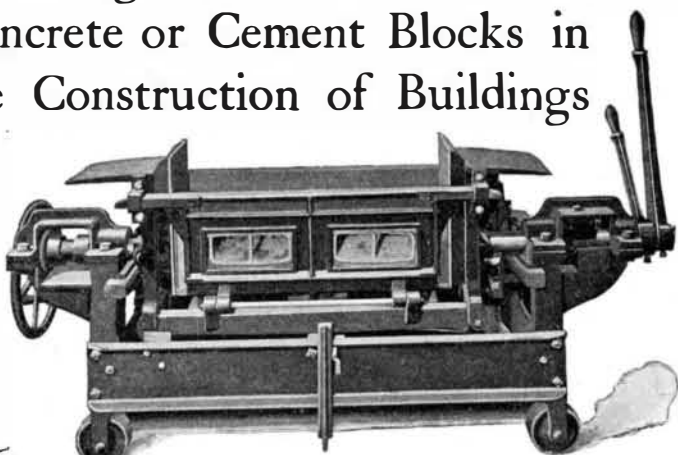


Business and Personal Wants.

READ THIS COLUMN CAREFULLY.—You will find inquiries for certain classes of articles numbered in consecutive order. If you manufacture these goods write us at once and we will send you the name and address of the party desiring the information. In every case it is necessary to give the number of the inquiry.  
MUNN & CO.

- Marine Iron Works. Chicago. Catalogue free.
- Inquiry No. 6732.**—For manufacturers of machines to make compressed medical tablets.
- "U. S." Metal Polish. Indianapolis. Samples free.
- Inquiry No. 6733.**—Wanted, address of firm making Radiora, or radium gold.
- Perforated Metals, Harrington & King Perforating Co., Chicago.
- Inquiry No. 6734.**—For manufacturers of small power pulverizing machines.
- Handle & Spoke Mch. Ober Mfg. Co., 10 Bell St., Chagrin Falls, O.
- Inquiry No. 6735.**—Wanted, address of maker of spun glass, such as cloth is made from.
- Adding, multiplying and dividing machine, all in one. Felt & Tarrant Mfg. Co., Chicago.
- Inquiry No. 6736.**—For manufacturers of automatic slot machines for mineral water, the same making a specific measure when money is put in slot.
- Commercially pure nickel tube, manufactured by The Standard Welding Co., Cleveland, O.
- Inquiry No. 6737.**—For manufacturers of machines for weaving elastic material such as is used in manufacturing elastic stockings, belts, etc.; also manufacturers of papier maché.
- Sawmill machinery and outfits manufactured by the Lane Mfg. Co., Box 13, Montpelier, Vt.
- Inquiry No. 6738.**—For manufacturers of motors and storage batteries.
- The celebrated "Hornsby-Akroyd" Patent Safety Oil Engine is built by the De La Vergne Machine Company, Foot of East 138th Street, New York.
- Inquiry No. 6739.**—Wanted, a pump, something like a small boiler feed pump, to be operated by compressed air instead of steam, one that will not waste much air or will return part of the waste back into the boiler again.
- Gut strings for Lawn Tennis, Musical Instruments, and other purposes made by P. F. Turner, 4th Street and Packers Avenue, Chicago, Ill.
- Inquiry No. 6740.**—Wanted, the address of a party to manufacture disks made of fiber in sizes from 3/8 to 1 1/4 for steam valves.
- In buying or selling patents money may be saved and time gained by writing Chas. A. Scott, 719 Mutual Life Building, Buffalo, New York.
- Inquiry No. 6741.**—For manufacturers of slated cloth.
- We manufacture on Contract anything in light Hardware. Write us for estimates. Edmonds-Metzel Mfg. Co., 143-153 South Jefferson Street, Chicago.
- Inquiry No. 6742.**—For manufacturers of toy balloons.
- We manufacture iron and steel forgings, from twenty pounds to twenty-five tons. Crank shafts of all varieties. Erie Forge Company, Erie, Pa.
- Inquiry No. 6743.**—For manufacturers of crude oil burners for engines and stoves of all kinds.
