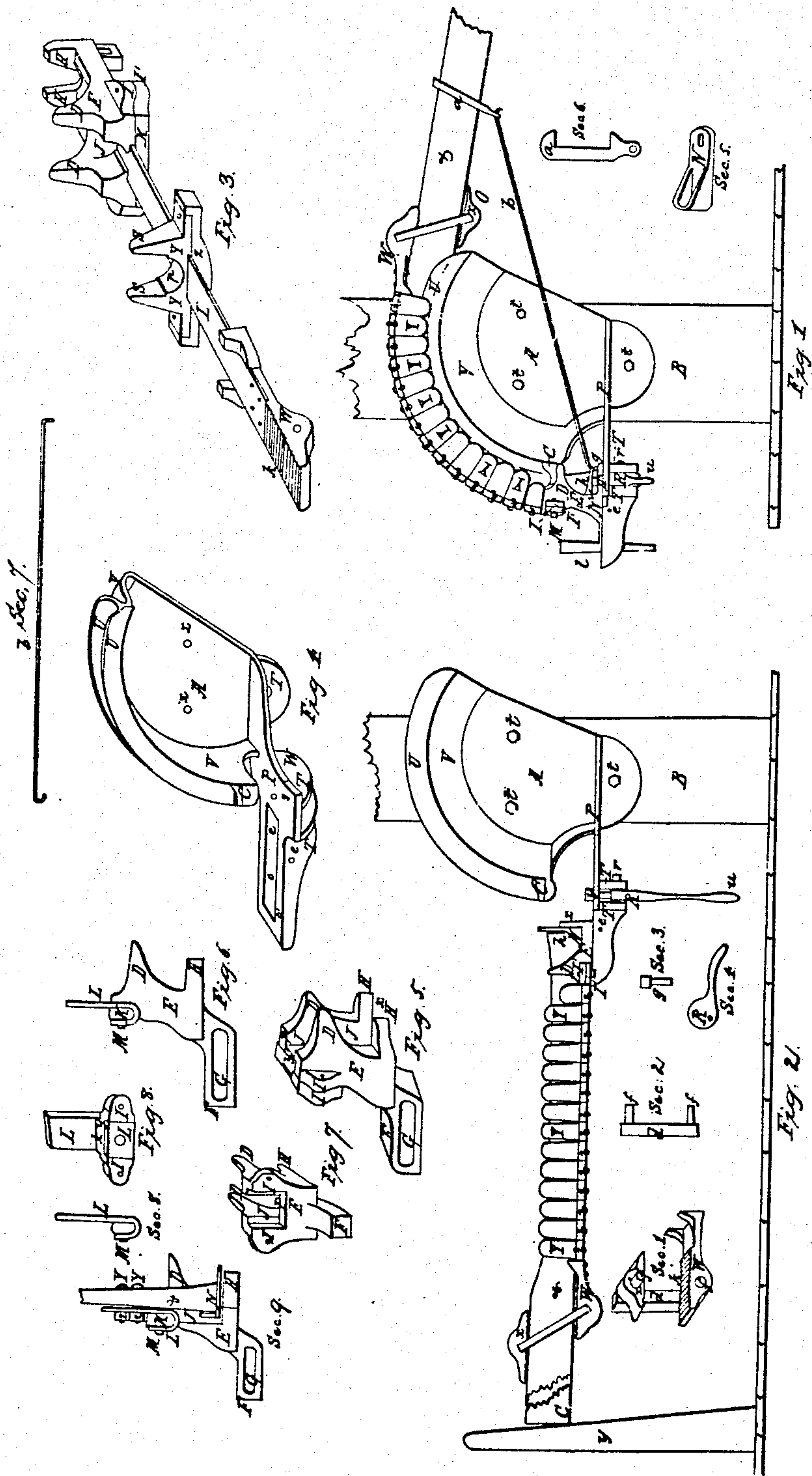


S. C. & E. O. FRINK.
WOOD BENDING MACHINE.

No. 68,621.

Patented Sept. 10, 1867.



United States Patent Office.

SAMUEL C. FRINK AND E. OTIS FRINK, OF INDIANAPOLIS, INDIANA.

Letters Patent No. 68,621, dated September 10, 1867.

IMPROVEMENT IN WOOD-BENDING MACHINES.

The Schedule referred to in these Letters Patent and making part of the same.

TO ALL WHOM IT MAY CONCERN:

Be it known that we, SAMUEL C. FRINK and E. OTIS FRINK, of Indianapolis, county of Marion, and State of Indiana, have invented certain new and useful Improvements in Machines for Bending Wood; and we hereby declare the following to be a full and exact description of the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon, making part of this specification, in which—

Figure 4 represents the former and the bed-plate of the machine.

Letters U U the former, P the bed-plate, A the back of the part that bolts to the part B. V V is the projection forward from the back A to the former U U, bringing the former opposite the slot O, thereby placing it in position to receive the spine, as represented at Y Z, figs. 1 and 2. T T represent the lugs, cast on the bottom of the bed-plate P in such a position as to receive the eccentric R, and pin g, sections 3 and 4, as represented in figs. 1 and 2 of the drawings, the pin g being placed in a perpendicular position under the end of the former, as represented by the hole s in the bed-plate P, fig. 4, and also in figs. 1 and 2, by the pin g. In the lugs T T is a hole, w, through which the eccentric R is fastened in its position by means of a bolt, as represented by r r, figs. 1 and 2. The holes t t t in the back plate A are to receive the bolts that fasten the machine to the part B, as represented in figs. 1 and 2. The holes e e in the slot O receive the bolt that fastens the base-piece E of the spine in its proper position on the machine, as represented in figs. 1 and 2.

