

Improved Double-edging Machine.

This machine is intended to be used in mills where large quantities of lumber require to be edged parallel, or split into parallel strips for flooring or fencing boards. Its construction and operation is such that much time and labor is saved by it, and lumber produced with neat and parallel edges. The machine is provided with two saws on one arbor; one of the saws, A (Fig. 2), is attached to a stationary collar, B (Fig. 1), and the other saw is attached to a sliding collar or sleeve, C, which is provided with a feather or key that fits in a groove running the length of the arbor between bearings. The saws are adjusted in an instant to any desired width by operating the hand lever, D, which moves the sleeve and saw, by means of the rod and lever, E; this operates a sliding arm, F (Fig. 2), under the front fluted roller, G. The lumber is fed through the machine by means of the several fluted rollers, and the press rollers, I, mounted on the roller caps or frames, J, which are jointed to the curved side plates of the cast frame, K. The press rollers can

be elevated or lowered at pleasure to suit any thickness of lumber by operating the long foot lever, L (Fig. 2), which carries or moves the two-branched lifting jack, M, on which rest the two frames before-mentioned. This arrangement always insures a parallel position of press rollers with the feed rollers. It is an important detail, as it produces an equal pressure on either edge of the board, thereby feeding the lumber through straight, which cannot be done where one end of the rollers is allowed to raise and fall independent of the other. The feed rollers are put in motion from a small belt pulley on the end of the saw arbor (Fig. 1), and the belt, N, which operates the small friction pinion attached to the belt pulley, O. This friction pinion runs between the two flanges on the large pulley, P, giving motion to the fluted feed rollers, G; motion is also imparted to the feed roller or pulley, Q, by the belt, R, driven by the large friction wheel, S. The pulley, O, is mounted on a rock shaft, T, and by operating the lever, U, the friction pinion on O is made to impinge either against the inside or outside friction rim, at pleasure. This arrangement admits of first feeding the lumber through to take off the edges of it, and then by operating the hand lever, U, re-

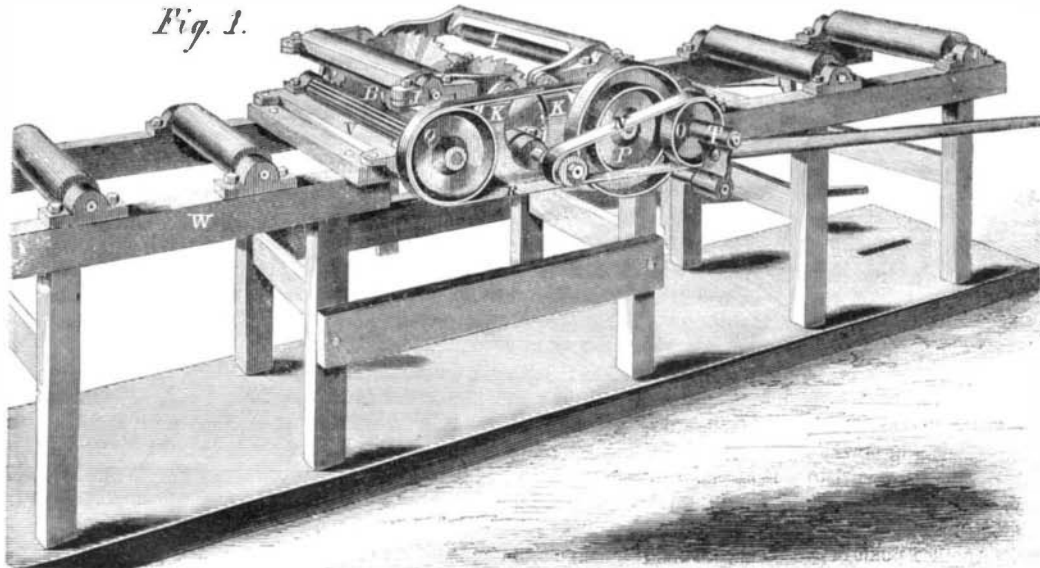
verses the motion of the feed rollers, and thus brings the lumber back again for a second operation of sawing into strips if required. All the working parts of the machine are neatly and substantially built of iron and mounted on the iron frame, O, which is simply bolted down to the wood frame or table, W. X is one of several wooden rollers which should be carefully adjusted into line with the iron-fluted rollers. This machine was patented Aug. 12, 1862; for further information address the patentees, Hayes & Newman, Unadilla, Otsego Co., N. Y.

WESTFIELD, Mass. has been for a long time famous for the extent of its whip manufactories. The business was commenced there twenty years ago and there are now forty-two factories.

WONDERFUL SKILL IN BILLIARDS.

Many curious illustrations of the composition and resolution of forces can be seen in the movements of ivory spheres on a billiard table. It is found that in the rebound of a ball from a plane, the angle of reflection is not always equal to the angle of incidence, but that the relation of these angles depends on a number of circumstances.

Fig. 1.