- Have you found a manufacturer for your invention? Write now and send samples. New York Die and Model Works, 508 Pearl Street, New York.
- Inquiry No. 6744.**—For manufacturers of power transmitting cables such as doctors use in massage treatment.
- We manufacture anything in metal. Patented articles, metal stamping, dies, screw mach. work, etc. Metal Novelty Works, 43 Canal Street, Chicago.
- Inquiry No. 6745.**—For manufacturers of grits, such as are used in window polish; also manufacturers of rouge for coloring brass.
- WANTED.—A patented article to manufacture on royalty or to buy outright. Address with full particulars to the W. E. McChristie Co., Camden, Ohio.
- Inquiry No. 6746.**—For manufacturers of steel-faced iron, such as is used for making planing knives, shoe cutter's dies, etc.
- THE SCIENTIFIC AMERICAN SUPPLEMENT is publishing a practical series of illustrated articles on experimental electro-chemistry by N. Monroe Hopkins.
- Inquiry No. 6747.**—For manufacturers of road machines.
- General Utilities Company, 299 Broadway, New York, offers unusual facilities for placing inventions and devices of merit before the public. Correspondence invited.
- Inquiry No. 6748.**—For manufacturer of Columbia dictionary stand or holder.
- Perfected kerosene wickless industrial oil burner, adapted for torches, stoves, etc. Large demand. Patent or rights for sale. E. Lyons, 332 Johnson Avenue, Jersey City.
- Inquiry No. 6749.**—For manufacturers of cotton tie roller for straightening cotton ties.
- WANTED.—Colonial silverware. Any one wishing to sell any authentic silver made in this country during the eighteenth century, please communicate with C. A. M., Box 773, New York.
- Inquiry No. 6750.**—For manufacturers of turbines.
- Manufacturers of patent articles, dies, metal stamping, screw machine work, hardware specialties, machinery and tools. Quadriga Manufacturing Company, 18 South Canal Street, Chicago.
- Inquiry No. 6751.**—For manufacturers of batters' supplies.
- You can rent a well equipped private laboratory by day, week or month from Electrical Testing Laboratories, 548 East 80th Street, New York. Absolute privacy. Ask for terms and facilities.
- Inquiry No. 6752.**—For manufacturers of chemicals, such as those used in explosives.
- Space with power, heat, light and machinery, if desired, in a large New England manufacturing concern, having more room than is necessary for their business. Address Box No. 407, Providence, R. I.
- Inquiry No. 6753.**—Wanted, address of manufacturers of sheet aluminum, also aluminum chains.
- WANTED.—Bids on plant capable of turning out 100 gross of special pencils per day. For specifications and full particulars address Continental Manufacturing Co., 1155 Broadway, Oakland, Cal., Suite 23.
- Inquiry No. 6754.**—For manufacturers of Japanese gim tacks of various colors.

