

BRICK COMPRESSING MACHINE.

The constantly increasing demand for materials for fire-proof construction has recently directed much attention to the manufacture of pressed brick, and there seems to be little doubt that a well made, well burnt brick is the most thoroughly indestructible substance known. We extract from our contemporary *Iron* an illustration of a brick pressing machine recently invented by Mr. Henry Large, of London, Eng. The machine is to be driven by a steam engine or other prime motor in the usual way, by means of a belt and fast and loose pulleys on the shaft of the fly wheel. The belt is shifted by the fork and key handled sliding lever, as plainly shown, brought to the side of the machine where the attendant stands, so as to be readily accessible. On the shaft of the fly wheel there is also a small spur wheel, which drives the large one above, fixed on the second motion shaft. On the farther side of the large spur wheel there is a reciprocating cam, which actuates a horizontal bar by means of a stud pin. This horizontal bar is a bent lever, having on the end opposite the stud pin peculiar mechanism for working the compressing piston, the head of which is seen below the end cover. The large spur wheel carries on its front a friction cam roller on a stud axle, which actuates one of the arms of a double bent axial lever, the other arm being furnished at its lower extremity with a long friction roller for pressing forward the molds across the table under the compressing piston. On the right hand side is seen a second piston, for emptying the molds, by pressing the bricks down through a suitable aperture in the table, one at each stroke, on to a platen table, which forms the head of another piston seen below, which is raised by a weighted lever. The counter balance is not sufficient for the weight of a brick, so that the brick presses the piston down; and when it is removed by the attendant, the weighted lever again elevates the platen table to receive another brick. As the bent arm on the left hand side pushes the newly filled mold forward under the compressing piston, it at the same time pushes forward the mold with the newly pressed brick a stage towards the emptying piston (displacing the mold occupying that stage under the emptying piston) and the empty mold a stage forward; while a fourth piston, working horizontally, and actuated by a cam on the side of the large spur wheel, pushes the empty mold forward to be refilled.

In this way the machine works continuously, turning out from 5,000 to 6,000 concrete bricks daily, which are ready in three or four days for the builder, and fit for use; while the fire bricks and common clay bricks made thereby are turned out in a drier state than by the ordinary processes, and hence are sooner ready for the kiln, and at less expense.

These machines can be made for compressing two or more bricks at one and the same time by means of a corresponding number of compressing and emptying pistons.

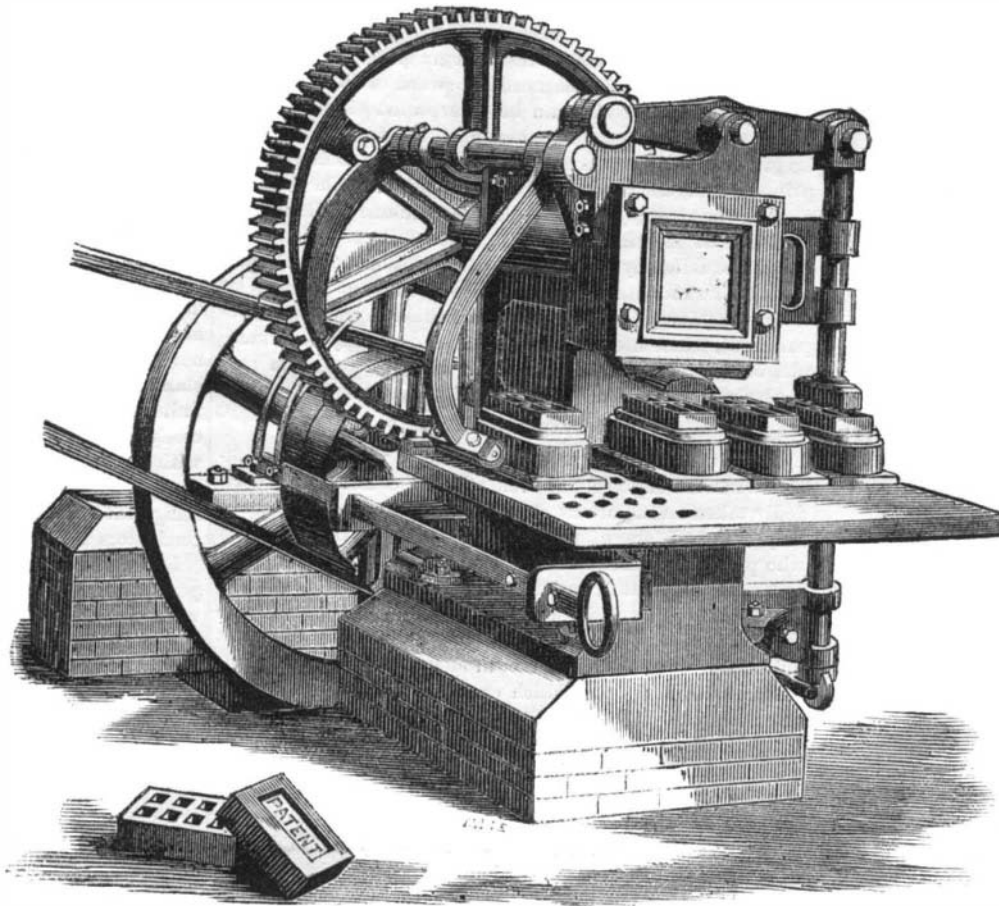
The machine does not require skilled labor to work it. It can be driven by a common farm engine, water wheel, or horse power, so that laborers experienced in such are qualified to control the whole. When burnt ballast and sand are at command, bricks can be made on the spot where the buildings are to be erected, and used, on an average, three or four days after they are made; at the same time, the older they are the stronger, and they can be made at all seasons of the year, as they require no drying or burning. For water tanks, liquid manure tanks, and all buildings under water, concrete bricks are much superior to common ones. They can be made of any color, for ornamental work, more successfully than can common bricks, and they can be made of any shape, and perfect in form, for plain, arched, groined, and cornice work. Such machines, therefore, are admirably adapted for use on landed estates for building purposes, as well as for general builders and contractors.

