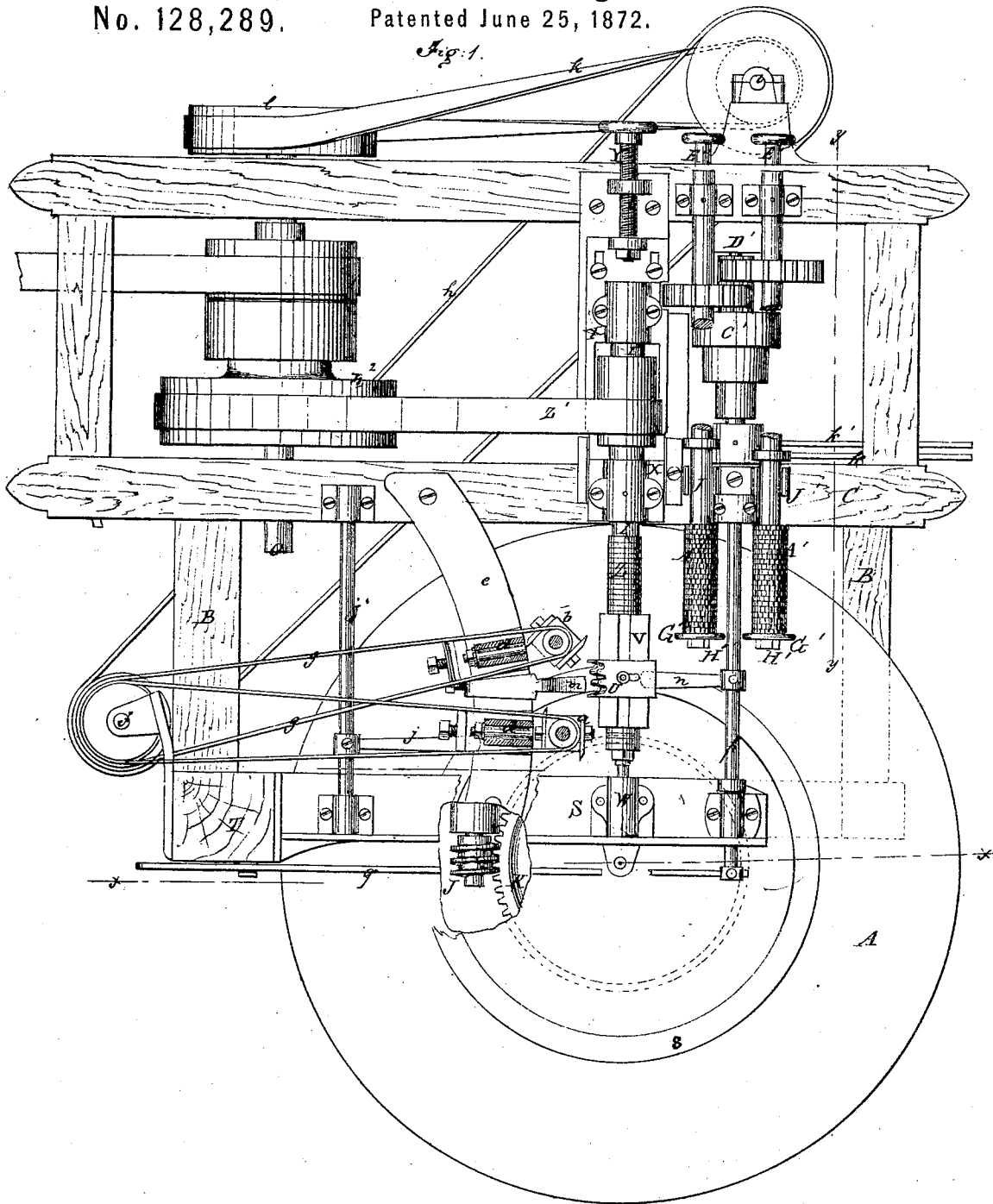


J. S. DEWING.
Improvement in Molding-Machines.
No. 128,289. Patented June 25, 1872.



Witnesses:

Chas. Viola
Geo. W. Mabee

Inventor:

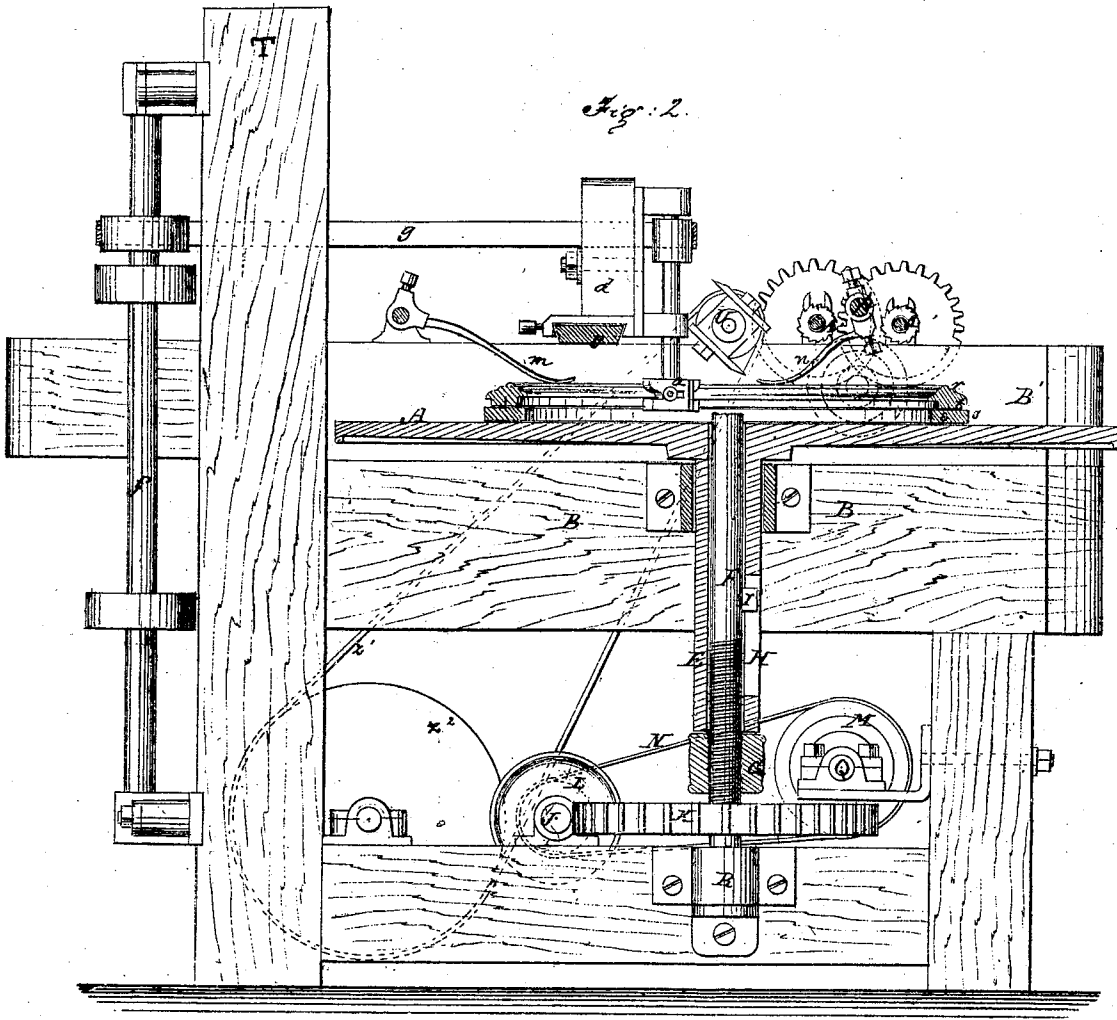
J. S. Dewing
PER *Munn & Co*
Attorneys.

J. S. DEWING.

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Witnesses:

Chas. Nida
Geo. W. Mabee

Inventor:

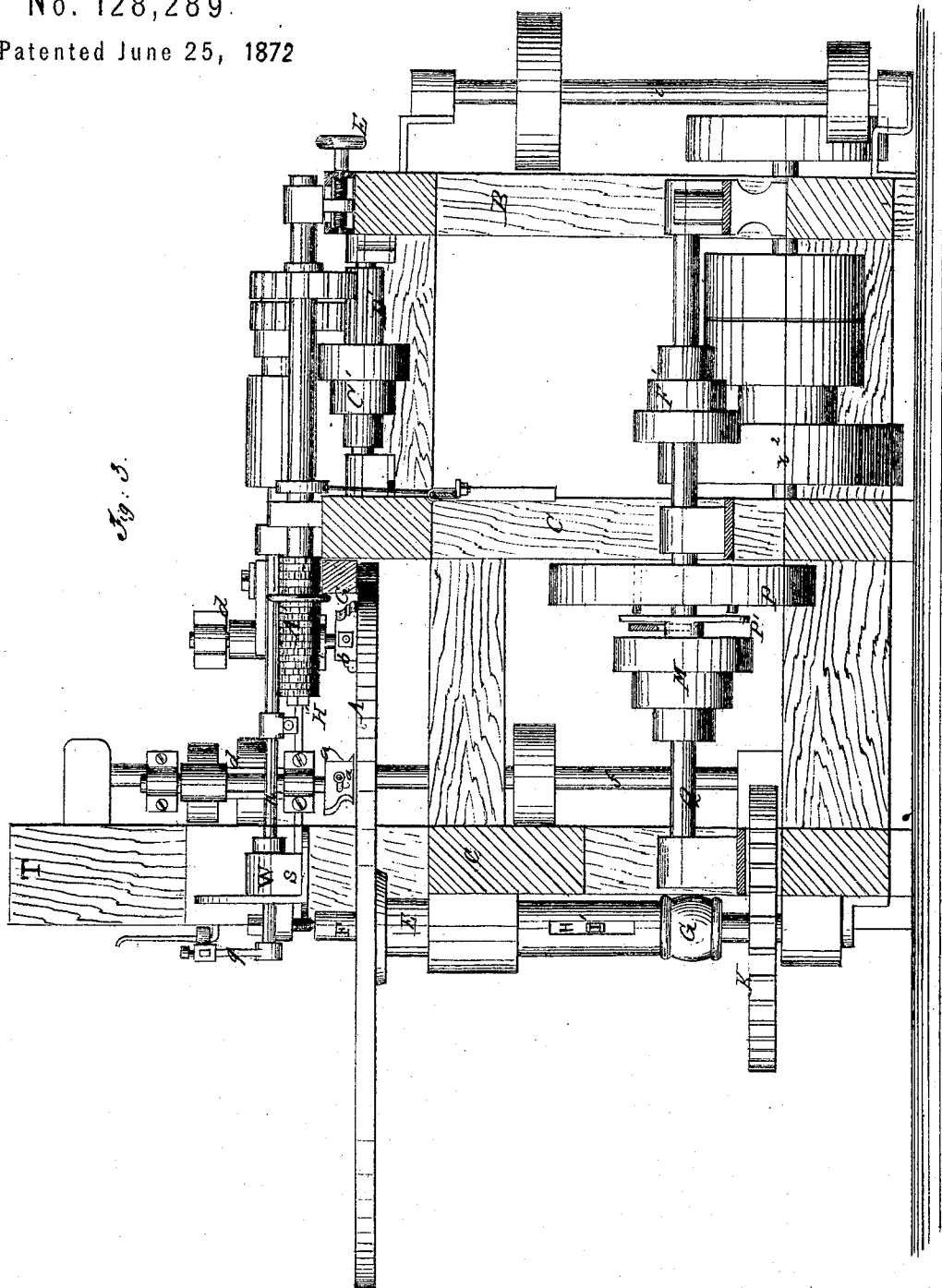
J. S. Dewing
PER *Mumford*
Attorneys.

J. S. DEWING.

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Witnesses:

Chas. Nida
Geo. W. Mabee

Inventor:

J. S. Dewing
PER *Wm. H. B.*
Attorneys.

UNITED STATES PATENT OFFICE.

JAMES S. DEWING, OF ORANGE, MASSACHUSETTS.

IMPROVEMENT IN MOLDING-MACHINES.

Specification forming part of Letters Patent No. 128,289, dated June 25, 1872.

Specification describing a new and Improved Machine for Cutting Moldings, invented by JAMES S. DEWING, of Orange, in the county of Franklin and State of Massachusetts.

The invention will first be described in connection with all that is necessary to a full understanding thereof and then clearly pointed out in the claim.

Figure 1 is a plan view, with some parts sectioned, of my improved machine. Fig. 2 is a sectional elevation taken on the line *xx* of Fig. 1, and Fig. 3 is a sectional elevation taken on the line *yy* of Fig. 1.

A is a circular horizontal table, supported above and at one side of a bench or frame, B, on the opposite side of which is another frame, C, somewhat higher than said frame B, by a tubular projection, E, on the under side, fitted on a vertical shaft, F, above an adjusting-nut, G, and having a slot, H, in which a stud or key, I, fits to turn said table and allow it to be adjusted vertically by said nut. The shaft F and the table are revolved slowly to feed the work past the cutters by the wheel K and worm J, the latter being turned by cone-pulleys L M and belt N, and the pulleys M by the main driving-shaft O, whereon a small pulley will be placed for a belt, which will work on the pulley P on the shaft Q carrying said pulleys M. The lower end of shaft F rests in a step, R, and the upper one is supported by a long bracket, S, projecting above the table from the high post T of frame B. U is a top rotary cutter, on a horizontal spindle, I, mounted on frame C, overhanging table A, and in a radial line of said table with the end near the vertical axis of the table, supported in a bearing, W, on bracket S, and so arranged that it may slide in and out of said bearing for adjusting it lengthwise, for which its support X on frame C is arranged adjustably thereon and provided with an adjusting-screw, Y, which adjustment is designed for accurately setting the cutter U relatively to the work and the other cutters after being shifted for greater variation by shifting the rings or collars Z from side to side of it on the spindle I. This cutter is operated by the belt Z¹ and large drum Z², the latter being on the main driving-shaft O. *a* and *b* represent the rotary side cutters, arranged on vertical axes, for dressing each side of the circular piece, which is dressed on the top by