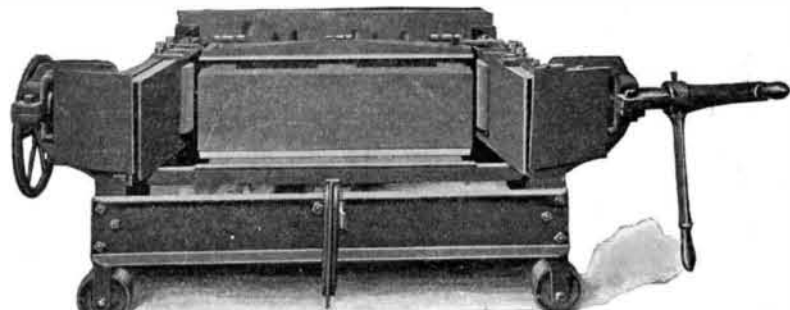
# The Economy and Advantages Resulting from the Use of Concrete or Cement Blocks in the Construction of Buildings



Cut No. 1, Showing initial position of machine where block is finished ready to be automatically released.

The Concrete and Cement industry is aged, but the Cement Block industry is rapidly taking the place of stone, brick and wood in the construction of all kinds of buildings for the following reasons:

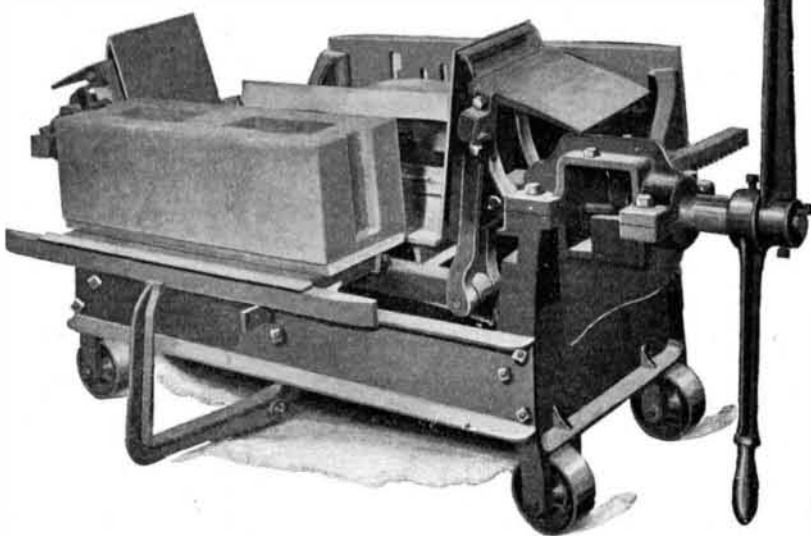
- First.**—Concrete or cement blocks can be made and laid in a wall for less than the cost of common brick covering the same space.
- Second.**—Cement Blocks made of the proper proportion, mixture, and quality of sand and cement and properly cured, are stronger, last longer, withstand heat or fire better than the best of natural stone. They also improve with age, where granite, limestone, etc., brick or wood deteriorate with age.
- Third.**—It is now simply a question of accuracy and rapidity in the manufacture of these blocks, which of course requires a machine well designed, simple, durable to withstand rough usage, perfectly made in all its parts.
- Fourth.**—The "Hayden Automatic" embodies all these features in detail. The "Hayden Automatic" is manufactured by a firm that has been in the foundry and machine business for seventy-five years, and has a reputation second to none.



Cut No. 2, Showing second position of the machine, namely: the automatic releasing of all the moulds simultaneously, prior to the delivery of the block. This position is obtained by throwing out side or long lever from a perpendicular (cut No. 1) to a horizontal position (cut No. 2), and the inside lever is brought from a perpendicular position forward as far as it will go, releasing moulds from block.

Compare the following points of advantage with other machines:

- 1st. AUTOMATIC.**—The Hayden Machine is the ONLY automatic block making machine on the market, for the following reasons: By one movement of a lever attached to mould-box rock-shaft, all moulds in which block is made are simultaneously opened, releasing the finished block by means of substantial cams, automatically delivers the block from moulds away from machine in a position to be easily carried away for curing, thus saving time and going away with the awkward and cumbersome method of releasing moulds by hand, and lifting the block from machine at a height that is a strain to the strongest of men. **This is important.**
- 2d. "MOISTURE PROOF FACING."**—The face of the block, made on the "Hayden Automatic," is made down, and in a horizontal position, thus enabling the operator to work to much better advantage, produce a perfectly faced block, and more compact for the reason that a large face tamping iron is used, thereby reproducing accurately any design acquired, with sharp corners and edges, facilitating different coloring of the facing, which is made with a mixture of two parts finer sand and one part cement, giving absolute resistance to dampness and frost without any appreciable additional cost in the making of the block. It may be well to add that the same case applies to side opposite face or inside of wall. **Can others do this?**
- 3d. "STRIKING OFF AND LAYING OF BLOCKS."**—Blocks made on the "Hayden Automatic" being made face down, enable the operator to strike off on side opposite face or inside of wall, thereby not requiring great care in the striking off of block by the operator, thus saving time and expert labor, as all the laying sides of blocks made on the "Hayden Automatic" are accurately moulded in the machine. **This saves money.**
- 4th. "MEASUREMENTS AND MORTAR ALLOWANCE."**—The standard block made on the "Hayden Automatic" is 32 inches in length by 9 inches face, but by actual measurement they are 31 1/2 inches in length by 8 1/2 inches face, allowing 1/4 inch for mortar in laying. This is the only machine on the market with this allowance. The width of blocks (thickness of wall) in standard machine are made in 8, 9, 10, 12 and 16 inch sizes, any other size on receipt of specification. Blocks may be made up to 32 inches in length or any fraction thereof. **Important to the architect.**
- 5th. "PORTABILITY, SIMPLICITY AND DURABILITY."**—The "Hayden Automatic" is without doubt the most simple and durable machine on the market, considering the many different sizes and shapes of blocks that can be made on the standard machine and regular equipment. The "Hayden Automatic" is portable, resting on four substantial wheels and can be moved anywhere easily by two men and does not have to be placed in a pit for the convenience and getativity of the operator. **A really portable machine can be kept close to the work.**
- 6th. "RAPIDITY."**—With four reasonably intelligent men, not experts, twenty 32 x 9 inch face and moisture-proofed blocks an hour can be made. The "Hayden Automatic" can be changed from making one size block to another (any size or shape) in from three to five minutes. **Always ready for a competitive test.**



