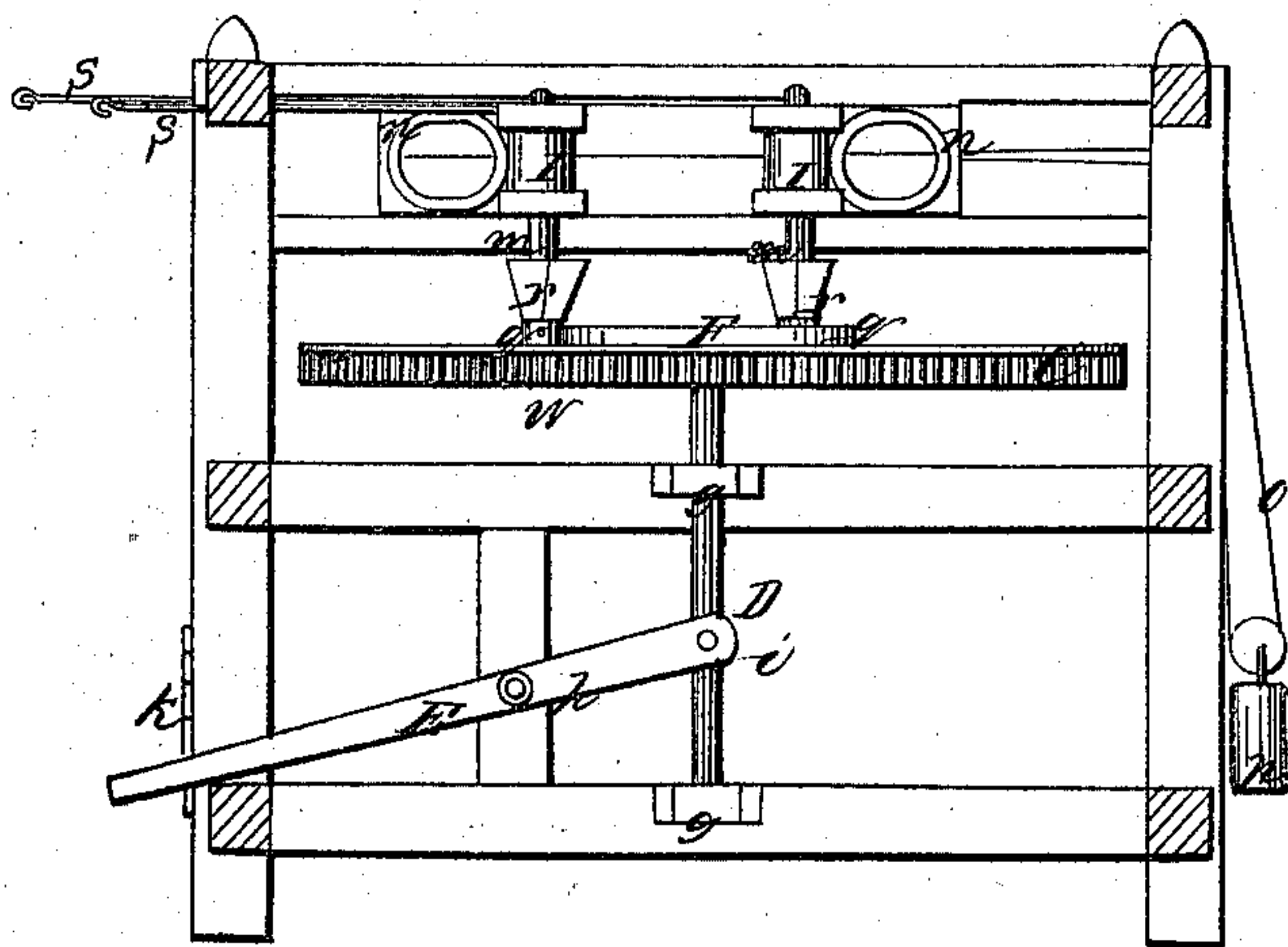
