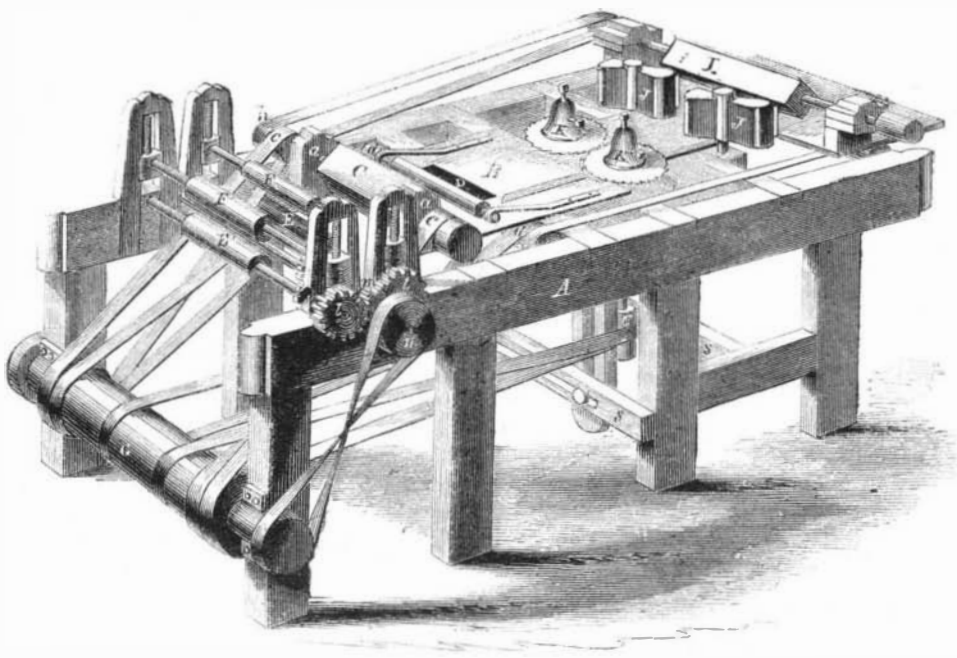
IMPROVED RE-SAWING MACHINE.

The frame, A, of this machine has a stationary bed, B, on the top of the main frame, and in a suitable place there is a rotary planer or cutter, C, having its bearings in two boxes, *a a*. There is an opening in B, in which another rotary cutter, D, is placed, and the "stuff" is fed to the cutters by the feed-rollers, E F, the roller, F, being capable of a vertical movement to accommodate the thickness of the stuff. The main driving-shaft, G, is placed in a convenient position, and by belts *c d* and *h*, motion is communicated to the upper operating parts of the machine; and belts from it also communicate motion to the pulleys, *e*, on the shafts of the vertical cutters in the machine, which are the saws, K, and cutters, J; I being a cutter operated by *h* at the back of the machine, and there is a cutter that operates through a groove in the frame like D at the back of I. The saws can be moved inwards or outwards, and the cutters, J, can also be adjusted by having their lower bearings attached to pieces that are connected with the slotted cross-trees, *s*. The feed-rollers receive motion through the gear wheels, *l l*, and the gear wheel, *m*, upon the same shaft as the wheel, *n*, that is operated by a belt from G. The plank is passed through the feed-rollers and through the first cutters, where it is smoothed off on both sides (the saws tongue and groove for flooring or ceiling, and the cutters, J, serve as jointers or matchers) and bring the stuff to the same breadth throughout its length. The cutter, I, and the cutter behind it may be used with either or both of them, as circumstances may require, for the purpose of bending or sticking moldings, or finishing strips for gothic houses. When the saws are used for re-sawing, the two saws enable them to be used thinner than one, and thus save power and wood. They can be placed at an angle to give a bevel to the edge of the stuff, as also can the cutters, J. From the manner in which the saws are arranged, there is no loss of time from filing the saws; but one, when dull, can be easily removed, and another, a sharp one, substituted in its place.

This machine is simple, cannot easily get out of order, and will do a large quantity of work, in a very superior manner. It commends itself especially to all who work on wood, or build structures with that material. The inventor, A. C. Ross, of Almont, Mich., will be happy to give any information concerning the invention. The patent is dated May 31, 1859.

ROSS' RE-SAWING MACHINE.