cutter U. These cutters are supported on holders *d*, having a dovetail base fitted on the curved horizontal bar *e* and held by set-screws, so that they may be adjusted toward or from the center of the table for pieces of large or small curves. This curved bar *e* is supported at one end on the top of frame C, and at the other on the bracket S, and its curve is struck from the axis of vertical shaft *f*, whereon the driving-pulleys for said cutters are mounted, and with which they are connected by belts *g*, and the said shaft is driven by a belt, *h*, operated by a pulley on shaft *i*, which is driven by belt *k*, pulley *l*, and the main shaft O. *m*, *n*, and *j* are spring-pressers for holding the work down. *m* is held on bar *e*, and is adjustable for the varying sizes of work. *n* is on a rock shaft, *p*, which has an arm, *q*, for applying pressure by a weight, and is adjustable on said rod. *j* is on a rock-shaft, *j'*. The segmental pieces *r* to be dressed are secured on the segmental holders *s* by studs or pins *t* projecting upward by driving them down with a mallet and carried around to the cutters, which, being properly adjusted beforehand, dress off the said pieces on three sides, as shown. A holder, *s*, is provided for each different-sized curve or circle on which the stuff is to be dressed, and it will be secured to the table in any approved way—say, by bolts screwing into it from the under side of the table. The holes in the table for said bolts will be arranged in true circles, so that the holder will be properly adjusted by the act of applying it, so that but little time will be lost in shifting from one size to another; but it is intended not to shift often, for large quantities of pieces will be turned out when the respective holders are applied and the cutters adjusted thereto.

It will be seen that by this plan the work can be turned in ogee form, or with grooves of any kind on the face; also with an undercut groove in the inside to receive the glass and the back at one operation, which cannot be done with the ordinary arrangement of two vertical cutters, one on the inside and one on the outside of the curve, or similar to *a* and *b* but shaped to work to the center of the top. The pieces are fastened down upon the holder and removed therefrom while the table is in motion; the finished pieces being taken off

after the holder has carried the said finished piece from the cutters, and the new blank put on while said holder is passing the attendant to the cutters again.

The arrangement of the table A with the frame C and rotary cutter U is purposely such that it may be readily adapted for planing or cutting straight moldings; also, simply by the application of feed-rollers A', to feed the work along on the top of table A, which, at this time, will be stationary, or may turn, if preferred, and by the side B' of frame C, said rollers being mounted on the top of frame C in advance of cutter-shaft I and overhanging the table A. These feed-rollers are geared with the cone-pulley shaft C' by a long pinion, D', to turn them both in the same direction and allow them to be adjusted endwise, for which they are arranged and provided with adjusting-screws E', and the cone-pulleys C' are driven by pulleys F' on the shaft Q and a belt. The object of adjusting these feed-rollers endwise is to utilize them for insuring the dressing of the upper surface of the work perpendicular to the vertical side by holding the latter firmly against wall B' of frame C by means of collars G', with which they are provided to lap the side opposite the one against B', and hold the work snugly against the said wall B'; the said collars being drawn against the work by the screws. The roughened portions of the feed-rollers are made up of rings held on by nuts H', which, being shifted from one side to the other of the collars, allow of adjusting the latter to wide or narrow stuff. The cutter U will be shifted up to face B' for cutting straight moldings. In doing this kind of work as well as the other the table A will be shifted vertically, for varying the thickness of the work,

which in both cases passes under the cutter U. Generally the table A will be stationary when cutting straight moldings, for which the cone-pulleys M that drive it are applied so as to run loose when unclutched from pulley P, by a lever, P'; but in case the stuff being worked does not feed well the table may turn also, being adjusted to have about the same surface speed that the rollers A' do, so that, together with the collars G, which act powerfully on the side of the stuff they hug against, and the roughened parts of the feed-rollers, the stuff will be efficiently fed to the cutter and with but very little friction.

The feed-rollers are capable of rising and falling in the boxes J' like ordinary feed-rollers, and they are provided with pressure-lever K' and weights for varying the pressure.

Having thus described my invention, I claim as new, and desire to secure by Letters Patent—

1. The combination, with a revolving table, A, of the horizontal cutter U and the vertical cutters a b, said cutters and table being adjustable, substantially as specified.

2. The combination of rotary table A provided with tubular extension E and vertical shaft F provided with stud I' and adjusting-nut G, substantially as and for the purpose set forth.

3. The adjustable feed-rolls having end collars G' G' and the wall B' in combination with the cutter U and table A, as described, for the purpose of planing straight work.

JAMES S. DEWING.

Witnesses:

R. D. CHASE,
A. KILBURN.