest-eyed critic will fail to detect the counterfeit.

The manufacturing works are very extensive, but the price is so reasonable that they are crowded to their utmost capacity; all of which would seem to indicate the cheapness of the material.

From the extent of the orders given, a very large amount of the material will be used in our best blocks and houses the coming season.

The great question—the one in which the public is chiefly interested—is the question of durability. Will it stand? Will it resist sun, and moisture, and cold, like nature's own stone, which has stood through the centuries? If so, then we latest born children of Time, have stumbled on a secret indeed. We can still boast of that high state of civilization which economizes human labor, and yet adorn our structures with more beautiful things than were known in past ages. As we said on a former occasion,

all this seems too good to be true; and yet we hope it is true, and have no reason for doubt indeed, save in that inate tendency to incredulity which more or less characterizes us all when some great invention modestly asserts its claims; and this the Frear Stone has done. It has come before the people without blare of trumpets; and the fact that it has come on slowly, fighting and conquering popular prejudice every step, and, like the invention of the art of telegraphy, growing constantly in favor, all this gives confidence of its ultimate success.

The severe chemical and mechanical tests, and these high scientific and professional indorsements, stamp the Frear Stone as one of the great inventions of the age, and as one particularly to be hailed by every man of moderate means whose taste appreciates architectural beauty.

From the Albany Sunday Press.

ARTIFICIAL STONE.

There is no denying the fact, this age we live in is certainly one of wonders. Every day brings forth something new or remarkable. The last great feature which has attracted our attention and elicited our curiosity, is the artificial stone recently invented by George A. Frear, Esq., of Chicago, and which has so rapidly grown into favor at Chicago, Toledo, New Orleans, Buffalo and other leading cities of the Union. By invitation, we had the pleasure of inspecting this last great production of the nineteenth century, yesterday, and receiving full explanation of its merits and usefulness from a gentleman thoroughly posted in the matter. The component parts of this artificial stone are sand, water lime and certain chemicals, the latter being used for the double purpose of coloring the mass at will, and of compacting it beyond the power of ordinary tests to affect it. The compound is placed in molds and subjected to a pressure of thirty tons to the square foot, by means of a press invented by Mr. Frear. The result is a solid, insoluble stone, cast in any shape for which a mold or pattern can be made. In fact, any device that the most florid architecture can demand is easily ob-

tained. We saw some of the blocks and caps prepared from this material, and must confess that in quality and appearance they have every resemblance to the genuine Nova Scotia white or Connecticut brown stones. This stone has undergone the severest possible tests, and in all cases satisfactorily resisted, while massy natural stones have succumbed to the same tests. As we have already stated, it can be molded to any shape for which a pattern can be made. This being a fact, we don't know why it should not come into general use in this city. Its cost is so remarkably cheap that everybody will use it in preference to brick, stone or iron in instances where the above articles are used, so long as it proves equally, if not more durable. Some of the finest residences, churches and public buildings of Chicago are constructed from the "Frear Artificial Stone," and, so far as appearance is concerned, look by far handsomer than those built of the real article, as the photographs of said buildings fully demonstrate. All that is necessary to convince any practical mind of the utility of this kind of building material, be it for houses, fences, pavements, monuments or anything else, is a simple inspection of the article. Its strength is wonderful. A cube of little over an inch was found to bear up over 6,000 pounds. Its durability is established by the tests it has already undergone. Therefore, any one contemplating building should just cast their eyes over any building where stone is used in this city, witness the crumbling process it is exhibiting, and then, if they can, fail to declare in favor of the artificial article in preference to the genuine. A man can now as readily build a brown stone front as a brick, and for no more, if not for less money. We say it is an article that cannot fail to come into general use, and we are glad to know that sagacious men have been so promptly found in this city who fully appreciate its advantages and have bought the right to manufacture for this and three adjoining counties. These gentlemen are Nelson and Isaac Bailey, merchants; John McCabe, builder, and Frederick W. Brown, architect. They propose to organize a company at once, to be known as the Albany Frear Stone Company, and which will be composed of some of our first citizens, with a capital of $100,000. They will erect, in this city, an extensive manufactory, and

commence the production, as soon as possible, of artificial stone for practical purposes. Notwithstanding they have only had the right for a few days, already contracts for four buildings have been received, to be built of this Artificial Stone. In Chicago and New Orleans companies are organized with a capital of half a million, and the stockholders are among the first citizens of both places. The gentlemen who have purchased the right here are all well known enterprising business men, who enjoy the confidence of our people and cannot fail to build up a corporotion that will add to the future welfare, wealth and architectural beauty of our city.

From The Arts.

LOST ART RESTORED.

As a useful invention of the nineteenth century, Mr. George A. Frear, of this city, the discoverer of artificial stone, will hand down to posterity a name that will rank with the highest order of talent.

It is not the purpose of The Arts to puff into renown the many patented or improved machines of the day, but when a subject of such vital importance to mankind presents itself, it is meet for us to give such matter its just due. Building materials enter largely into the finances of a people and country. The rapidity with which cities and towns are reared having all the comforts and conveniences of modern device, this subject is a natural question for capitalists, house and free-holders, particularly so, when economy is a prime consideration.

The subject of artificial stone has engaged the attention of scientists for a number of years with but indifferent results, and, none have been brought to so successful an application as the Frear Artificial Stone Manufacturing Company, of this city. Extensive works have been erected throughout the United States and Territories. Hundreds of magnificent edifices are now, and have been erected, which is proof enough that architects and builders consider this material among the best thus far brought to perfection. Public edifices are con-

structed at Lincoln. Nebraska, under a contract with the State authorities.

The details of manufacture of this artificial stone are briefly summed up as follows: The base of the artificial stone is the ordinary silica, (sand or gravel,) indigenous to every country; four parts of calcium are thoroughly incorporated and moistened with a caustic solution of shellac. Any of the prime alkaline salts may be employed in preparing this solution. To one gallon of boiling water may be added a quarter of a pound of alkaline, lastly adding the shellac, say half a pound, until the same is thoroughly dissolved.

The pulp mass being saturated with this solution, it is formed into every conceivable form, ashlars, key-stones, corner blocks, water tables, door and window caps, sills, cornices, brackets, head-blocks, monuments, mantle-pieces, etc.

(At a public trial under the supervision of the U. S. Ordinance Department at Washington, D. C., the Commander certifies that the specimen cube of Frear's Artificial Stone withstood a pressure of 6,000 pounds to an inch and a quarter cube, the original document being now on exhibition at their office.)

The chemical effect is such that as soon as the several elements herein described, and which are compressed by a powerful lever-machine, also an ingenious invention of Mr. Frear's, the hydrated lime, or calcium, combines readily with the silica, sand or gravel, crystalizing into a more solid body as the moisture evaporates, which requires a number of days. The shellac acts as an agglomerate, and renders the stone impervious to atmospheric elements, and almost entirely fire proof. All the varieties of color may be given to the molden masses.

As an industrial pursuit this manufacture will accomplish a great desideratum in building. That it should at once supersede wooden structures is a *sine qua non.* Its cheapness recommends it, while the most elegant architectural designs may be carried out at one-third the cost of hewn stone. We present herewith two illustrations which are constructed of Frear Stone; they are living evidences of Mr. Frear's invention.

From The Chicago Tribune's Annual Review, for 1869.

FREAR'S ARTIFICIAL STONE.

In giving this our annual review of the commerce of this great city, we cannot pass over a due notice of the wonderful invention of the Frear Artificial Stone, which is now being manufactured and used extensively in this city and in many of the cities and towns throughout the country, and it is with especial pride that we write of this, because it is the invention of one of our citizens. It is purely a Chicago institution, but merit is not claimed for the stone upon these grounds, but solely upon its CHEAPNESS, BEAUTY, DURABILITY, and adaptability to all purposes for which cut stone or brick is used.

During many years repeated efforts have been made by men of scientific attainments and practical ability to produce an artificial stone which would commend itself to architects and builders as suitable for building purposes in place of quarried stone or brick, but every such attempt has proved abortive, until Mr. George A. Frear, of this city, some three or four years ago, discovered the "philosopher's stone," and the result is a beautiful brown stone—as beautiful as the most highly wrought specimen taken from the justly celebrated Portland quarries, and coming from the hands of the most skillful workman.

We have watched with great interest the introduction of this stone, and have visited the extensive manufactory of the Frear Stone Company, of this city, located at the foot of Wapanseh avenue, on the lake shore, and are free to confess that we have never been more intensely interested in witnessing the production of a manufactured article. The process is simple, and is precisely that adopted by nature in her formation of rock; the only apparent difference being that while the slow process of nature occupies ages to form the stone, this invention assumes nature's prerogative and produces from the sand a stone of any size or design almost instantly, and so closely is nature's production counterfeited in this stone, that it is extremely difficult to detect the difference.

The Frear Stone has now been in use so long, and has resisted the action of the weather so perfectly, that we can speak with confidence of its merits, believing it superior to many

kinds of building stone used in various parts of the country, and equal in value to any; while in plain cut-stone work it is furnished for one-half the cost of native stone; and in highly-wrought carved work, such as window caps, pilasters, modillions, etc., it can be afforded for one-third the cost of native stone, and at the same time pay the manufacturers an enormous profit.

Very many buildings have been erected of the Frear Stone in this city, of various sizes, from two-story dwellings to five-story business houses, asylums, etc. We give a cut on page 54 of the elegant five-story building of the Mutual Life Insurance Company, constructed entirely of this stone, at No. 81 South Wells street, in this city. This is one of the finest structures in the city, and is a credit to that old and well established Company, so ably managed by its worthy President, Merrill Ladd, Esq. Also, on page 55, we give an illustration of the elegant dwelling of H. B. Horton, Esq., No. 93 Calumet avenue, this city. This is fully equal in all respects to the finest brown-stone palace on Fifth avenue, New York city.

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The Frear Stone Company of this city are doing a very extensive and prosperous business, as we are informed, and of which we see evidences in the large amount of stone being used, which is constantly increasing. We hail this invention as one of great public benefit, and expect to see it generally adopted throughout the country. We understand the right is also secured by letters patent in England and France.

From The Lincoln, Neb., Statesman.

GROWTH AND PROSPERITY OF LINCOLN.

It is with feelings of pride that we advert to the rapid growth and marked prosperity of our city, the young Capital of the Giant State of the Prairies.

The history of the West, though full of interest to the men of enterprise, as affording in the rapid growth of its towns and cities, examples unparalleled in history, has not hitherto given

the world such an example of energy and enterprise as does Lincoln, the capital of Nebraska.

Only about two years since this was one vast prairie. The progress of civilization, in its onward western march, had driven the original proprietors further toward the setting sun, and thus nature was left unmolested to yield up her bounties to the energetic efforts of progressive Americanism.

And within these two years, from this houseless prairie has grown a city of nearly 3,000 inhabitants, with State Capitol Buildings which would be an honor to any place, and private dwellings and business houses of elegant design and architectural finish, which argues more (present and prospective) for the prosperity of a place than any other one thing; for, as the traveler passes through a country seeking a location for a home and to invest his capital in business enterprises, he is always governed in his judgment by the character of the buildings, architectural skill displayed, and permanency of the structures.

