

J. W. D. FIFIELD.

MACHINE FOR MAKING CRIMPING FORMS.

No. 301,581.

Patented July 8, 1884.

Fig:1.

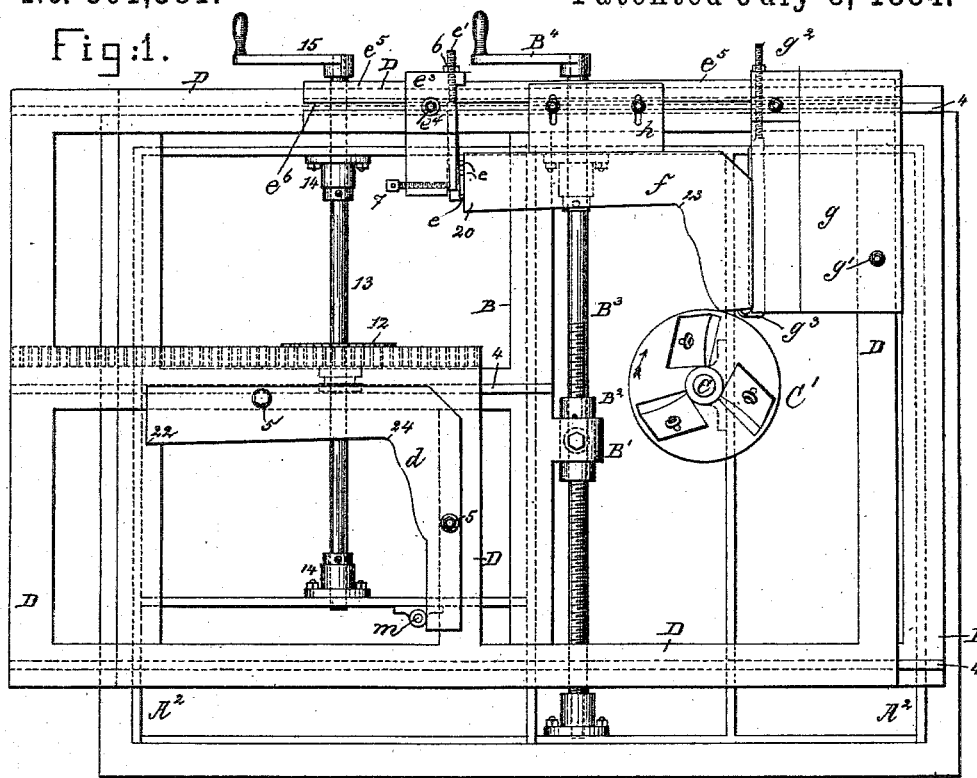
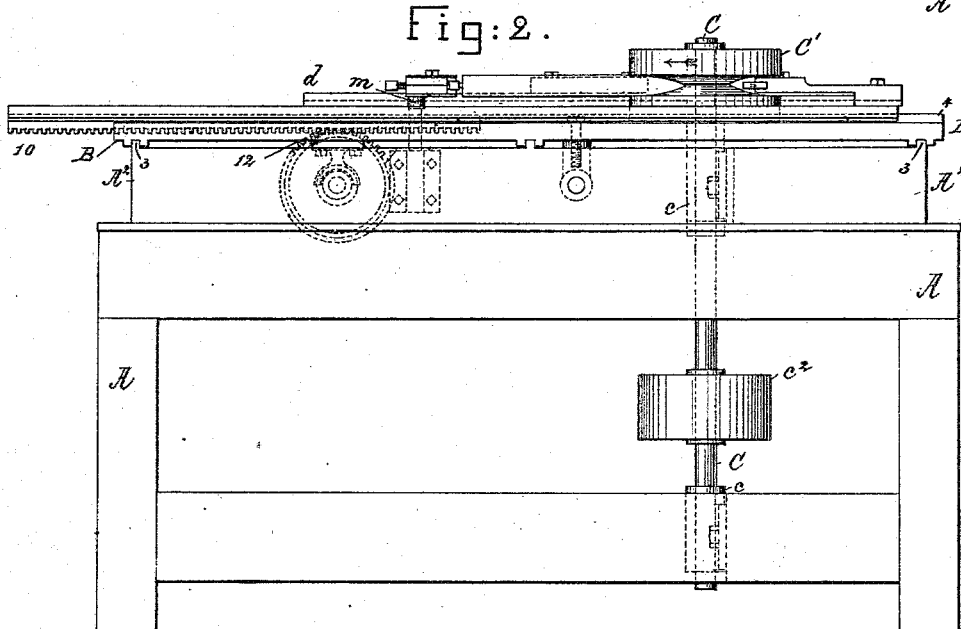