Cut No. 3.—The final position of machine, showing Block automatically delivered, away from the moulds, in a position to be carried away for curing. This position is the result of throwing outside or long lever back to its original (perpendicular) position.

All inquiries and information regarding the "Hayden Automatic" will be gladly given upon request, and we are always pleased to demonstrate and invite the inspection of anyone interested in a thoroughly up-to-date and automatic cement block machine.

**HAYDEN AUTOMATIC & EQUIPMENT CO., 26 Cortlandt St., New York, U. S. A.**  
Eastern and Foreign Office  
**THE HAYDEN AUTOMATIC BLOCK MACHINE CO., Columbus, Ohio, U. S. A.**  
Factory and Western Office

Business and Personal Wants.

(CONTINUED.)

- WANTED.—Representative to sell our spinning, weaving and batting machinery, by oldest firm in France and Germany. Grand prize awarded Paris Exposition. Address Steeg, 563 William Street, Buffalo.
- Inquiry No. 6755.**—Wanted, name and address of inventor of a new material named Kryptol used to produce high temperatures.
- All Manufacturers Take Notice!—Patent rights for sale with royalty. Easiest of terms. Improved bicycle—more than three times the power of common bicycle. Attachment can be used on any Bicycle. See cut in Nov. 5th's issue. Use larger saddle. A. A. Kennedy, No. 1233 N. 19th Street, Cambridge, Mass.
- Inquiry No. 6756.**—For manufacturers of gate valve boxes (cast iron) used in city streets.
- Splendid opening for a high-grade mechanical engineer, who has had a broad experience in managing machine shops, the manufacture of machinery, engines and metal specialties. Applicants must be in prime of life and now employed. Preference will be given to applicants who have had modern scientific training in mechanical schools of high standing. Unqualified references will be exacted. All communications received will be regarded as strictly confidential. Address Mechanical Engineer, Box 773, New York.
- Inquiry No. 6757.**—For machinery for producing sheet steel corrugated elbows.
- Models, dies, boxes, metal stampings, patent articles, novelties, manufactured and sold. Printing on aluminum. U. S. Novelty Co., Lily Dale, N. Y.
- Inquiry No. 6758.**—For manufacturers of lumber tramways and cableways for timber.
- Engineer having first-class Chicago office desires to represent manufacturers. Address Representative, Box 773, N. Y.
- Inquiry No. 6759.**—For manufacturers of presses for molding popcorn.
- WANTED.—An engineer experienced in the design, construction and use of gasoline motors for automobiles. Address J. F., Box 773, New York.
- Inquiry No. 6760.**—For addresses of shingle and saw mills.
- WANTED.—Second-hand 10-inch Screw-Cutting Lathe—Fred Unser, Mineola, L. I.



HINTS TO CORRESPONDENTS.

Names and Address must accompany all letters or no attention will be paid thereto. This is for our information and not for publication. References to former articles or answers should give date of paper and page or number of question. Inquiries not answered in reasonable time should be repeated; correspondents will bear in mind that some answers require not a little research, and, though we endeavor to reply to all either by letter or in this department, each must take his turn. Buyers wishing to purchase any article not advertised in our columns will be furnished with addresses of houses manufacturing or carrying the same. Special Written Information on matters of personal rather than general interest cannot be expected without remuneration. Scientific American Supplements referred to may be had at the office. Price 10 cents each. Books referred to promptly supplied on receipt of price. Minerals sent for examination should be distinctly marked or labeled.