And the men of energy and enterprise possessing pecuniary ability, are of the greatest benefit in aid of the growth of a town or city—for, where capital locates, laborers will rapidly congregate. Such men will surely pass by a town that is slovenly and cheaply built, to seek the association of men possessing broader and more enlarged views, and who are willing themselves to aid in giving characters to the locality by the erection of first-class buildings. Thus, every first-class building which is erected adds to the value of every part of ground within the limits of the municipality.

And among the many enterprises which are going forward in this city bespeaking the energy and enterprise of our citizens, we deem the establishment of the manufacture of the "Frear Artificial Stone" as of the greatest importance and value to the future growth of the place.

The Frear Stone works were started here about one year since, and the success of the enterprise is manifest by the elegant dwelling erected for his Excellency Gov. Butler, of which the entire front and side is built of ashlars, and the entire trimmings of the building—such as beautifully wrought window and door caps and sills, water table, etc.; also, the entire cut-stone

trimmings as above, in the brick dwellings of the Hon. Secretary of State Kennard, and Hon. Auditor of State Gillespie. These dwellings were all erected last autumn, and are of a character that would do credit to any city. The Frear Stone is found to stand the action of the weather perfectly and to answer all the purposes for which the best building stone is used, while at the same time it can be manufactured at so much less cost than cut stone can be furnished, as to bring it within the means of all, and thus give an architectural adornment to our city. Even the elegant brown stone fronts on Fifth avenue, New York, do not excel in beauty and durability the "Frear Stone," which it so closely resembles.

We shall take occasion to inform our numerous readers from time to time of the establishment of new and valuable enterprises in our midst.

From The Interior.

"FREAR ARTIFICIAL STONE."

In looking round our city among the many enterprises which are being pushed forward with that energy and skill so characteristic of our citizens, we find none that commends itself more readily to the capitalists, the practical builders, the property owners, and men of science, than the manufacture of the "Frear Artificial Stone." This is an invention of one of our own citizens, and has been in practical operation for three years past, and very many buildings have been constructed in whole or in part of this stone, which is found to stand the test of our severe weather perfectly. Among the buildings so constructed are the elegant dwelling of H. B. Horton, No. 93 Calumet avenue; the beautiful dwelling, sidewalk, and door-yard fence, all of Frear Stone, on Indiana avenue, near Twelfth street, belonging to Col. Farrer, of the Chicago *Evening Journal;* two elegant dwellings belonging to Benj. Lombard, Esq., on Kankakee avenue and Twentieth street. Blocks of dwellings on Michigan and Wabash

avenues trimmed of the stone; the Market, corner Adams and State streets; the elegant five-story building on Wells street, near Randolph, belonging to the Mutual Life Insurance Co., one of the finest buildings in the city, and an honor to that old and sterling company; the elegant residence, with door-yard fence, of Hon. C. N. Holden, on West Monroe street, this city; the immense new Asylum building, five-stories, erected the past season in the North division; two dwellings for Prof. Sawyer, near the Chicago University and numerous of other buildings, all of which proves that the capitalists, practical men, and men of science are thoroughly satisfied of its very great value. And for beauty it is not surpassed by the highest wrought specimens of the justly celebrated Portland Brown Stone, coming from the chisel of the most skillful artist. We hail this as one of the most valuable inventions of the age. The company manufacturing in this city, and who we learn have purchased the right for this State, are composed of some of our wealthiest and most substantial citizens, and the manufacture is prosecuted on a large scale.

We learn that several of the Southern States are sold, and portions of several of the Northern States, and that at New Orleans, St. Paul, in Iowa, Michigan, Toledo, Ohio, and many other places, extensive works are already established, and many public buildings have been, and are now, in progress of erection of the Frear Stone, such as the extension of the State House at Jackson, Miss., the State Public Buildings, Governor and Secretary of State's dwellings at Lincoln, Nebraska. Extensive works are to be started at once in Cheyenne, Wyoming.

We were shown elegant window-caps of various designs, which the company sell from $12 to $20 each, which cannot be had in cut-stone from the quarries for less than from $40 to $80 each; and we are assured by the superintendent of the works that very large profits are made even at these low prices. It seems that the invention has really robbed nature of one of her most valuable secrets, for it is impossible to detect the difference in the formation of this stone from the Portland Brown Stone, and it can be manufactured with equal facility in any locality where sand, or sand and gravel can be obtained. This is

surely an age of progress, and it is evident that the native rocks are to be permitted to quietly repose in their beds, and sleep the sleep of ages; and the sand hills of our country, hitherto deemed asleep, are to be converted into elegant building stone, and thus by the cheapness of production render it possible for the man of limited means to decorate his home. And thus by a higher order of architecture, to embelish our cities and towns, and elevate the taste of the people.

From The Standard.

A CHEAP AND VALUABLE BUILDING MATERIAL FOR CHUCHES, PARSONAGES, ETC., THE FREAR ARTIFICIAL STONE.

The wisest sage that ever lived, once wrote, "there is nothing new under the sun," but had he lived in this nineteenth century, we fancy he would somewhat modify his declarations. He may have referred to material things, or possibly to abstract principles and immutable laws. Be it as it may, the age in which he lived was surely not characterized by the rapid progress in the arts and sciences which is the wonder and admiration of all thinking minds of this present age.

We are led to these few reflections from having (while in our perigrination about this city) observed the elegant brown stone fronts, and cut-stone trimmings of brown stone, which are being so extensively used by our builders and property-owners, and our very great surprise on learning that the stone so elegantly designed and carved (as are supposed) was not from nature's rock, as one, even the closest critic, would suppose, but that it was all manufactured from the common sand taken from our lake shore —a knowledge of this fact stimulated us to an earnest inquiry into the reality and process of such a manufactory, and we found an immense establishment located at Cottage Grove, on the lake shore, where the Frear Stone Company are manufacturing brown stone of the most elegant designs for building purposes, at a cost which enables them to fill orders for cut-stone for buildings of

any size or architectural designs, at prices so far below native cut-stone work as to utterly defy competition; and the Frear Stone now having been exposed to the tests of our severe winters during the past three years, is proved not only to endure the weather perfectly, but continually grows harder from exposure to the atmosphere, in the degree of time and exposure. We are pleased to note that this is the invention of one of our citizens —Mr. Geo. A. Frear; and while standing by and witnessing the manufacture of an elegant key-stone, with large, raised figures on its face, and a cornice finish, all made in fifteen minutes, which would employ a stone-cutter from one to two days to chisel the same, and also elegant window and door-caps, costing in native stone from $40 to $125, each manufactured in the Frear Stone more perfect in finish than can possibly be cut by an ordinary workman and at a cost less than *one-fourth* of the cost of native stone, actually sold for from $30 to $40, we were actually forced to the conclusion that in giving the world the advantage of his ideas, Mr. Frear is entitled to the appellation of a public benefactor.

The Frear Stone Manufacturing Company of this city, having for its President the Hon. John M. Wilson, is composed of some of our wealthiest and most substantial citizens. The Company, we learn, has purchased the right for this State, and propose to sell county rights, reserving Cook county for their own manufacturing operations, and indeed have already sold some county rights, and manufactories are already established in different parts of the State. We also learn that the original owners of the patent have sold several State rights, and that already there are over thirty extensive manufactories in successful operation in different parts of the country.

No man of sagacity can look upon this enterprise but with favor, for it offers to furnish a building material equally as substantial as stone, and much more so than brick, and at much less cost, and the sand banks of our country, which have hitherto been considered of no value, can now by this invention be utilized and converted to valuable purposes.

From the Chicago Real Estate and Building Journal.

BUILDING MATERIAL—ANCIENT AND MODERN.

Ever since Cain went out from his father's house to the land of Nod, and "builded a city," the subject of a cheap, substantial, and durable building material, has engrossed the attention of architects, builders and property owners, for however prolific a section of country may be in the products of the soil, (and this is the real, substantial wealth of any country,) in cannot be peopled and wealth extracted from the soil, without good, substantial, and comfortable houses for the people. Experience teaches that the *balloon* style of modern houses, which were erected by the earlier settlers in the West, and such as are still being built in many places, instead of promoting either public or private interests, is quite the reverse, and in the end is a detriment to the interests of all. It is not always the cheapest building which costs the least possible sum to erect. A wise man builds not for himself alone, but for those who shall come after him, and become the inheritors of his (it may be) hard earned fortune. The traveler, in passing through a section of country, judges of the character of its people, their habits of thrift, their intelligence, energy and enterprise, entirely by the class of buildings and style of architecture of their towns and cities, and so judges correctly, and if he is seeking a location for a home for himself, or for a suitable place to make investments in business, he passes by those places where cheap wooden houses of no architectural design is displayed; and on entering a town or city whose streets, however few or short they may be, are lined on either side with substantial stone or brick buildings, he says to himself, "here are men of energy and enterprise, and I will cast in my lot with them;—here my property, if invested in merchandise, will be comparatively safe from fire—no danger that the business and prosperity of this town will be interrupted by a conflagration which would destroy a 'wooden town' in an hour."

What does this argue? That real estate is rendered valuable or invaluable, in and about a town or city according to the style of architecture and durability of its structures. This, we think, will not be denied by any man of judgment, but the very great expense necessary to be incurred in the erection of stone buil-

dings, has nearly precluded its use in our country, except by capitalists in our large cities. And although a substantial house may be built of brick, it is not susceptible of any architectural embellishment without the great cost of cut stone trimmings, which few, comparatively, at least, can afford.

Again, we have in this country no first-class building stone, except granite, and the cost of working and transporting that is too great to be indulged in except by men of large means. The lime-stones which are classed under the general name of marbles, used quite extensively in this city and throughout this and other States for building purposes, are found to disintegrate rapidly on the outer surface of the buildings, rendering it necessary to paint them. This, therefore, is not in as good favor as formerly. The native sand stones of Ohio and the West are loose and friable, and in using them for building purposes, great care must be taken, in dressing the stone as it comes from the quarry, to follow the lines of stratification, that it may lay in the building as it lay in its quarry-bed. Else it will rapidly disintegrate and destroy the beauty of the building, if not the structure itself. So it is with the beautiful Portland brown stone, so extensively used in New York, Philadelphia, and other Eastern cities, and all of these stones are seriously affected by the frosts of our severe Northern winters.

Yet, after all, a stone house is the best that can be built, and can be adorned by architectural skill to render it more beautiful than one of brick or wood, and many more would be erected were it not for their great cost.

In view of all these facts which we have adverted to, repeated efforts have been made from time to time by men of science and genius, to invent and manufacture an artificial stone which should possess all the good qualities of native rock, such as strength, beauty and durability, and at the same time be manufactured so cheaply, that a person of limited means could well afford to indulge in the luxury of a substantial and beautiful stone dwelling or business house.

