

SCIENTIFIC AMERICAN

A WEEKLY JOURNAL OF PRACTICAL INFORMATION, ART, SCIENCE, MECHANICS, CHEMISTRY, AND MANUFACTURES

Vol. XX.—No. 3.
(NEW SERIES.)

NEW YORK JANUARY 16, 1869

\$3 per Annum
(IN ADVANCE.)

Improved Machinery for Planing and Molding Curved Forms.

In No. 24, Vol. XIX, SCIENTIFIC AMERICAN we illustrated and described two machines, manufactured by the Combination Molding and Planing Machine Company, designed to plane and cut moldings of straight or irregular forms with rapidity, exactness, and economy of material. In this number we present views of two other machines involving the same principles, and manufactured by the same concern, who claim to the proprietorship of no less than sixteen patents on wood working machinery. The one represented in Fig. 1 is called the Elliptical Molding Machine and is intended to "stick" or cut moldings of an elliptical, or oval, circular, or sinuous form. Its parts are simple and direct in operation; it is adapted to all thicknesses of stock and every variety of pattern. The cutter shaft is horizontal, and the projecting end in front is adapted to receive a number of cutters of different forms, which may be almost instantly adjusted to cut to any depth required. The work to be cut is held and guided firmly and accurately by means of feed and friction rollers in combination with vertical guides which keep the work down to the table by means of adjustable weights.

The engraving is so exact and clear in its details that a mere reference by letters to the principal parts will be sufficient for a proper understanding of the principle and the operation of the machine. The cutter shaft is driven from the pulley, A, on the horizontal shaft that receives power on the pulleys, B, one fast and the other loose. A belt from this shaft is received on a back intermediate shaft, C, from which a quarter turned belt is led on to an upright shaft, D, that in turn, by a similar belt, rotates a horizontal shaft under the working table. This shaft by means of a worm engaging with a gear on an upright shaft drives the feed roller which is set with spurs or teeth, that engage with a perforated metallic strap secured to the pattern on which the piece to be molded is fastened. This pattern with its piece is held to the feed roller by means of two friction rollers revolving on studs that are secured to a sliding piece in the table. They are held against the pattern by means of a weight, E, and can be disengaged instantly for the release of one piece of work and the reception of another by means of the lever, F. The handle, or crank, G, is used to raise or lower the table and its appurtenances by means of a worm, gear, pinion, and rack. The hand wheel, H, turns a screw that moves the head with the cutter shaft forward or back. The weights, I, serve to hold the work to the table, having on the lower end of their shafts horizontal guides for this purpose, which may be adjusted by means of nuts engaging with the threads on the upright shafts.

Fig. 2 represents the Universal Molding Machine, and is a combination of the Variety Molding Machine illustrated in No. 24, Vol. XIX, and the machine just described. It is intended to subserve the purposes of both these machines in establishments of limited capacity. The principles involved and the operations are the same as those of the other machines, except that it may be used with horizontal or vertical cutter shafts at will. The engraving shows one upright cutter head projecting above the main table, as in the Variety Molding Machine,

and another in a horizontal position, as in the Elliptical Machine. This latter cutter, can, however, be turned to an upright position and be made to perform the same work as the cutter head in the Variety Machine. The method of holding, guiding, and feeding the stock, of elevating, depressing, or adjusting laterally the table and cutter heads is the same as before described for the other machines, with this difference: that the working table corresponding to that of the Elliptical Machine is supported on an independent pedestal, so that when not in use, and the room it occupies may be wanted for