Figure 5, E represents the base-piece of the spine. F is the slide that slides backward and forward in slot O, fig. 4. G represents the slot through which the bolt e passes, so as to confine the base to the bed-plate P when in a perpendicular position, as represented in fig. 1, and to let it slide backwards and take a horizontal position, as represented in fig. 2. D D are two projections, which catch under the ears C of the former when the base-plate is moved forward and wedged in its proper position, as represented in fig. 1 by letters E D C. H H represent the two projections that slide on each side of the pin g, thereby forming a base for the shoe N, section 5, to rest upon, and also leave an opening, x, so that the pin g has a chance to be elevated by the eccentric R, thereby taking up the slack between the double clutch or clamp X W, section 1, and the gib end of the handle as represented in fig. 1 by h. N the shoe, H the base-projection, g the pin, and R the eccentric, at the gib end of the handle, and by W X on the handle beyond the bend. J J represents the space between the projection D D to receive the handle and shoe N at the gib end h. K represents the back piece or clamp that holds the steel strap L in its proper position by means of bolts through the wings I I.

Figure 7 represents the back part of base-piece E, with the mortise P to receive the tenon or clamp y of the back piece K, as represented in fig. 5.

Figure 8 represents the back piece, with the strap L hooked on and secured in its position by means of the screw M. By securing the strap L in this position it protects the strap from breaking, and makes it perfectly secure. Section 8 gives a side view of the strap L hooked on to the back piece K, and secured in its position by screw M. Section 9 gives a sectional view of the base-piece E, with the projection D H, the mortise P, slot G, shoe N, back piece K, strap L, segment Z Y, and handle f, all in proper position. Section 1 represents the double clamp X W and dog d. The dog d is made of wrought iron, forged round and bent at each end, as represented by d and f f, section 2. On these ends is placed the serrated-faced clamp X W, W being pivoted to the opposite end of the strap L from that of the base-piece E. The whole, when in position, is represented by figs. 1, 2, and 8, the two clamps X and W being free to work on the prongs f f of the dog d. Section 2 forms a clamp when wood is placed between them that holds tighter the more strain the handle gives in bending, and does not slip after the slack is taken up by means of the pin g, shoe N, and eccentric R, as represented in fig. 1.

Figure 3 represents the base-piece E, the back piece K, strap L, one segment Y Z, and the serrated-faced clamp W. The segment Y Z is made of brass or malleable iron, and is made in two pieces Y and Z, with a slot between them of sufficient depth and breadth to receive the strap L freely. The semicircle p is made as near the strap L as possible and preserves the circle. This saves the handles from staving up too much on the outside, and also keeps the semicircle close to the back of the handle in bending, thereby preventing splitting or breaking of the wood. The projections S S are to act as guides on the edge of the former U U in bending the semicircle piece. Y is pivoted to the back piece Z, which stiffens it and thereby prevents it from breaking

at the thin part of the semicircle *p*. Section 7 represents the connecting-rod *b* between the shoe *N* and clamp *a*, section 6, after the handle is bent, as represented in fig. 1.

To enable others to use our machine in bending plough-handles or other wood, we will proceed to describe the process.

First, place the spine of segments *Y Z* in a horizontal position, as represented by fig. 2. Take the handle and place it in the semicircle segments with the shoe *N* at the base, and then shove the other end down against the inclined part *y*, fig. 2, so that the gib end *h* is brought tight against the shoe *N* on the base projection *II II*; then place the double clamp on the handle and throw it back on the top side as far as possible; next bring the handle, with spine of segments attached, to a perpendicular position, and slide them forward so that the projections *D D* slide under the ears *C*; then make it fast by pushing down the wedge *l*, fig. 1. Next, raise the eccentric *R* by means of the handle *u*, and the slack is taken out of the spine by the elevation of the pin *g* and the holding tight of the double clamp *W X*. Next use the handle as a lever, and bend down until it is in the position as shown in fig. 1. While in this position hook on the connecting-rod *b* to the shoe *N* and to the clamp *a*, and slide the clamp *a* as far as possible and let go of the handle. Next hit the clamp *X* on the side marked *O* with a mallet, when the clamp will be loosened. Take off the part *X* and *d*, and the strap is loose; then remove the wedge *l* and slide the spine *Y Z* back, and return it to its horizontal position, then take the handle that is bent out.

We do not claim the former. What we claim as our invention, and desire to secure by Letters Patent, is—

1. We claim the bed-plate *P* and former *U U*, when constructed as set forth.
2. We claim the pin *g*, the eccentric *R*, shoe *N*, and clamp *X d W*, when used for taking up the slack of the spine.
3. We claim the base-piece *E*, the back plate *K*, the clamp *X d W*, in combination with the strap *L*, substantially as described and set forth.
4. We claim the segments *Y Z*, when constructed as described, in combination with the strap *L*, substantially as set forth.
5. We do not claim a strap running outside the handle to be bent, but we do claim the shoe *N* and clamp *a*, in combination with the rod *b*, substantially as set forth and described, when used to hold the material in a bent position.

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Witnesses:

J. P. SOUTHARD,
H. A. MOORE.