But all such efforts proved abortive, and while we have ever taken a deep interest in the success of such efforts, we cannot avoid expressing our disapprobation of the measures adopted,

and the haste manifested by the owners of those patents in forcing the sale of worthless patents upon the public. But we congratulate the public upon the fact that all but one of these impositions are out of the way. The one to which we refer is the so-called "Beton Coignet Agglomerate," which is being so extensively advertised in this country as a French invention. It is a most remarkable fact that all that has ever been done or attempted with this, in this country, is to extensively and expensively advertise it, which looks to us a good deal like a desperate attempt to sell a worthless patent for a large sum of money. All we pretend to know of the "Beton Coignet," we gather from the published advertisements concerning it, and from the patent papers, copies of which we have before us. And first, it seems very singular that the patent office will grant letters patent for an article that is as old as our country. Yes, and much older, for all there is to this wonderful artificial stone, is simply lime-cement and sand, made into the consistency of mortar and puddled into a box and allowed to stand until it shall have become set sufficiently as to remove the boards. It is not claimed for it that it can be used as a substitute for cut stone; and it cannot be, whether so claimed or not. It is true houses can be built of it, in the manner claimed, which is by making a board box the size of the walls, and filling in between them with this concrete, or puddling it in. Then when sufficiently set, raise the boards nearly their width and fill in again, and so continue doing all the walls of the house until they are complete, and become one solid mass of concrete, precisely in the same manner as houses have been built in this city, Buffalo, and in fact all over our country at times ever since its first settlement. And it is a mystery to us how men can have the assurance to presume upon the credulity of men by attempting to sell what we conceive to be an entirely worthless article, and indeed, so far as we are able to judge from the elaborate advertisements, the "Beton Coignet" is of far less value than the old fashioned concrete, from the fact that any man can in any place erect a mortar house of the concrete, while the "Beton" has to be mixed by expensive machinery, which renders it impossible for a person of ordinary means to obtain· for be it borne in mind the machinery must be

erected and set up on the spot where the building is to be erected, for mixing and puddling purposes.

After all these repeated attempts and failures, it remained for Mr. George A. Frear to unlock nature's laboratory and take from thence the hidden secret that had been so securely kept since the creation, and himself (and what he does any man can do after a few day's experience, the process being so simple and inexpensive,) manufacture from sand as its base, a stone as beautiful as the most elegantly wrought specimen of the justly celebrated Portland brown stone, and so closely resembling it in its geological formation, that the eye of the closest critic cannot detect the manufactured from the native stone.

It is now about four years since Mr. Frear made his discovery, and three years since the stone has been exposed in buildings, etc., and has proven in all respects, we believe, fully equal to all that is claimed for it by the owners of the patent, and within the past two years has come rapidly into use, and now the "Frear Stone" has become an established article of trade in this city and many other parts of the country. The Frear Stone Manufacturing Company of this city, is composed of some of our wealthiest, most enterprising and substantial citizens, and they are carrying on the manufacture on an extensive scale, as is shown by the scores of first-class buildings in our city, among which are the elegant five-story building of the Mutual Life Insurance Company, on Wells street; the immense Asylum Building, five-stories high; the elegant dwellings of Hon. C. N. Holden, H. B. Horton, Esq., and Col. Farrer's beautiful house on Indiana avenue.

This stone resists the action of the atmosphere perfectly, and in every case has been found to increase in hardness from month to month, and from year to year in proportion to its exposure to atmospheric influences. It perfectly resists the action of acids and alkalies, which will entirely disintegrate any of the native stones.

We have watched with a great degree of interest the introduction and progress of this invention, fully realizing the immense value of the patent should it prove a success, as it has.

TESTS AND TESTIMONIALS.

The most satisfactory evidence of the value of the Frear Stone, is the official indorsement by scientific men, our architects and experts. Some of these we give below, and first the certificate of the Ordinance Officer, referred to in the foregoing.

[CERTIFCATE—A. COPY.]

ORDINANCE OFFICE, NAVY YARD,
WASHINGTON, D. C., March 10th, 1869.

The following are the results of a test of building material, presented by Mr. Charles Holland, of Chicago, through Mr. David A. Burr, and called by him, Frear Stone:

Cube—Height. 1 in.27 x Base. 1 in.30 x Depth. 1 in.29

Compression.	Strength.
1 in 270	300 lbs.
1 " 270	1000 "
1 " 270	2000 "
1 " 265	3000 "
1 " 265	4000 "
1 " 265	5000 "
1 " 265	6000 "
Crushed	**6050** "

The specimen was not an exact cube as is seen above—the measurements indicate the position of the stone in the machine when crushed.

W. R. REESE,
[Seal.] Com'd'r U. S. Navy and Inspector of Ordinance.

The following letter from Mr. Burr, is corroborative of the copy of the certificate above:

CERTIFICATE—B. COPY.

OFFICE OF DAVID A. BURR,
Counsellor at Law and Solicitor of Patents,
Corner Seventh and F. Streets,
WASHINGTON, D. C., 13th March, 1869.

CHAS. HOLLAND, ESQ.—I sent you by express, yesterday, the official report of the Ordinance officer at the Navy Yard respecting the test of the Frear Stone. The report is full, and is accompanied by specimens taken from the cube crushed, so that

the identification thereof is complete. I deem this important, in order to remove all possibility of question as to what manner of stone was crushed, and to prove to all interested that the test was applied to your ordinary material, and not to a special manufacture thereof.

I am greatly pleased with the result of the test. Any stone which will carry **6000** lbs. upon a cube of an inch and a quarter is unquestionably good for the severest requirements of architecture. With kind regards, yours truly,

[Signed,] DAVID A. BURR.

STATE OF ILLINOIS, }
County of Cook, City of Chicago, } CHICAGO, Jan. 2, 1870.

I, J. Appleton Wilson, a notary public duly commissioned in and for the City of Chicago, and County of Cook, and State of Illi- . . do hereby certify that I have read the original certificate of . . R. Reese, Commander U. S. Navy and Inspector of Ordinance, dated March 10th, 1869, giving the results of a test of the Frear Stone, and the copy on the foregoing sheet, marked A, is a correct copy of the same. I have also read the original letter of David A. Burr, and the foregoing copy marked B, is a correct copy thereof.

In witness whereof, I have hereunto set my hand and affixed my notarial seal, at Chicago, this second day of Jan., A. D. 1870.

[SEAL.] J. APPLETON WILSON, *Notary Public.*

OFFICE OF E. BURLING, ARCHITECT, }
Mercantile Building, 110 LaSalle Street, }
CHICAGO, June 3, 1868. }

Illinois Artificial Stone Company:

GENTS: I take pleasure in saying in reply to your note asking for my opinion of the "Artificial Stone," as manufactured by your Company, at Hyde Park, that, in my opinion, you have fully succeeded in producing a durable and beautiful building material, and easily fabricated into the most elaborate forms, enabling the architect to introduce variety and ornament in his designs, with-

out the great expense of cutting them from stone. I would also say that after a very careful examination of the stone manufactured by you, and to be used in the front of the building now in process of erection, it will be both elegant and durable, and will fully answer all the purposes which are claimed for it.

E. Burling, *Architect.*

Office of Cochrane & Piquenard, Architects,
32, 33 and 34 Lombard Block,
Chicago, June 4, 1868.

Geo. A. Frear, Esq., *Sup't Ill. Artificial Stone Co.*

Dear Sir: Having examined and thoroughly tested "Frear's Patent Artificial Stone," manufactured by your Company, we have become so satisfied with our experiments as to its durability, and so much pleased with its beauty for a building material, that we have induced Mr. H. B. Horton to enter into contract with you for the erection of a first-class dwelling, now being erected on Calumet avenue, between Twenty-second and Twenty-third streets, the contract to include all the window and door caps and sills, water tables, and the entire ashlar front. We consider it the best article for fronts ever introduced, and shall endeavor to encourage you in its manufacture by introducing it in our future building operations. Yours respectfully,

Cochrane & Piquenard, *Architects.*

Chicago, July 20, 1868.

C. Holland, Esq.: You inquire of me my opinion of the Frear Artificial Stone. In reply it gives me great pleasure to say, that as foreman for the Illinois Artificial Stone Company, I have had charge of their works at Hyde Park for several months past, and we have manufactured stone of almost every variety of design, and have not in a single instance failed to produce a perfect stone. Indeed, there is no such thing as failure in manufacturing the stone, except by design or ignorance of the proper proportions used; and there is not the least complication or difficulty in making the stone, no greater skill is required than that possessed by common laborers. I am now superintending the

erection of some buildings of this stone of our own manufacture, and have had occasion to cut the blocks in some places, and find that although those cut had not been made longer than four weeks, yet they cut as hard as any building stone ever used in this city—and some of them as hard as granite. I have entire confidence in the "Frear Stone" to answer the purpose required of any native stone. From the fact that we depend wholly upon the atmosphere and elements to harden it, I believe it will perfectly and forever resist those atmospheric influences which will dissolve all native rocks. Very respectfully yours,

AARON J. GOODRICH.

CHICAGO, Dec. 12, 1868.

GEO. A. FREAR, ESQ.—*Dear Sir:* Having used the "Frear Artificial Brown Stone" in building, the past season, I take pleasure in bearing testimony to its great value as a building material. It is both elegant and durable, and being so readily manufactured into elegant forms, enables the architect to elaborate his designs, and thus produce a higher order of architecture at much less expense than formerly, and I shall with pleasure lend my influence for its general adoption. T. V. WADSKIER

Architect, Room 14, *Cobb's Building.*

OFFICE, 15 PORTLAND BLOCK, }
CHICAGO, June 4, 1868. }

CHAS. HOLLAND, *President:*

DEAR SIR: I have examined and experimented with a specimen of the stone manufactured by the Illinois Artificial Stone Company, and subjected it to chemical tests to determine its value as building material in resisting atmospheric influences, and I find that it stands the test equal to the best Athens marble, which is extensively used in this State, and I will use my influence to have it adopted in place of either native stone or brick, in the erection of dwellings, office buildings and fronts.

L. B. DIXON, *Architect & Superintendent.*

CHICAGO, Dec. 12, 1868.

GEO. A. FREAR, ESQ.—*Dear Sir:* Having used the "Frear Artificial Stone" in the erection of our large market building, corner of State and Adams Sts., this city, it gives us pleasure to say that we are perfectly satisfied with the stone in every particular, and we believe it superior, under all considerations, to any other building material in use. SCHUREMAN & MELICK,

Chicago Marble Works, cor. Clark and Adams Sts.

OFFICE OF MERIAM & NOCQUET,
Room 43, Reynold's Block,
CHICAGO, March 22, 1869.

C. HOLLAND ESQ.—*Dear Sir:* We have made a thorough examination of the Frear Stone, and we have already adopted it for some buildings, and intend to do so in the future. It is vastly superior to many kinds of building stone in use, and fully equal to any, for any purpose whatever. It has a superior compactness and consequently is entirely impervious to dampness; all of which, added to its great strength, elegance, cheapness and durability, cannot fail to cause a great demand for it.

Very respectfully, MERIAM & NOCQUET,

Architects and Superintendents.

OFFICE OF F. & E. BAUMAN, ARCHITECTS,
156 Washington Street,
CHICAGO, March 15, 1869.

JOHN R. DICKINSON, ESQ., *Secretary, etc.*

DEAR SIR: At the request of Mr. Frear we have carefully examined at your works, the Frear Stone manufactured by you, and cheerfully say that we were astonished at the result. The chemical action, upon which the hardening process is depending, takes place so promptly, that samples scarcely a week old, exhibited a degree of hardness and toughness which will enable any builder to employ them, even in that early state. Older samples appear quite as hard as other stone. In our opinion, therefore, the question of hardness and toughness is fully settled. As to

durability, the chemical combinations brought about is such as to render it permanent, and indistructable by atmospheric influences. To give evidence of our faith in the stone, we will state that we have adopted it for the entire front of a heavy five story building on Wells street, for the Mutual Life Insurance Co. of Chicago.