Fig:2.



Witnesses.

Arthur Apperlen.
Henry March.

Inventor.

John W. D. Fifield.
by Crosby & Gregory, Attys.

(No Model.)

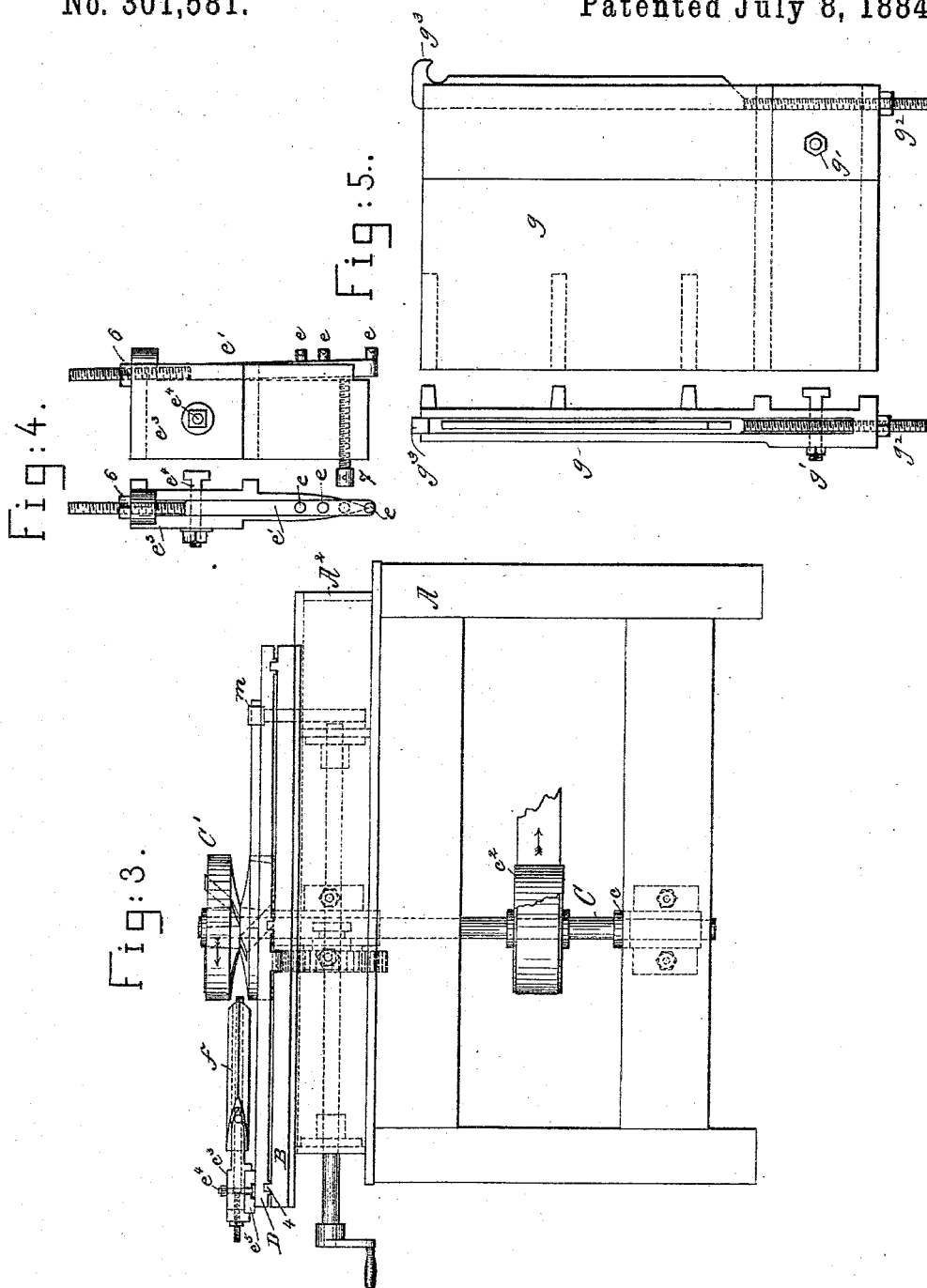
2 Sheets—Sheet 2.