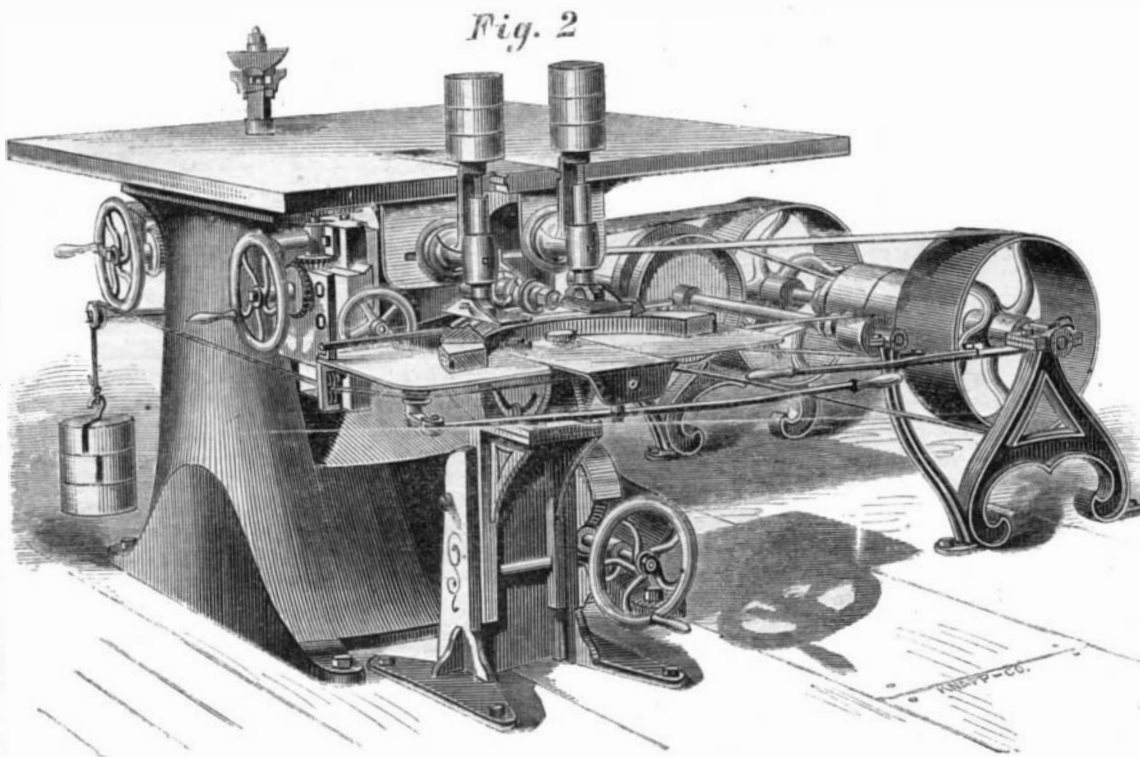
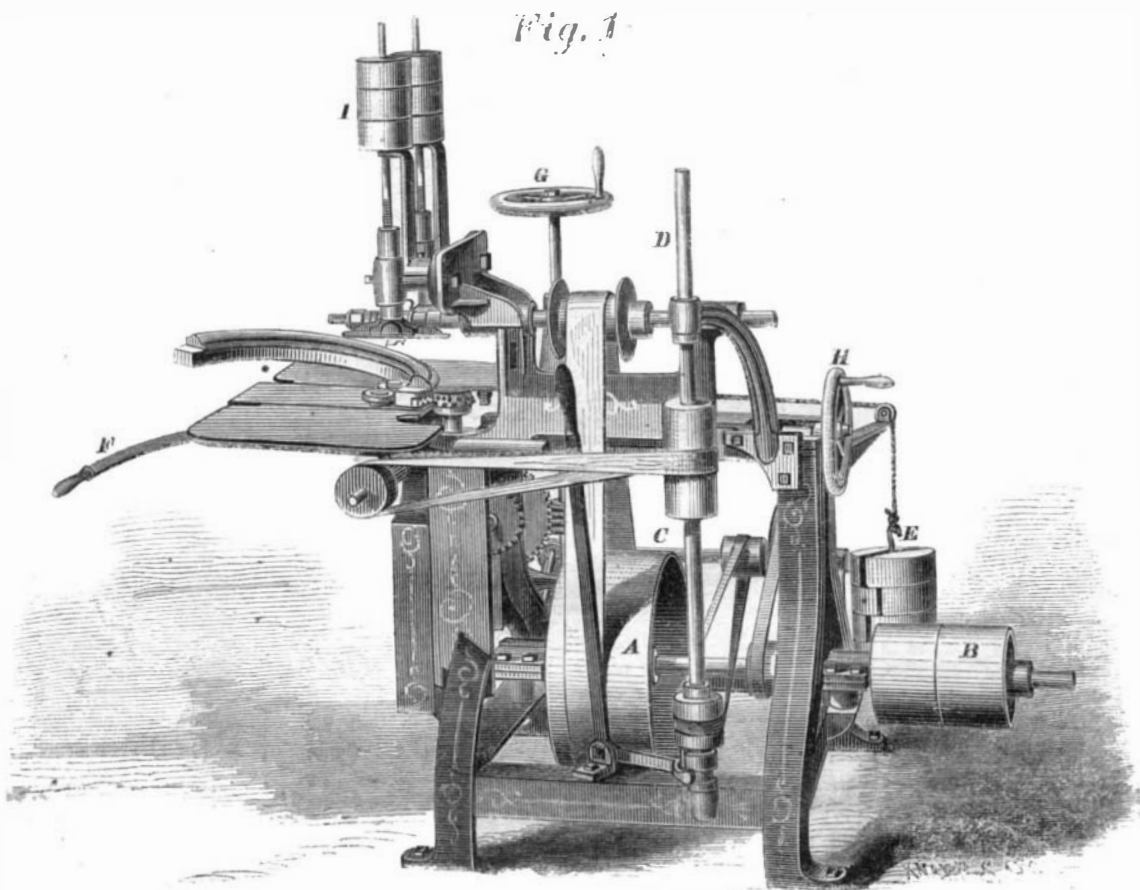
are manufactured by the Combination Molding and Planing Machine Company, who may be addressed at No. 424 East Twenty-third Street, New York.