Respectfully yours, F. & E. Bauman.

New Orleans, May 20, 1870.

Messrs. Holland, Frear & Wilson.—*Dear Sirs:* At the fire which destroyed our pattern shop and office, granite was scaled to pieces, marble cracked in every direction, and a large piece of Connecticut brown stone was entirely decomposed, large samples of Ransome stone, and samples of the Union stone, of Boston, lost their bond under the heat and water, and were completely disintegrated, becoming sufficiently soft to be crushed readily by pressure in the hand.

The section of Frear Stone Fence, near the office, after being heated to a white heat and then played upon by streams of water from the engines, still stands, amidst the ruins, a monument to the superiority of Frear Stone under heat.

I am very respectfully, Edwin A. Burk.

Louisiana Frear Stone Manufacturing Co., }
New Orleans, Sept. 2, 1870. }

Messrs. Holland, Frear & Wilson.—*Gents:* Acknowledging your favor of the 24th ult., and pursuant to your request, we this day send by express, six pictures and frames, of the Engine House.

We have the satisfaction of observing that the Frear Stone of that building stands perfectly well, and appears well, and so far it ought to establish full confidence in the minds of the public, of its utility as a Building Material.

We have other buildings in hand, in a forward state of progress, which we hope will prove also satisfactory.

Very respectfully yours,

Newton Richards, *President.*

INDIANAPOLIS, Jan. 21, 1868.

FRIEND BOYDEN: Some parties have been putting the Frear Stone to a severe test to-day. They first boiled it in water for four hours without any visible effect, and heated other pieces to a red heat and then plunged them in water, but not a single grain separated from the mass, or a single crack appeared. I must confess I held my breath when I saw it drawn from its bath, and was most agreeably surprised at the result. Tell Holland "Frear Stone" is a brick. A. J. ELDER.

OFFICE SOUTH PARK COMMISSIONERS,
CHICAGO, Jan. 6, 1871.

HON. GEO. H. THACHER, Mayor, etc., Albany, N. Y.

Dear Sir: By request of Chas. Holland, Esq., of this city, I write to inform you that I am familiar with the introduction and use of the Frear Stone in this city, and have taken pains to investigate its merits, and do not hesitate in the least to add my testimony to its great value. I have determined upon using it for catch basins and inverts to sewers to drain Boulevard and Park. From experiments which have been made I think it is as durable as brick, or perhaps natural stone, and considering its cost, smoothness and durability, it will prove a good substitute for brick or other material for permanent sewers. Respectfully, GEO. W. WAITE,

Chief Engineer South Park.

CHICAGO, Jan. 19. 1871.

To whom it may concern:

The undersigned takes pleasure in saying that he has used the Frear Stone in various ways in the construction of buildings from their foundations, during the past four years, and has been familiar with the manufacture and use of the stone in this city, in buildings, sewerage, side walks, mastic, etc., and is frank to say it stands all tests put to it perfectly. I consider it a very valuable discovery, and think it will take the place of natural stone, to a large extent, for the purposes mentioned.

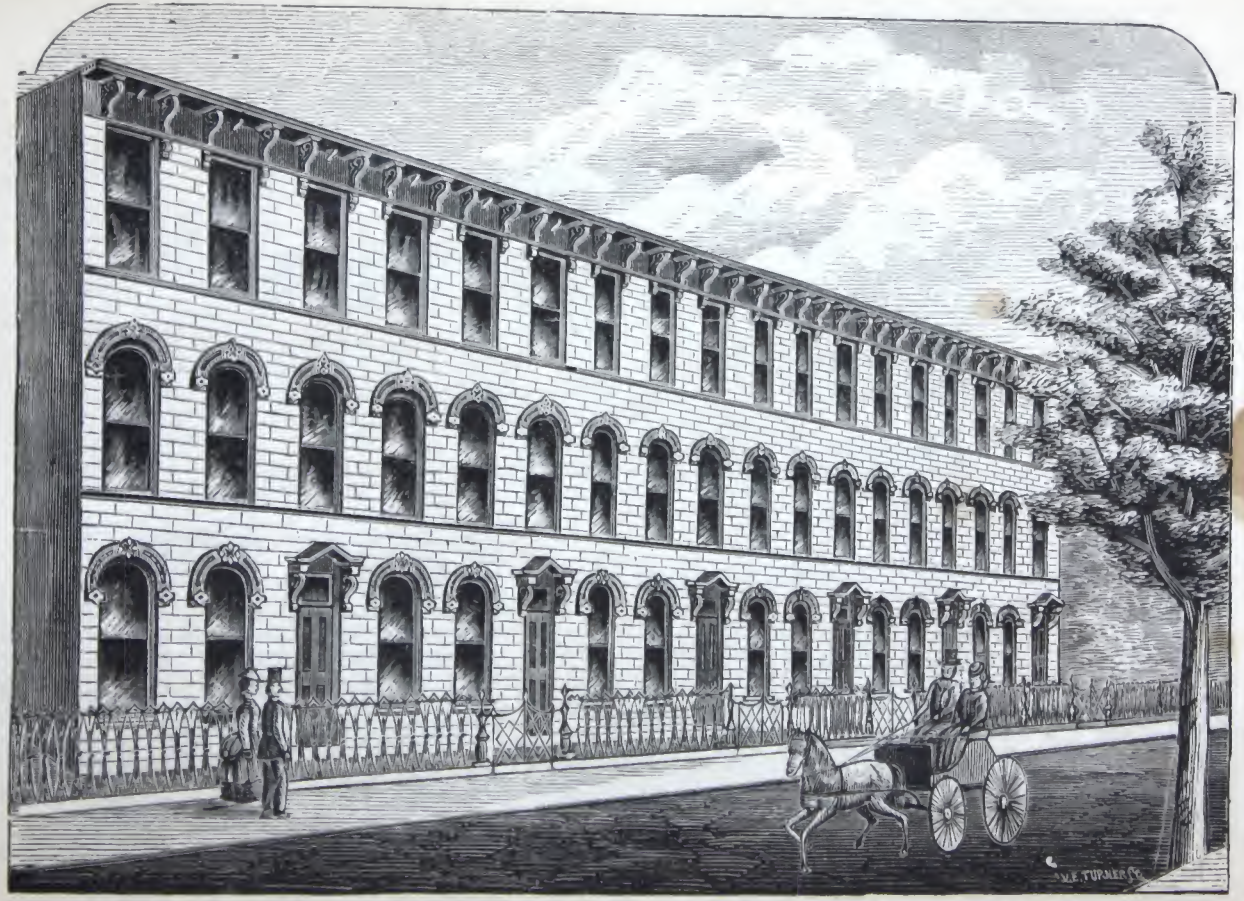
O. L. WHEELOCK,

Architect and Superintendent.

SEA WALLS, CULVERTS, ETC.

We confidently affirm that there is no natural stone that can be made as readily available for culverts for railroads, for sea walls or dockage, as the Frear Artificial Stone; for from experiments made by specimens of the stone having laid in the water, both *still* and *running*, for over two years, they have been invariably found to be hard as granite, and not to have suffered the least abrasion or disintegration, and its cheapness of manufacture admits of its being fashioned into blocks closely fitting eachother, thus constructing a solid stone wall, avoiding the enormous expense incident upon quarrying and cutting native rock.

COL. FARRER'S DWELLING, CHICAGO, OF THE CELEBRATED FREAR STONE.



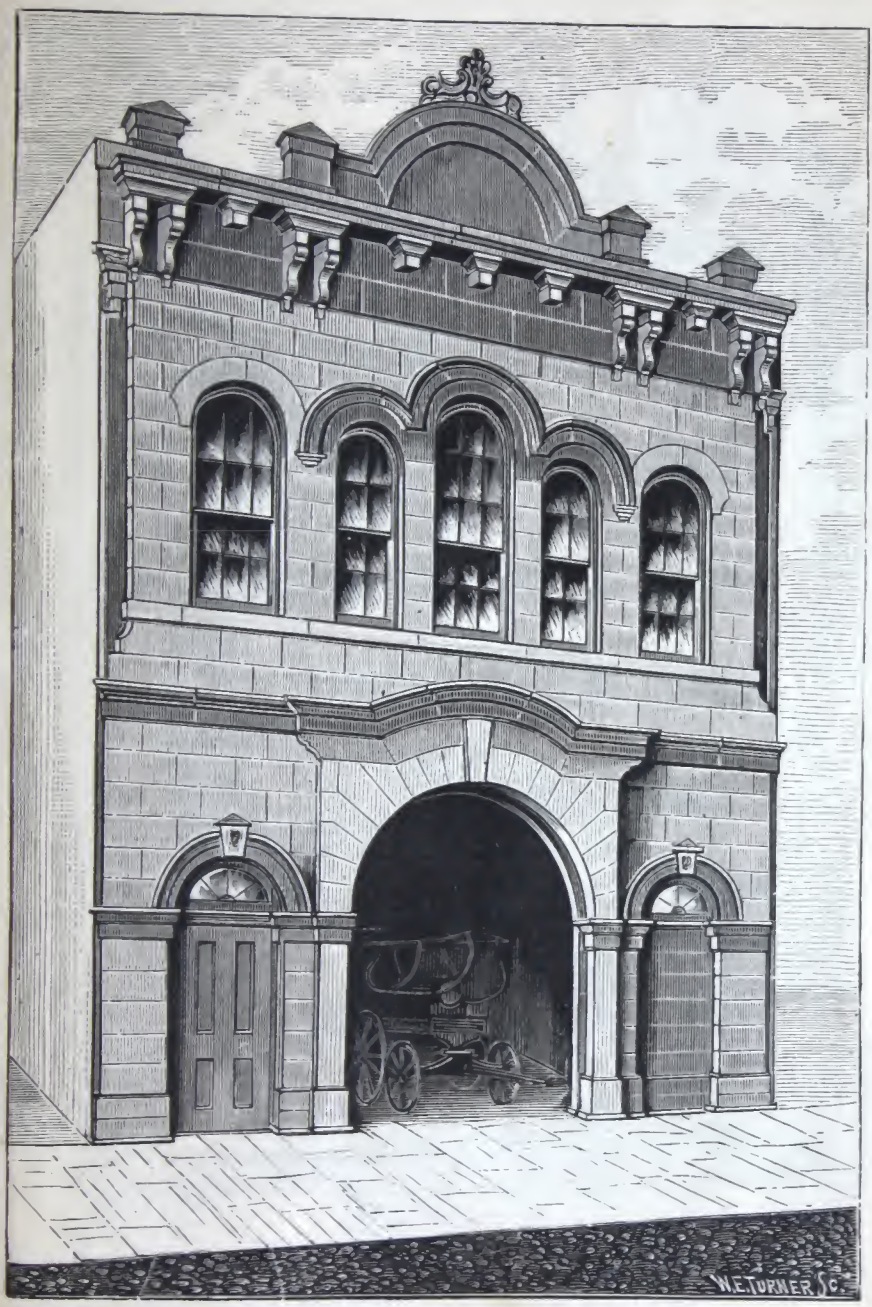
WARD'S BLOCK OF SIX DWELLINGS, TOLEDO, OHIO, OF FREAR STONE ENTIRE FRONTS.

LOMBARD'S DWELLINGS, CHICAGO, CUT STONE OF THE CELEBRATED FREAR STONE.