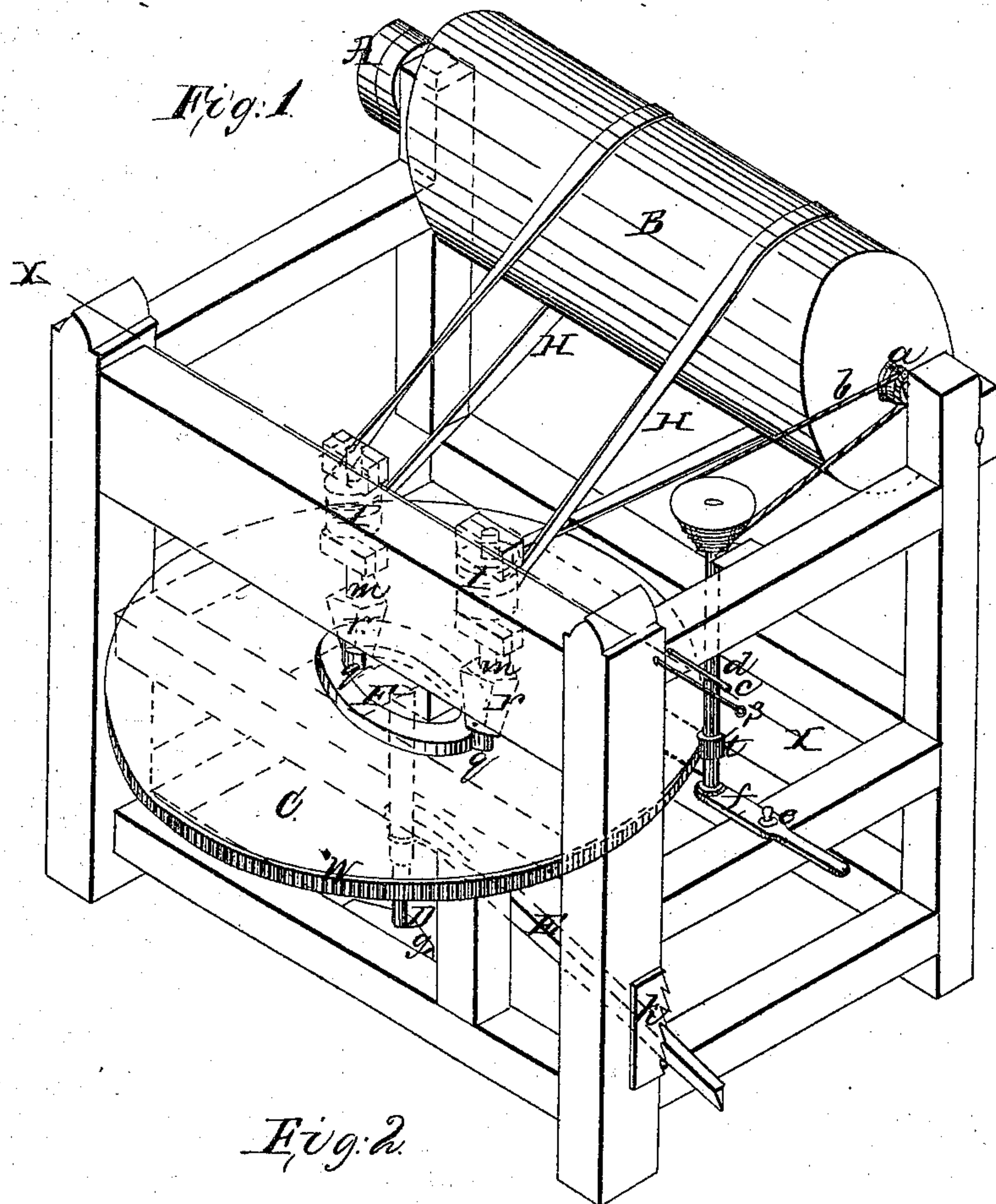