THE EVILS OF PAINTING, AND THEIR REMEDY.

It has been said, and with much truth, too, that "House-painting might, with study, and acquirement of correct taste and more extensive information, resume its rank as a liberal art." There is no reason why it should not. It is an art, and should be recognized as such, and will be when the painter shall have sufficient interest to do something more for its elevation. It is at a low ebb at present; for, while the various other branches of the fine arts have their elaborate volumes of reference, and art journals of deep research and investigation, and latest discoveries and improvements, for the benefit of their artists, the house and sign painter and the grainer are left to their own resources, to catch what they may by individual experiment and the careful observation of their own mistakes.

Though America may boast of many excellent painters, who may not be excelled on the earth, yet they are almost lost amid the vast multitude of ordinary, indifferent, and miserable ones. The long apprenticeship and practice of the former seem almost thrown away, for they stand a very little better chance, in the aggregate of success, than others who have spent little or no time in the study of the business. A poor workman can and will work cheaper than a good one; and, consequently, competition comes into service, and the finished workmen are obliged to learn their trade more thoroughly, that is, learn the art of slighting, before they are able to cope with their competitors, and obtain, like them, an honest living. This spirit is caught up by the employer, and, in the rage to get everything cheap in this go-ahead age, the lowest bidder, without regard to quality, too often gets the job; so, many good and poor workmen naturally fall into that uncertain and unsubstantial manner of doing work that characterizes all the sham, slop-shop works of decorative art. It must be understood, however, that these remarks have only a limited reference, for there are both painters and employers who well understand these practices, and whose correct taste—and liberal pockets—keep them mindful of the purity of the art of decoration. And, in justice to the inferior workmen, it may be remarked that it is not so much a fault with them as it is a want of facilities for learning. There are no published books of any utility; and then painters are very chary of their knowledge, and do not like to impart it too freely.

There should be a remedy for this evil, and there can be. Painters should be more communicative, and not so tenacious of whatever superior method they may have acquired or discovered. It is quite a mistaken idea that one's business would be injured by discovering the secret of a superior method to his brother painter. If all this secret knowledge was more generally diffused among the craft, the benefit would be mutual. Knowledge should not be monopolized, but should be imparted to all alike, and all alike would be benefited. A better style of work would be the result of such a reciprocity, and better prices would be realized (which is a feature devoutly to be wished by a class of painters, who, as



ELLIPTICAL MOLDING MACHINE AND UNIVERSAL MOLDING MACHINE.

other purposes, it may be removed. This table can be elevated with its superincumbent work and parts by means of the hand wheel seen in front, a worm, gear, pinion, and rack. The support of the main table is a single casting, very strong, and so constructed as to allow plenty of room for the action of the belts, and yet give a very firm foundation. Letters of reference are deemed unnecessary in describing this machine.

These machines, together with the Crossvenor Saw Bench, illustrated and described in No. 3, Vol. XIX, form a set of tools with which all kinds of straight and curved moldings may be produced with a great saving of labor and time. They