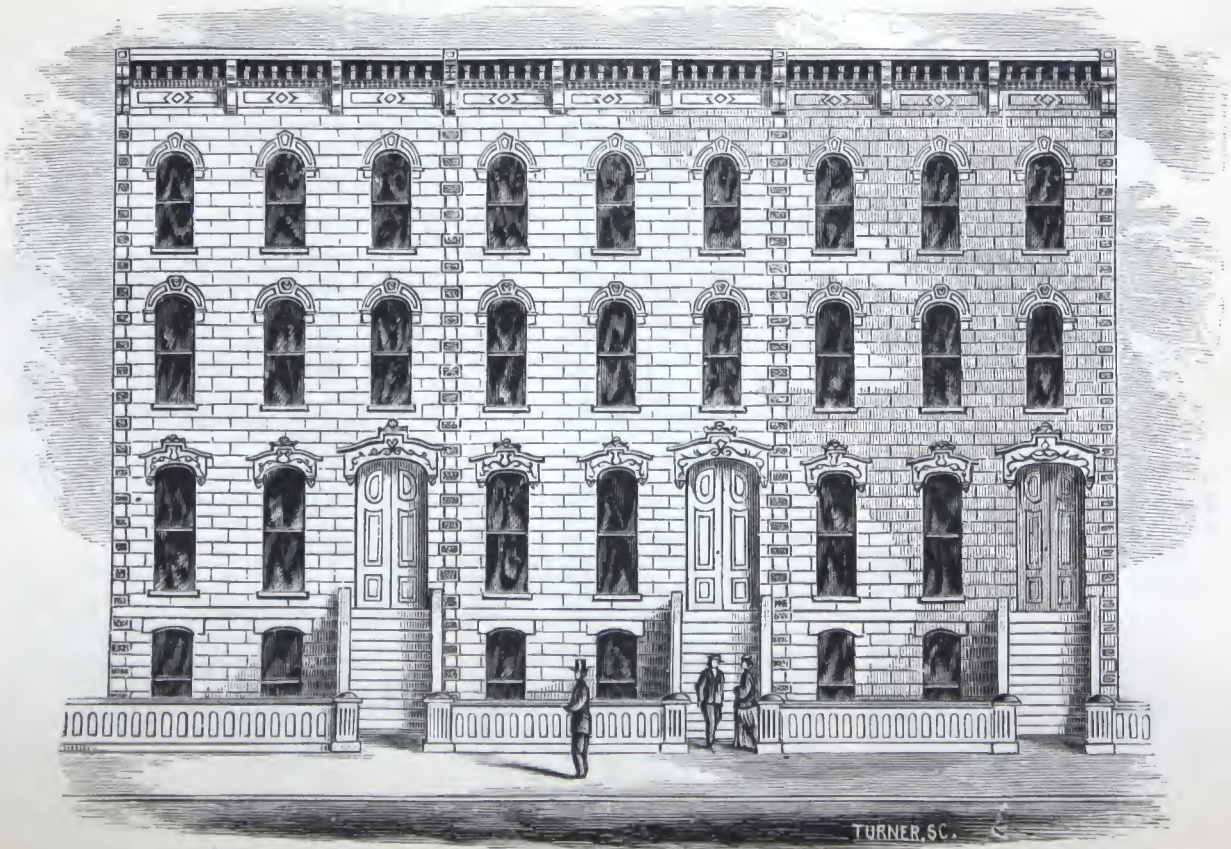
HOPKINS' STORE AND DWELLING, HYDE PARK, ILL., OF THE CELEBRATED FREAR STONE ENTIRE.

ASYLUM OF THE GOOD SHEPHERD, CHICAGO, ILL.

WATER TABLE, BELT COURSE, CAPS, PINACLES, &C., OF THE CELEBRATED FREAR STONE.

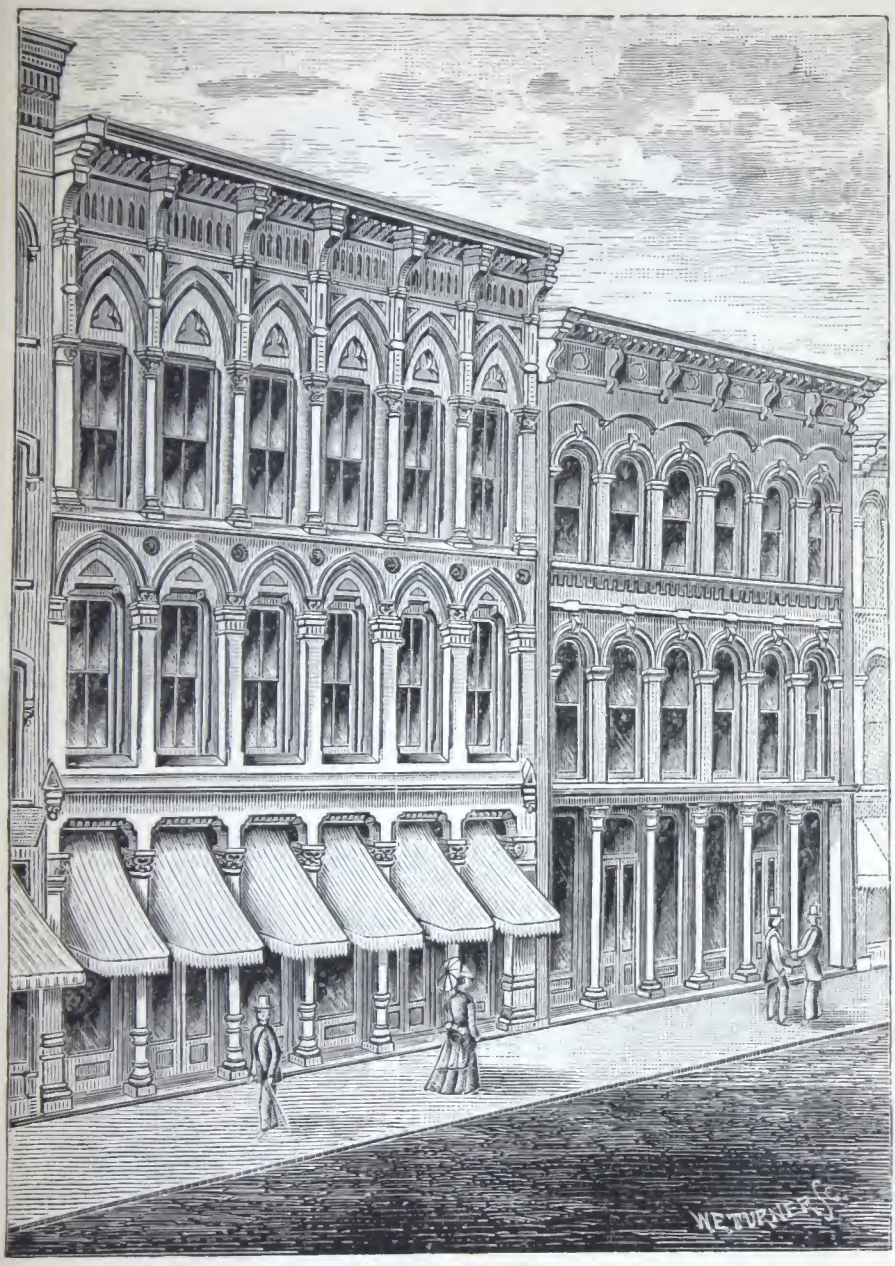


ENGINE HOUSE, NEW ORLEANS, FRONT OF FREAR STONE ENTIRE.



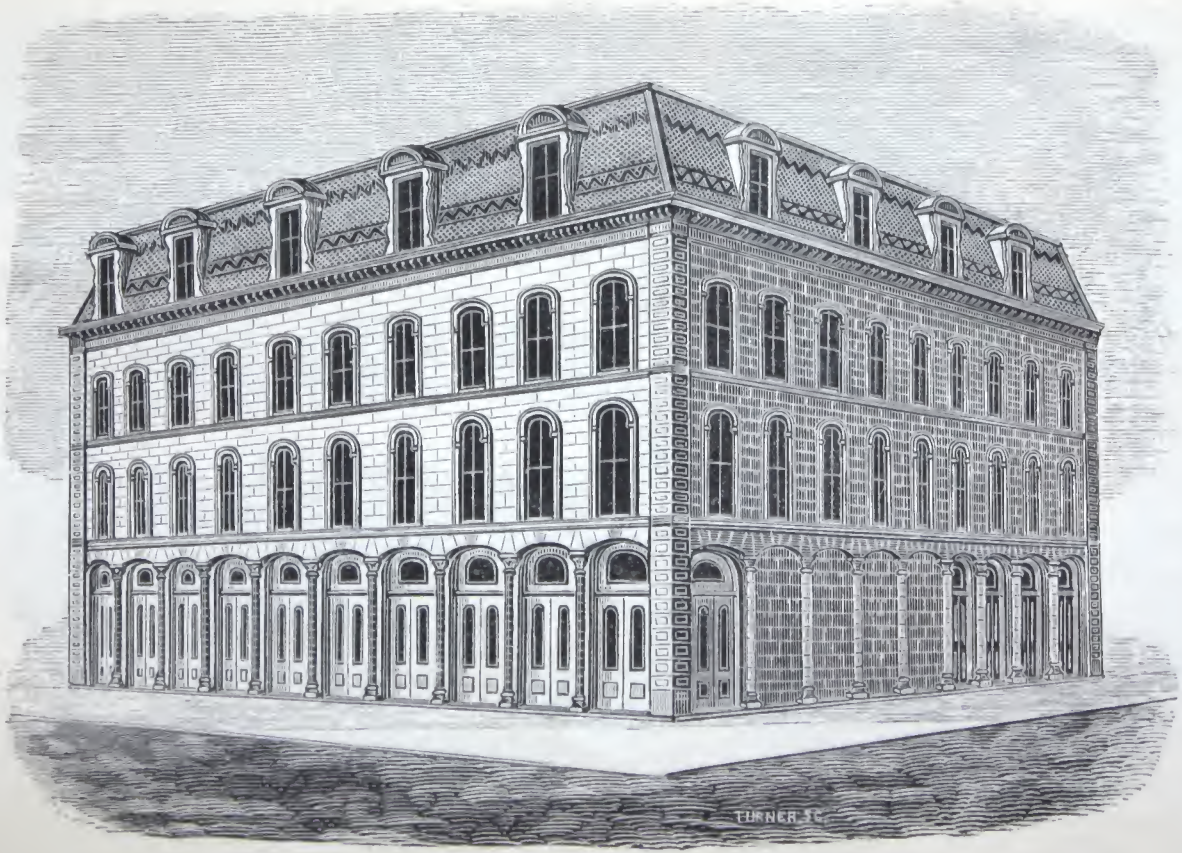
WILSON'S BLOCK, CHICAGO, FRONT, FENCE, STAIRS, ETC., OF THE FREAR STONE.

RESIDENCE OF H. B. HORTON, ESQ., CHICAGO, BUILT OF FREAR STONE.



LOMBARD BLOCK, TOLEDO, OHIO.
FRONT ENTIRE OF THE CELEBRATED FREAR STONE.

HOLLAND & FREAR'S BLOCK, ELLIS AV., CHICAGO. FRONT, SIDES, CORNICE, FENCE, STEPS, SIDE WALK, ETC., OF THE CELEBRATED FREAR STONE.