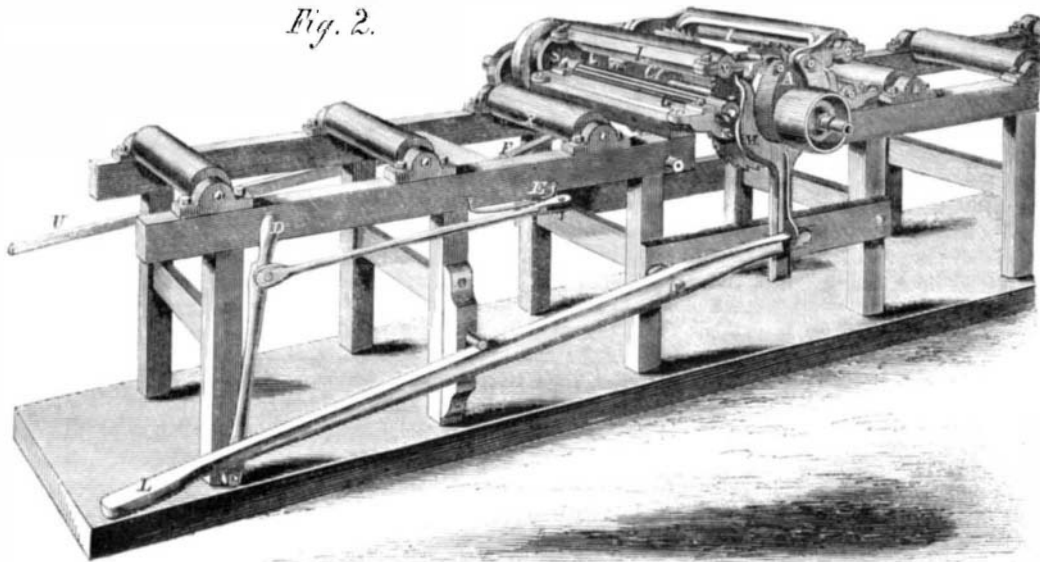
**HAYES & NEWMAN'S PARALLEL DOUBLE-EDGING MACHINE.**

On the evening of Tuesday, April 11th, several hundred persons, including a number of ladies, were gathered in the large hall of the Cooper Institute to witness a display of skill in billiards by M. Carme, who had recently arrived from France to enter the lists in contest with the eminent billiard players of this country.

The table used was a small carom, manufactured by Phelan & Collander for the occasion, having been commenced and completed on the same day of the exhibition.

Some of the shots made by the Professor, his *masse*

Fig. 2.



shots especially, were exceedingly well executed, and evinced remarkable skill; but for some reason he did not seem to possess that degree of confidence in the result of his endeavors which always characterized the celebrated Berger's playing, and consequently he was too much given to *misses* to make the entertainment in the highest degree enjoyable. The management was bad on the opening evening, but will no doubt be improved on subsequent occasions. On the cards of invitation it was stated that seats would be reserved for ladies, but on our arrival, a few minutes past 8 o'clock, we failed to discover any vacant ones, although the number of ladies present was not overwhelming. A challenge to play with any one in America was read at the close of the exhibition, but the specified conditions as to size of table, balls, etc.,

may not meet the approbation of our American players. We should like to see M. Carme play with Kavanagh the American game, on a full-sized Phelan table, and we hope an opportunity will be given New Yorkers to witness such a contest.

ARSENIC POISON.

An old and respected correspondent sends us this note:—

"It may do good to some of your many thousands of readers, to remind them that a teaspoonful of common copperas, dissolved in a small tumbler of water, with another teaspoonful of common magnesia added, and drank, is a perfect antidote to arsenic taken into the stomach. Of course it will not repair any damage already done to tissues, but it will almost instantly check and prevent further harm. I leave you to state, if you will, what the reaction in the stomach will be. I suppose physicians would recommend an emetic within half an hour."

The importance of the subject of this communication induces us to publish it, in the hope of drawing out the truth in relation to the remedy proposed. Oxide of iron is a well known antidote for arsenic poison. If magnesia is added to a solution of copperas, which is sulphate of iron, the copperas is decomposed, the sulphuric acid combining with the magnesia and the oxide of iron being set free. It might therefore seem plausible that the plan suggested would be effectual.

But the form in which arsenic is most commonly used is that of arsenious acid, As_2O_3 , and the antidote is the sesquioxide of iron, Fe_2O_3 .

The iron gives up a portion of its oxygen which combines with the arsenious acid, converting it into arsenic acid, As_2O_5 , and this combines with the iron, forming a sub-arsenate of the protoxide of iron, $4FeO, As_2O_5$. In the plan proposed by our correspondent we do not see where the oxygen is to come from to convert the arsenious into arsenic acid. There may be, however, some reaction between these substances of which we are ignorant. If R.H.A. or any other correspondent has facts which settle the question, we should be pleased to hear from him. With our present information we are more disposed to

caution people against trusting to this remedy than we are to recommend its use.

THE sewing-machine inventor, James E. A. Gibbs, who went South in an early stage of the rebellion, is said to have been the chief of the torpedo corps organized by the rebel authorities, and the efficiency of those infernal machines is attributed to his ingenuity and mechanical skill. He is a native of Pocahontas County, Virginia.

A. BABCOCK, Brunson Harbor, Mich., wishes to obtain hand looms and plantation spinning machines for farmers' use.

A THREE-CENT copper coin has been ordered, and by law to be a legal-tender, up to sixty cents.