J. S. Barber,

Turning Draps.

N^o 12,884.

Patented May 15, 1855.



UNITED STATES PATENT OFFICE.

J. S. BARBER, OF BOSTON, MASSACHUSETTS, ASSIGNOR TO ROBT. J. MARCHER, OF BLOOMING GROVE, NEW YORK.

MACHINE FOR CUTTING IRREGULAR FORMS.

Specification forming part of Letters Patent No. 12,884, dated May 15, 1855; Reissued September 10, 1861, No. 1,226.

To all whom it may concern:

Be it known that I, J. S. BARBER, of Boston, in the county of Suffolk and State of Massachusetts, have invented a new and useful Machine for the Purpose of Turning Oval and other Forms, of which the following is a full, clear, and exact description, reference being had to the annexed drawings, making part of this specification, in which—

Figure 1 is an isometric view of my machine Fig. 2 a vertical section upon the line X X, the table C being shown in elevation.

Ovals for picture and looking glass frames have either been turned by hand upon an eccentric or elliptical lathe, or they have been formed by rotary cutters revolving in stationary bearings, the blanks being secured to suitably shaped forms or patterns and held up to the cutters by hand while the patterns are guided by bearing against the cutter shafts; both of these operations are slow and require to be performed by skilful hands.

The object of my invention is to perform this work by machinery which shall be entirely automatic and shall operate rapidly, and without requiring the care of a skilful attendant. For this purpose I employ rotary cutters to give to the oval the molding desired, the cutters which run in sliding boxes being kept up to their work by weighted cords or springs and guided so as to form the oval required by patterns in a manner which will now be described.

In the accompanying drawings the framework of the machine is indicated in red.

A are the fast and loose pulleys, to the shaft of which is secured the driving drum B, and also the pulley *a*, from which through the band *b* motion is communicated to the vertical shaft *d*; this shaft is stepped into the lever *f*, pivoted at *e*.

C is a horizontal table or disk secured to the shaft D, which slides freely up and down in the boxes *g* in which it runs.

E is a lever pivoted to the framework at *h*, and to the shaft D by a pin at *i*. Thus by means of the lever E the table C may be

raised or lowered. The lever E is secured in position by being caught in the teeth *k*.

m are cutter shafts which run in carriages *n*, which are allowed to slide freely in the framework and are drawn constantly in one direction by the cord *o*, and weight *p*. To the center of the table C, is secured the pattern F, and to the extremity of the cutter shafts *m* are secured the rollers *q* which bear upon the pattern F, one upon its interior and the other upon its exterior, the rollers being kept constantly in contact with the pattern by the weight *p*, as before explained.

r are molding cutters secured to the shafts *m* of the exact form required to give the desired section to the oval.

s are rods secured to the sliding carriages *n*, by means of which the cutters are moved away from their work when required. The cutters are caused to revolve by the bands H from the driving drum B, which give motion to the pulleys I upon the cutter shaft *m*. A slow motion is communicated to the table C by the pinion *t*, which engages with the teeth *w* upon its periphery.

Operation: The pinion *t* is thrown out of gear with the table C, by moving the lever *f*, the table is then dropped by releasing the lever E from the notches *k*, a blank of the general form of the pattern F is then secured to this pattern, so that as the rollers *q* bear upon the periphery of the pattern, the cutters *r* shall operate upon the blank; the table is now raised by depressing the lever E, and the pinion *t* is thrown into gear with the teeth *w*; the blank is thus slowly rotated while the cutters *r* are operating upon it, and thus by a single revolution of the table C the oval is completed, having a general form in section corresponding to the cutters *r*, one of which forms the outside of the molding, and the other the inside.

It is evident that other forms or figures may be cut upon this machine as well as ovals, such as squares, circles or polygonal figures, a separate pattern being required however for every different figure to be cut; these patterns may be made of hard wood or of metal.

I do not claim the revolving cutters with rollers upon their shafts when the latter revolve in fixed bearings. Neither do I claim the forms or patterns to which the blanks 5 are secured; but

What I do claim as my invention and desire to secure by Letters Patent is—

The within described machine for turning ovals, consisting essentially of the slid-

ing cutters *r* in combination with the table 10 C, and pattern F, connected together and operating in the manner substantially as herein set forth.

JED. S. BARBER.

Witnesses:

CONSTANCE BROWN,
SAM. COOPER.

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