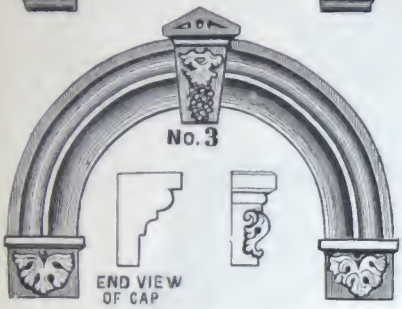


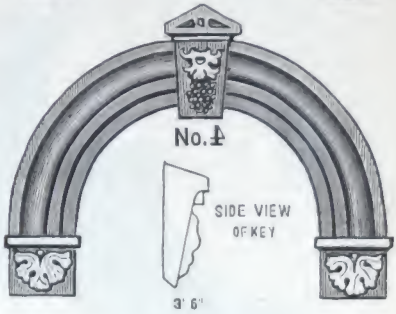
BLOCK IN TOLEDO, OHIO, BUILT OF THE FREAR STONE ENTIRE.

BUILDING OF THE MUTUAL LIFE INSURANCE COMPANY, CHICAGO.

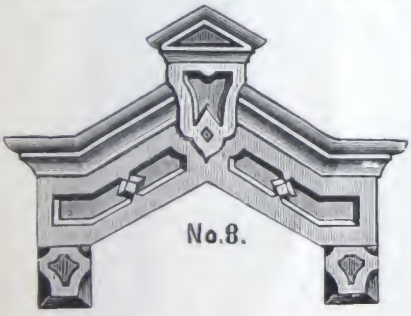
FARWELL'S BLOCK, CHICAGO, CAPS, FRONT AND SIDE OF THE FREAR STONE.

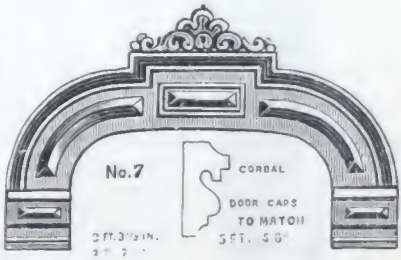
ZOUAVE HALL, CORNER OF STATE AND ADAMS STS., CAPS, TRIMMINGS, &C. OF THE FREAR STONE.



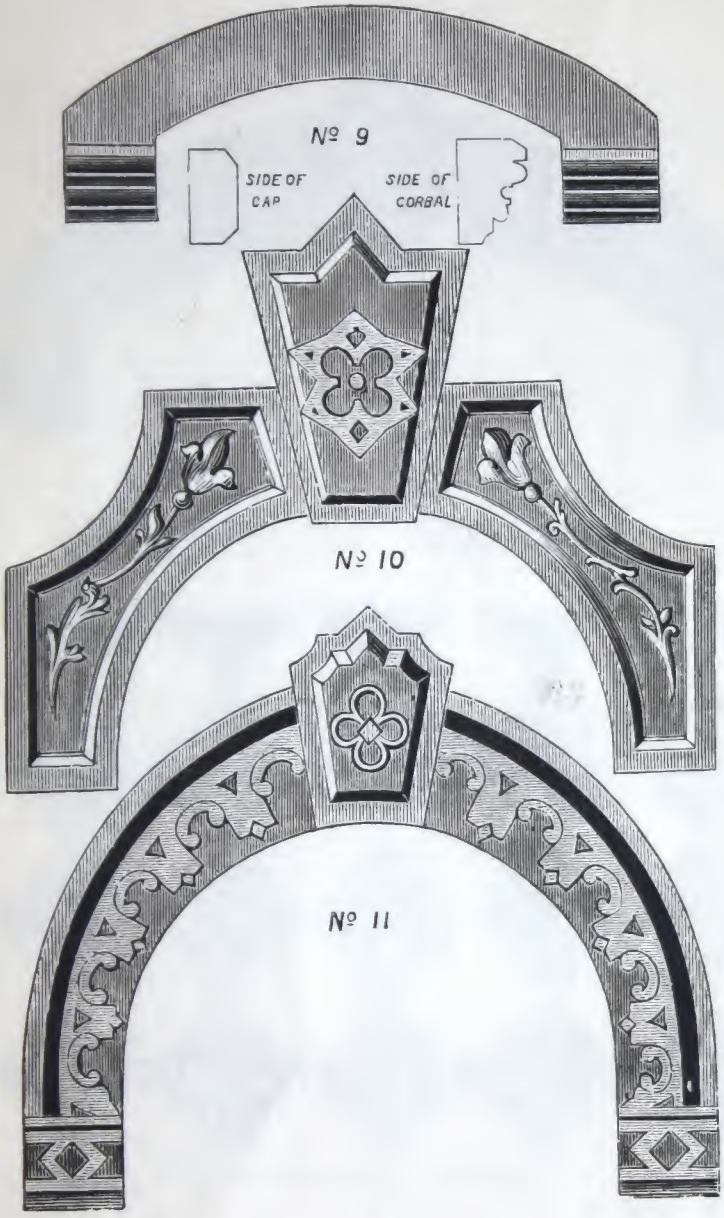


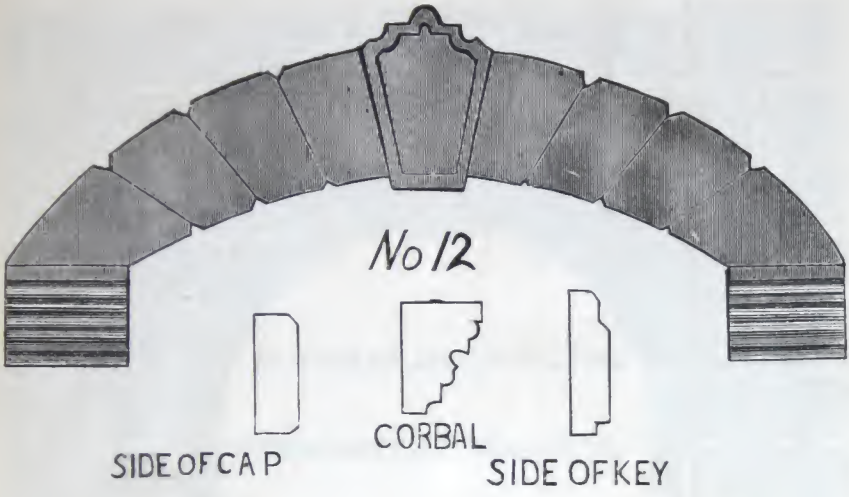
DOOR CAPS TO MATCH 5FT.6IN.

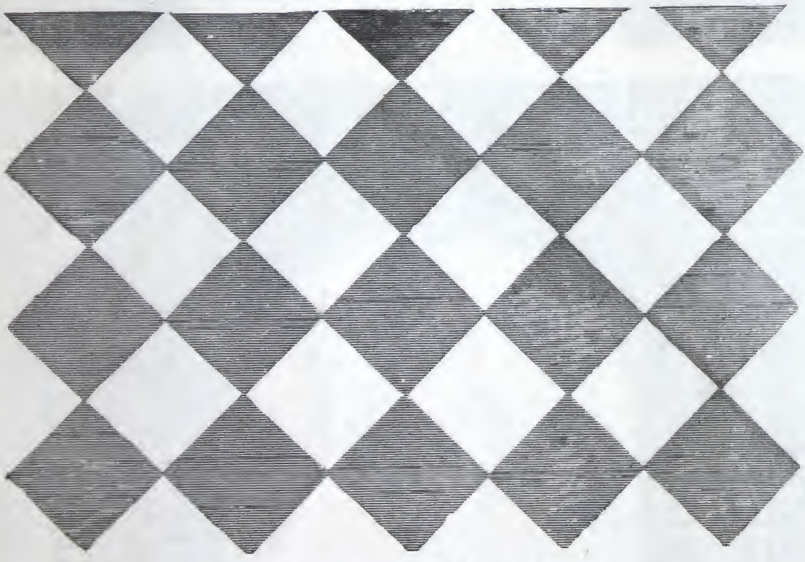




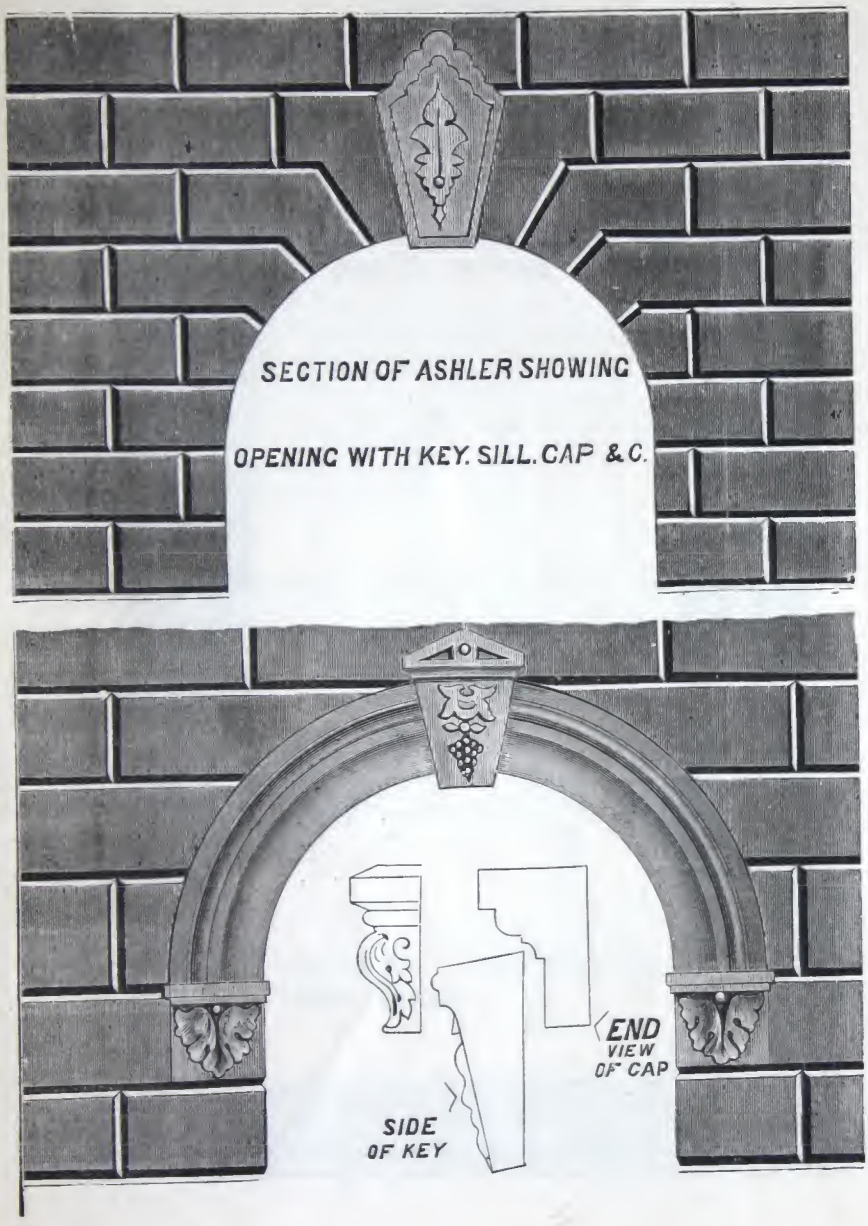
WINDOW CAPS.