(9618) J. M. C. says: I am making an armature core, and after cutting out about one hundred disks, I thought that may be the iron (?) I am using is not free from steel. I send you three pieces. Examine them, and write me as soon as possible if they are all right. I have an equal number of all three grades cut. No one here can give me a decided answer as to their being strictly iron. Would it make so much difference if there was a little steel in them? The three are all species I can find here except tin. Is tin good for disks? A. Any one of the three pieces of sheet steel you send will answer for the armature core of a dynamo. The piece marked 3 is thinner and softer than the others and will be better, since more disks can be got into the same space. You cannot get sheet iron nowadays very easily. Steel has crowded it out of the market. As you may know, steel differs from iron in having a small per cent of carbon in it. It is iron with carbon, not a different substance.

(9619) J. H. M. asks: What is the real explanation for the fact that snakes, frogs, etc., are unable to exist on the "Emerald Isle"? Did they ever? A. The insular position of Ireland has doubtless protected it from the incursions of many pests, and among them the ones you specify. Perhaps if they were introduced they would overrun the land, as the Colorado beetle did our States a short time ago. It is a well-known fact that an island often has a flora and fauna peculiar to itself in many respects.

(9620) J. S. asks: If you shoot a bullet through a board with such force that it comes out the other side, which gets through the board first—the bullet or the hole that the bullet makes? I say that it is the bullet. Will you be so kind as to decide the question? A. If by "gets through the board" in this question is meant "entirely" through the board, then the hole gets through first, since the bullet is not entirely through the board until it has traveled its length after the hole is through the board. Its rear end must be clear of the hole before it is through the board. The hole is through the board when the tip of the bullet is seen at the surface of the board on its path through. If the phrase means that the bullet is through when its tip pierces the surface of the board, then hole and bullet come through the board at the same time.

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**How To Increase Your Business**

READ carefully, every week, the **Business and Personal Wants** column in the **Scientific American**

This week it will be found on page 330.

Some week you will be likely to find an inquiry for something that you manufacture or deal in. A prompt reply may bring an order.

Watch it Carefully

(9621) C. S. W. asks: It takes several years for light from the sun to reach the earth; the light we now see started from the sun years ago. If the sun's light were extinguished, would we continue to get sunlight for as long a time as it takes the light to reach the earth? On this theory, does an eclipse occur at the time we see it, or is it only the result that we see several years after the eclipse takes place? A. It requires 499 seconds for the light to come from the sun to the earth, and about one and one-third seconds to come from the moon to us. Hence, if the moon intercepts the light of the sun, we see the fact in one and one-third seconds after it happens. Whatever occurs on a distant star to affect its light, we see at such a time after it occurs as may be required for the light to pass over the space between us and that star. Anything that occurs on the sun is seen by us 8 minutes and 19 seconds after it occurs.

(9622) M. J. McC. asks: Does the part of a wagon wheel touching the ground while in motion stop while the other part of the outer rim revolve at the same velocity? I have heard this argued, but I confess I can't see how one part of the wheel could be in motion while the other was stationary. A. The part of the rim of a wagon wheel which is in contact with the ground is at rest while the rest of the wheel moves along in the direction in which the wagon is traveling, and the whole wheel moves around a line drawn through the center of the axle. Both statements are facts. We might add to this curiosity of motion that the top of the rim of the wheel moves forward in the direction in which the wagon is going twice as fast as the hub of the wheel moves. To understand the matter it is necessary to distinguish kinds of motion. The wheel has two certainly. It moves with a rolling motion over the earth; it rotates on its axle. Its motion of rotation as viewed by a fly which might be standing on one of the spokes is a continuous motion round and round, always repeating itself. The motion along the ground is of another kind. If a fly stood on the ground as the wheel passed by him, he would see a point of the rim come down to his side and stop. It would immediately begin to rise, and would go up high in the air only to descend again, and so on again and again. A point of a wheel in contact with the earth is not in motion with reference to the point of the earth on which it is pressing unless it is slipping backward, a condition which this case does not include. It is at rest therefore on the ground, but in motion around its hub or axle. Rest and motion are frequently relative. To some point a body may be at rest. To some other point it may be in motion. And it is sometimes quite puzzling to determine the rest and motion as it may be in reality. This is the case with some of the motions of the heavenly bodies. The motion of a wheel may be tested by taking a small circular disk and fastening a chalk crayon in a hole close to its edge. Then roll it along a fence in such a way that the chalk will mark a line on the boards. You will be interested in seeing its real path. You will see that it contains a point of rest. The curve traced by the crayon is called a cycloid.

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