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UNITED STATES PATENT OFFICE.

JOHN W. D. FIFIELD, OF NORTH BROOKFIELD, ASSIGNOR OF ONE-HALF TO
ALFRED H. BATCHELLER, OF BOSTON, MASSACHUSETTS.

MACHINE FOR MAKING CRIMPING-FORMS.

SPECIFICATION forming part of Letters Patent No. 301,581, dated July 8, 1884.

Application filed February 18, 1884. (No model.)

To all whom it may concern:

Be it known that I, JOHN W. D. FIFIELD, of North Brookfield, county of Worcester, State of Massachusetts, have invented an Improvement in Machines for Making Crimping-Forms, of which the following description, in connection with the accompanying drawings, is a specification, like letters on the drawings representing like parts.

This invention relates to that class of machine represented in United States Letters Patent No. 281,856, granted to me July 24, 1883, to which reference may be had, and has for its object the production of a machine containing fewer parts, and in which the sliding frames are adapted to be moved by hand, each independently of the other, in a very simple manner.

The particular features in which my invention consists will be hereinafter described, and specifically pointed out in the claims at the end of this specification.

Referring to the drawings, Figure 1 represents a top or plan view of my improved machine, the crimping-form being supposed to have been operated upon by the cutter-head and reduced or shaped to conform to the pattern; Fig. 2, a side elevation of Fig. 1; Fig. 3, a left-hand end view of Fig. 1; Fig. 4, enlarged details of the clamp to hold the leg end of the form, and Fig. 5 enlarged details of the clamp for the foot of the form.

The frame-work A, of proper shape to receive the working parts, to be described, has at its top a track, A², having, as herein shown, a projection, 3, which receives upon it and guides the base slide or frame B, provided with a track, 4, upon which the pattern and form-carrying slide D is made movable at right angles to the movement of the base-slide on the track A². The shaft C, carrying the cutter-head C', substantially such as in my said patent, has its bearings in stationary boxes c c, attached to the frame-work A, and is rotated by a belt upon the belt-pulley c², and the two frames referred to are so operated in unison, or one upon the other, as will be hereinafter described, as to present the wood to be cut, no matter what may be its particular outline, directly to the said cutter-head. A