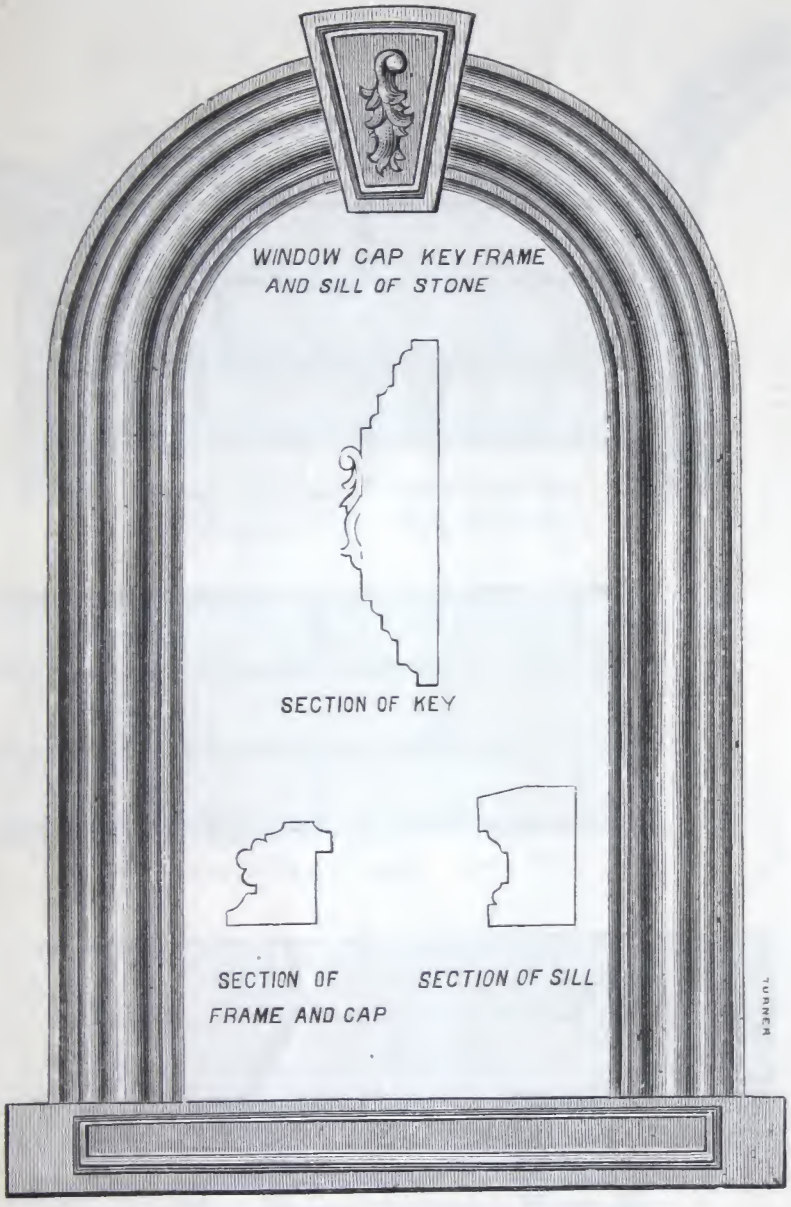

Nº 9
SIDE OF CAP
SIDE OF CORBAL
Nº 10
Nº 11

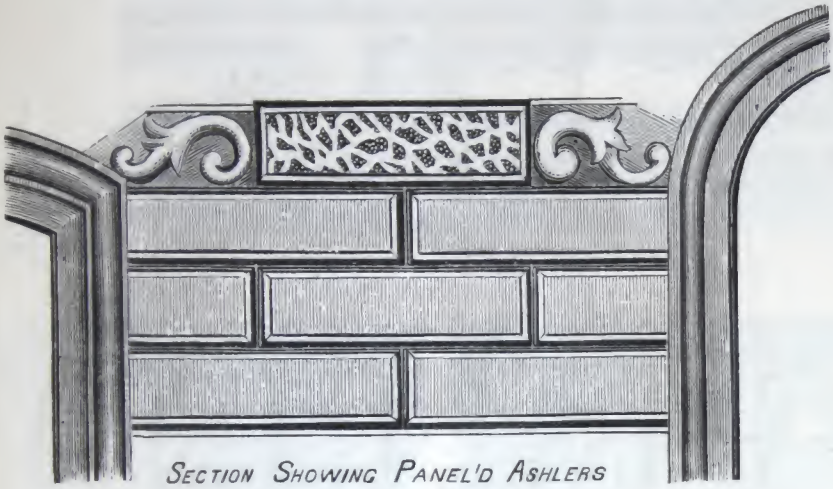




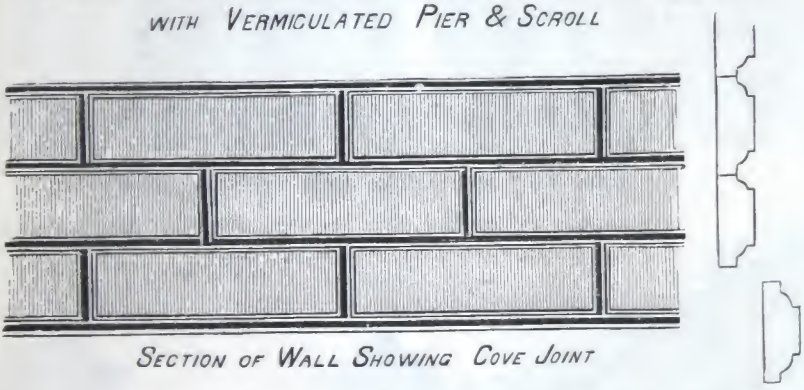
TILEING FOR CELLARS, ETC.