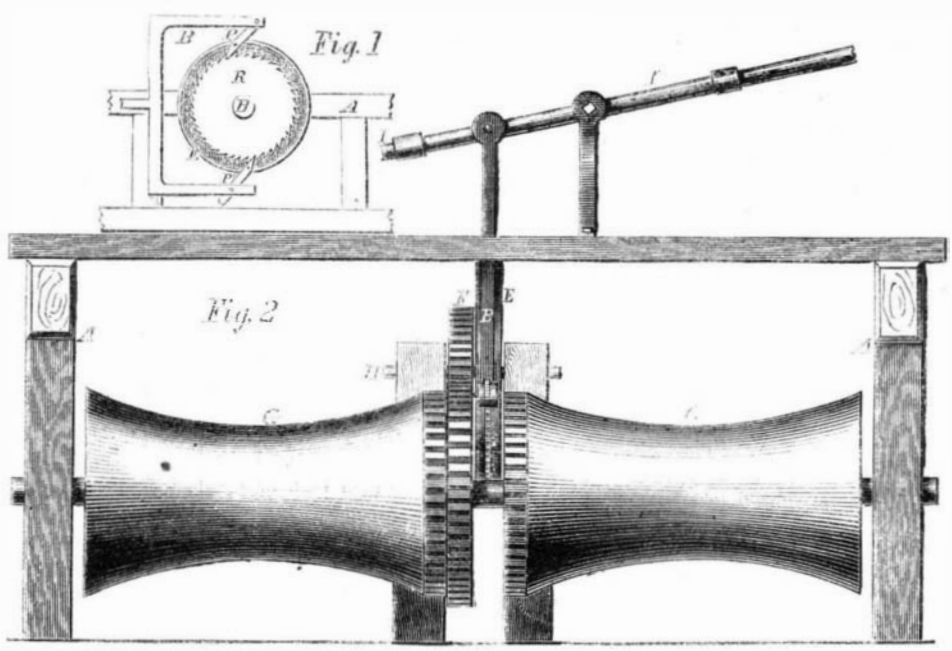


IMITATING MARBLE.

Variegated marble may be imitated in all the rich colored veins for which some species of it are distinguished. For this purpose a polished block of marble to be treated is first warmed in an appropriate oven to open its pores, after which the colors are applied. These consist of an alcoholic solution of alkanet root, to produce a rich lavender, a madder lake to make a crimson, indigo to produce a blue, verdigris green and gamboge yellow. They are put on according to the fancy and taste of the artist, so as to form the desired pattern, after which the marble is again raised in temperature to make it absorb the colors, then cooled gradually and afterwards rubbed down to a smooth face with pumice stone and water. The principle of operation is similar to that of staining wood to imitate the rich qualities of mahogany, walnut, satin and rosewood.

IMPROVED ROTARY MOVEMENT.

There are many devices for changing reciprocating into rotary motion, some very complicated and some very simple. To the latter class belongs the subject of our illustration which shows the invention of W. Howard Mitchell, of San Francisco, Cal.



MITCHELLS' ROTARY MOVEMENT.

Fig. 1 is a diagram of all the parts of the invention. A is a frame across which a shaft, H, is placed, carrying a ratchet wheel, R, that is provided with a flanged casing, E, on each side. Between these flanges, on each side of the periphery of the ratchet wheel, are two inclined reversed pawls or catcher, P and P′, jointed to the flanges by pins, and also attached to two horizontally-moving arms, B, which are connected at the back, and both move simultaneously and together. The power is applied to these arms, and as the pawls are continually coming in contact with the teeth of the wheel in reverse directions, the reciprocating motion of the bars is changed to a constant rotary one of the wheel, E, and shaft, H. The pawls detach themselves and are not liable to catch, but the whole (judging from the model we have examined) operates smoothly and efficiently.

Fig. 2 shows the invention applied to a windlass, A, being the framing, and B, the arms; on the shaft, H, a cog wheel, F, is placed, and this geers with another cog wheel on the shaft of the drums of the windlass, G. It can be rotated by the up-and-down motion of the levers, I, which may be of any length and the power of the windlass proportionally increased. For ships' use the invention as will be seen is very compact and easily operated, and can be operated the same whether the arms, B, are in a vertical, horizontal or inclined position.

The patent is dated Aug. 16, 1857, and the inventor may be addressed for further information at No. 27 Bleecker-street, New York City.

SUGGESTIONS TO INVENTORS.—A correspondent, writing from Belleville, Ind., who has had good success as an inventor, sends us a letter of suggestions to inventors in regard to the best mode of proceeding when they wish to effect any particular improvement. Two of these suggestions are valuable. The first is to keep alive a large faith in the resources of invention. In regard to this point, the writer's says that, "fifty years ago, my father remarked that he thought that he would turn his attention to inventing, but it seemed as if *they had got everything about perfect!*" Since that time every art has been revolutionized by inventions; and, as the number is increasing every year, there is no doubt that the next 50 years will see a much greater advance in improvement than even the last 50. The second suggestion is, that inventors, before spending time or money, should ascertain what has already been done in the matter under consideration. This is important. One of the most curious among the many curious things connected with inventions, is the great number of times that the same thing is invented, over and over again, by different minds. Men make costly models, sometimes still more costly experiments, and then learn that the same field has been gone over before.

EXAMINATION OF INVENTIONS.—It is important for inventors, so far as possible, to determine upon the probable novelty of their inventions previous to incurring the expense of an application for a patent. Messrs. MUNN & CO., publishers of this journal, are able to offer the best possible facilities for this purpose. United to their own experience of fourteen years in the examination of inventions, they make preliminary examinations (through their branch office in Washington) at the Patent Office, into the novelty of supposed improvements, for which service a fee of $5 is charged. For an opinion without this Patent Office research, no charge is made. All they need is a plain pencil sketch and description.