cross-bar of the base slide or frame B has an ear, B', that receives a swiveled nut, B², which is entered by the screw-shaft B³, provided with handle B⁴, and held near its ends in suitable bearings connected with the frame A, so that the said shaft B³ may be rotated, but will not move longitudinally, and consequently as the shaft B³ is rotated in one or the other direction the base slide or frame B will be correspondingly moved in one or the other direction, and at a speed more or less rapid, according to the work being done. The slide-frame D, mounted on suitable tracks, 4, of the slide B, has attached to it by screws 5 the pattern d, and to another part of the said frame D, by devices to be described, is attached in an adjustable manner the piece of wood to be cut or reduced by the cutter-head c' for the production of a boot or shoe crimping form, f. The leg part of the piece of wood to be made into a crimping-form, f, will be engaged by spurs e e of a spur bar or dog, e', held in a guide-block, e², attached by bolt e⁴ to a bar, e³, provided with a longitudinal L-shaped groove, in which is placed the head of the said bolt, as shown in Fig. 3, the said bar being secured to the slide-frame D, the said dog being adjustable on the block by the nut 6 on its threaded end, and by the screw 7, the latter forcing the spurs in the wood. The plate g, attached to the frame D by bolt g', is provided with a clamp-rod, g², having a suitable spur, g³, adapted to enter and hold the toe end of the piece of wood to be cut into shape for the form f. An adjustable plate, h, attached to the plate e³ by suitable screws, is adapted to rest against the rear side of the said piece of wood, as in Fig. 1, to brace the same between its ends when being acted upon by the cutter-head. The piece of wood to be made into a crimping-form will be sawed out into nearly the outline which it is to have when finished, and connected, as described, with the frame D, it will partake of the movements of the latter, and the edge of the said piece of wood will be presented to the cutter-head, and will be beveled, as usual, along the leg and foot part from end to end. The frame D has a connected rack, 10, which is engaged by a gear, 12, on a shaft, 13, having its bearings 14 fixed in a

stationary part of the frame-work, and provided with a suitable handle or crank, 15. The stationary part of the frame is provided with a guide, *m*, preferably a roller on a fixed stud. Rotation of the shaft 13 in one or the other direction correspondingly moves the frame D, and while partaking of these movements, or while stationary on the frame B, the latter may be moved in one or the other direction parallel with the shaft B³. When the cutter-head is to act and form and bevel the edge of the crimping-form, the frame D will be in such position with relation to the cutter-head C' as to enable the latter to act upon the piece of wood to be cut at its leg end, and substantially at the point 20, and the point 22 of the pattern *d* will then occupy a position against the guide *m*. The cutter-head having been started, the shaft 13 will be turned to move the pattern *d* away from the cutter-head, the pattern traveling with its edge against the guide *m* until the latter arrives at the point 24, at which time the cutter will have cut the form to the point 23. Thereafter both shafts 13 and B³ will be moved more or less, thus moving the two frames D B in such direction as to keep the foot-shaped edge of the pattern against the guide *m*, which movement will result in presenting the form *f* correctly to the cutter-head, the latter, as it finishes the form, passing from it, as shown in Fig. 1.

I have described the machine herein referred to as especially adapted to shape boot and shoe crimping forms; but I desire it to be understood that the described mechanism will cut a piece of wood to correspond in outline with that of the pattern *d*, whatever may be

its shape, as will be obvious to any worker of wood.

I claim—

1. The combination, substantially as shown and described, in a wood-molding machine, of the frame A, having transverset tracks, the base-slide B, mounted thereon and connected with a traversing screw, B³, the slide D, mounted on longitudinal rails on the base-slide, and movable by a rack and pinion lengthwise of said crosswise-moving frame, the pattern *d*, attached to the slide D, the guide-roller *m*, the clamping devices for holding the wood to be molded on three sides, and the fixed rotary cutter acting upon said wood as it is presented to it under the direction of the pattern and roller, as specified.

2. In a wood-molding machine, the combination, with the pattern and its slide or frame, the fixed rotary cutter, and the movable base-frame, of the wood-holding devices consisting of the bar *e*⁵ on the slide-frame, the bar *e*', provided with spurs to engage one end of the wood, the guide-block *e*³ for said bar, adjustably connected to the bar *e*⁵, the adjusting devices 6 7 for said bar, the clamp-rod *g*², provided with spur *g*³, to engage the other end of the wood, and the back bar, *h*, all substantially as shown and described.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

JOHN W. D. FIFIELD.

Witnesses:

G. W. GREGORY,
B. J. NOYES.