SECTION OF ASHLER SHOWING
OPENING WITH KEY. SILL. CAP &C.
END
VIEW
OF CAP
SIDE
OF KEY

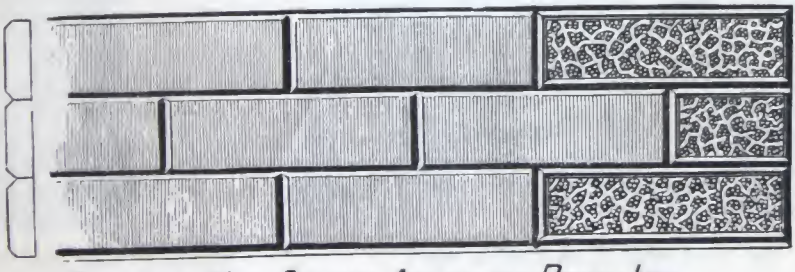

WINDOW CAP KEY FRAME
AND SILL OF STONE
SECTION OF KEY
SECTION OF
FRAME AND CAP
SECTION OF SILL
TURNER



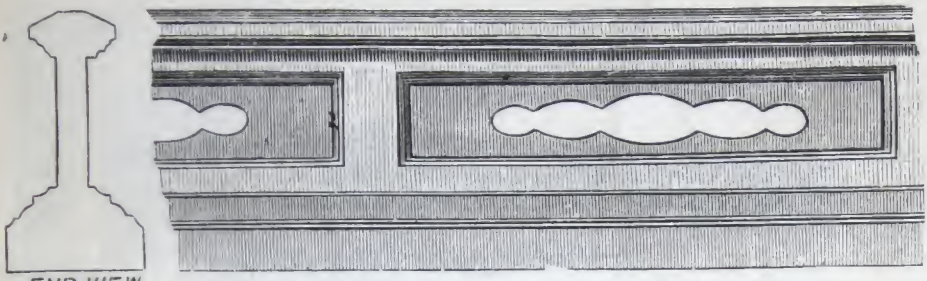
SECTION SHOWING PANEL'D ASHLERS
WITH VERMICULATED PIER & SCROLL



SECTION OF WALL SHOWING COVE JOINT

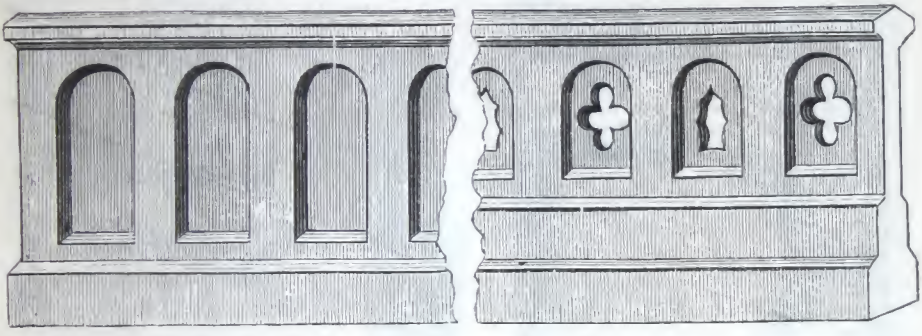


SECTION OF WALL SHOWING ASHLER WITH RUSTIC JOINT

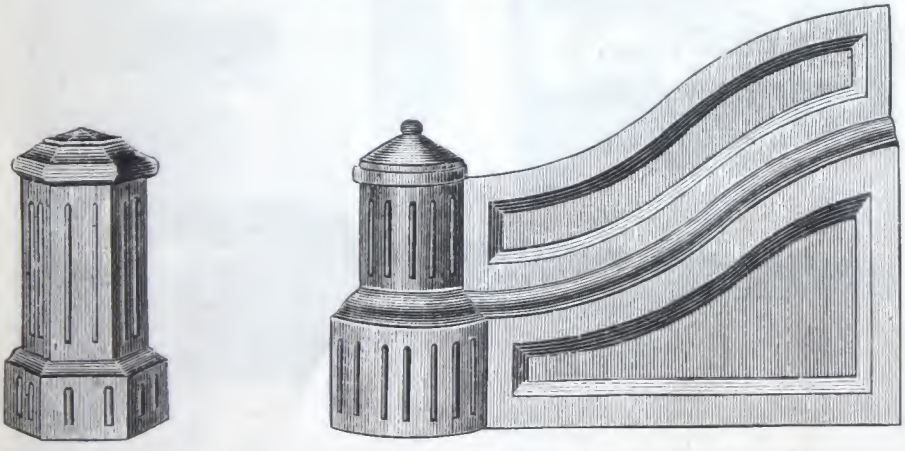


END VIEW

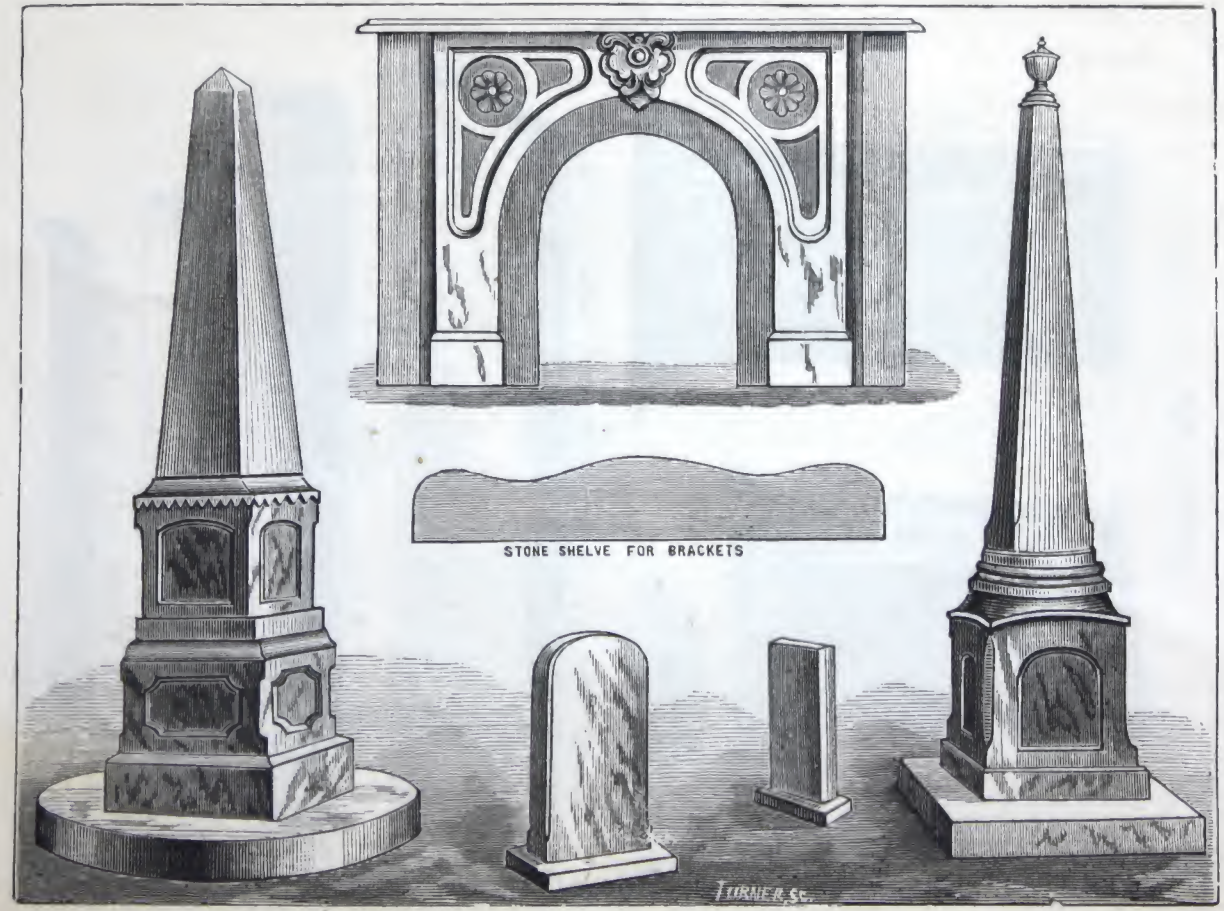
PANEL FENCE WITH OPEN PANEL.



FENCING 4FT HIGH WITH CAP AND SILLS 1FT THICK



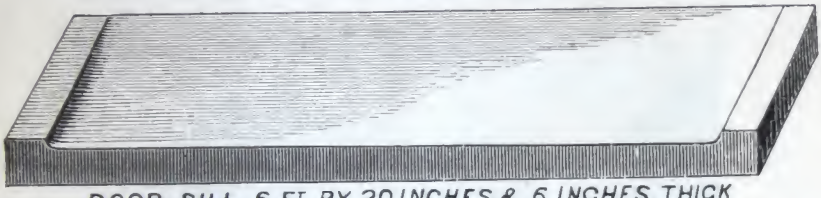
STONE STOOP WITH NEWELL POST


STONE SHELVE FOR BRACKETS
TURNER Sc.

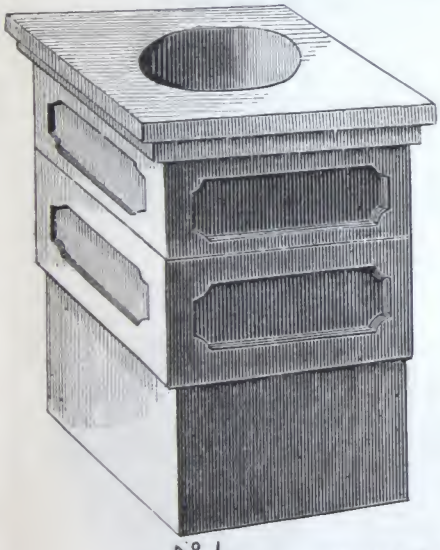
WINDOW SILL 4 Ft 6 BY 8

WINDOW SILL WITH LUGG 6 BY 8

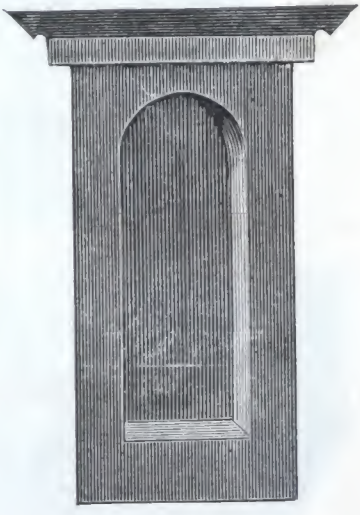
WATER TABLE 8 BY 8



DOOR SILL 6 Ft BY 20 INCHES & 6 INCHES THICK

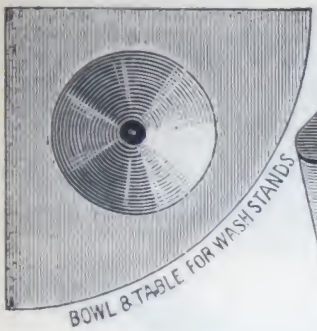


Nº 1.

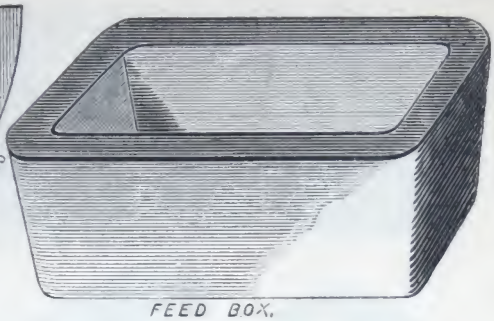


Nº 2.

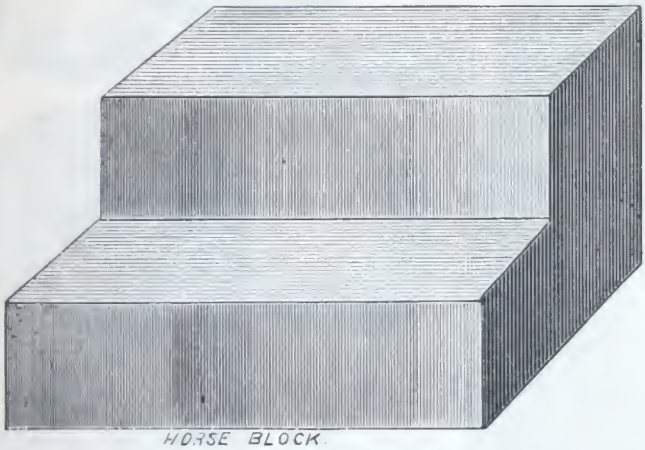
CHIMNEY TOPS



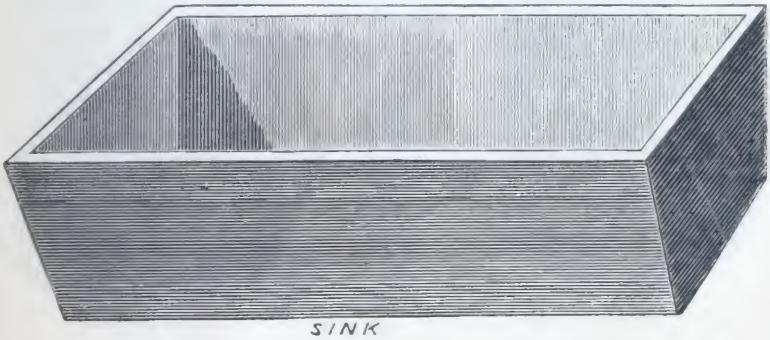
BOWL & TABLE FOR WASH STANDS



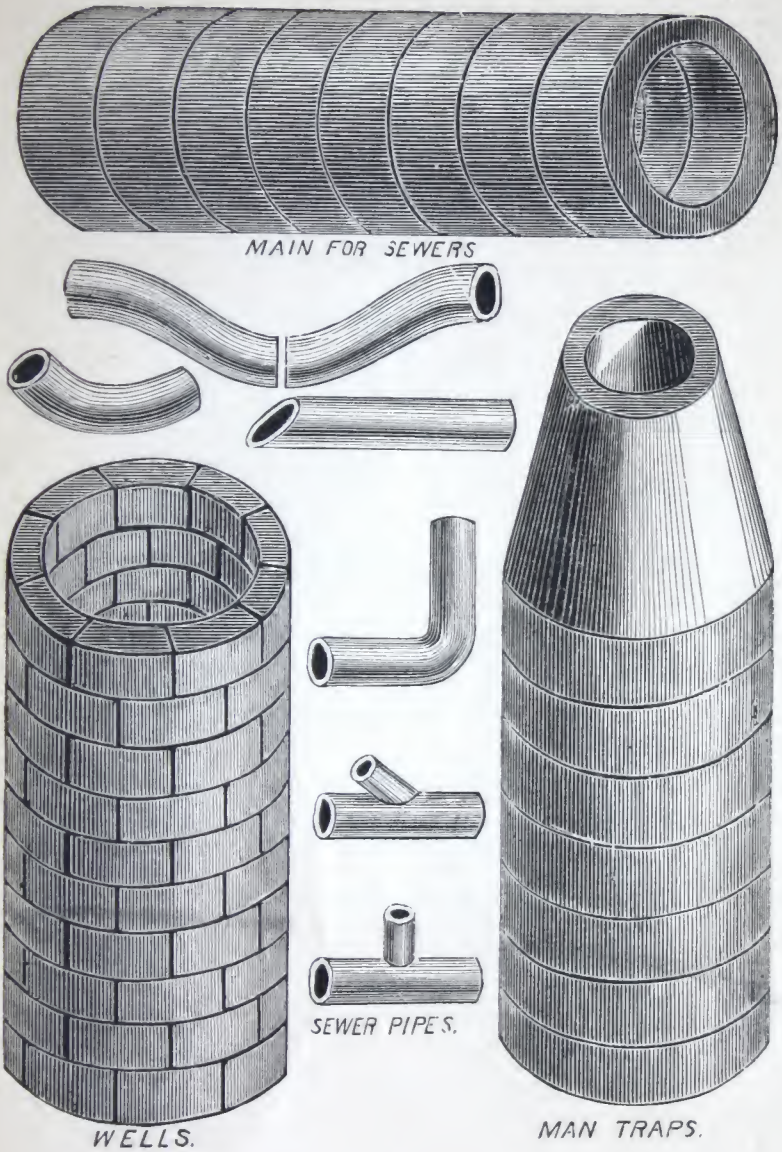
FEED BOX.



HORSE BLOCK.



SINK


MAIN FOR SEWERS
SEWER PIPES.
WELLS.
MAN TRAPS.

BLOCK IN TOLEDO, OHIO, BUILT OF THE ERIE STONE ENTIRE.