Dining Table of the Emperor of Russia.

One of our correspondents now travelling in Russia sends us a description of the novel dining table of the Emperor, now in use in one of the Peterhoff palaces, near St. Petersburg. The table is circular and is placed on a weighted platform. At the touch of a signal like the rub of Aladdin's lamp, down goes the table through the floor, and a new table, loaded with fresh dishes and supplies, rises in its place. But this is not all; each plate stands on a weighted disk, the table cloth being cut with circular openings, one for each plate. If a guest desires a change of plate, he touches a signal at his side, when, presto, his plate disappears and another rises. These mechanical dining tables render the presence of servants quite superfluous. In this country, at the Oneida community, they employ dining tables having the

central part made to revolve. Here the goblets, spoons, tea and coffee, castors, pitchers and other necessary articles of table furniture are placed; revolving the center piece, the sitter brings before him whatever article may be desired without the intervention of a special waiter. The Russians

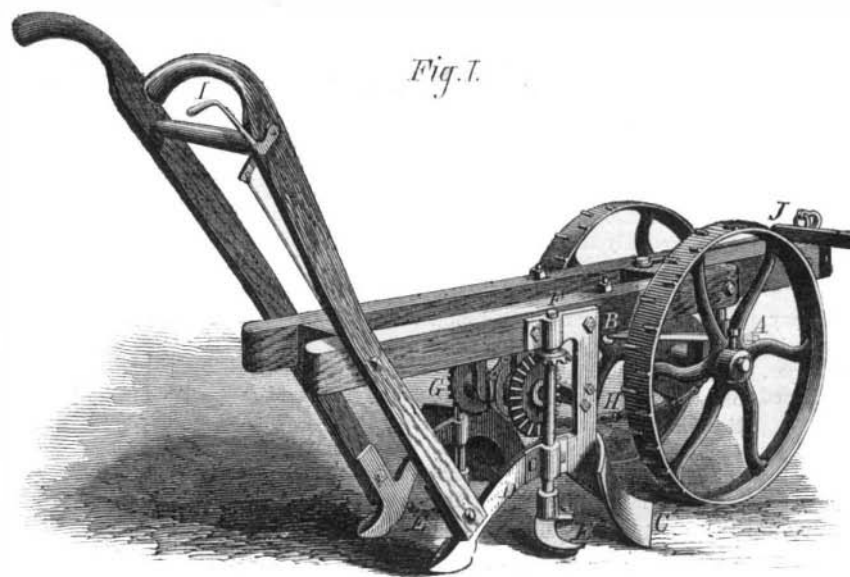
inches apart, a distance which may, by suitable means, be increased to fifteen inches. After chopping, the machine may be used as a cultivator. It is stated to be adjustable, in all its parts, simple, strong and durable, of light draft and easily guided.

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are evidently in advance of the Yankees in respect to dining tables.

THE DIAMOND COTTON CHOPPER AND CULTIVATOR.

The invention herewith illustrated, and the distinguishing title of which forms the heading of the present article, is a labor-saving implement, claimed to produce work superior to that done by the hoe in the first working of cotton. With one man and a horse, we are informed, it chops out

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cotton at regular intervals, scrapes and bars it on both sides, and effectually weeds it, at the same time throwing the soil loosely around the young plant for its protection. The hills of cotton are thus left in a diamond shape, about twelve

out injuring them, while the machine runs immediately over the row.

The device was patented through the Scientific American Patent Agency, July 8, 1873, to J. B. Underwood, but for a year past it has been the subject of careful trials, with, we are informed, complete success. A number of testimonials from farmers in the south bear witness to its efficiency and economy as a labor-saving machine. The patent is owned by the Diamond Cotton Chopper Company, to the Secretary of which, Mr. John W. Hinsdale, No. 2 Hay street, Fayetteville, N. C., letters for further information may be addressed.

To Our Subscribers.

Any of our readers who do not bind their volumes, and have copies of Nos. 4 and 6 of the current volume (July 26 and August 9), will much oblige us by forwarding such numbers to this office.

MINING PICKS.—A number of patents have been secured to present the miner with a pick with shifting points, says the *Mining Journal*, all of more or less merit, but none have come into any extended use; but if such a tool could be manufactured to meet the requirements of the miner for working hard ground, no doubt it would be a saving of time, material, and muscle, as the miner could take equivalent to a dozen picks in his pocket, each point not weighing over six ounces, which, being made of the best cast steel, would do good service.

