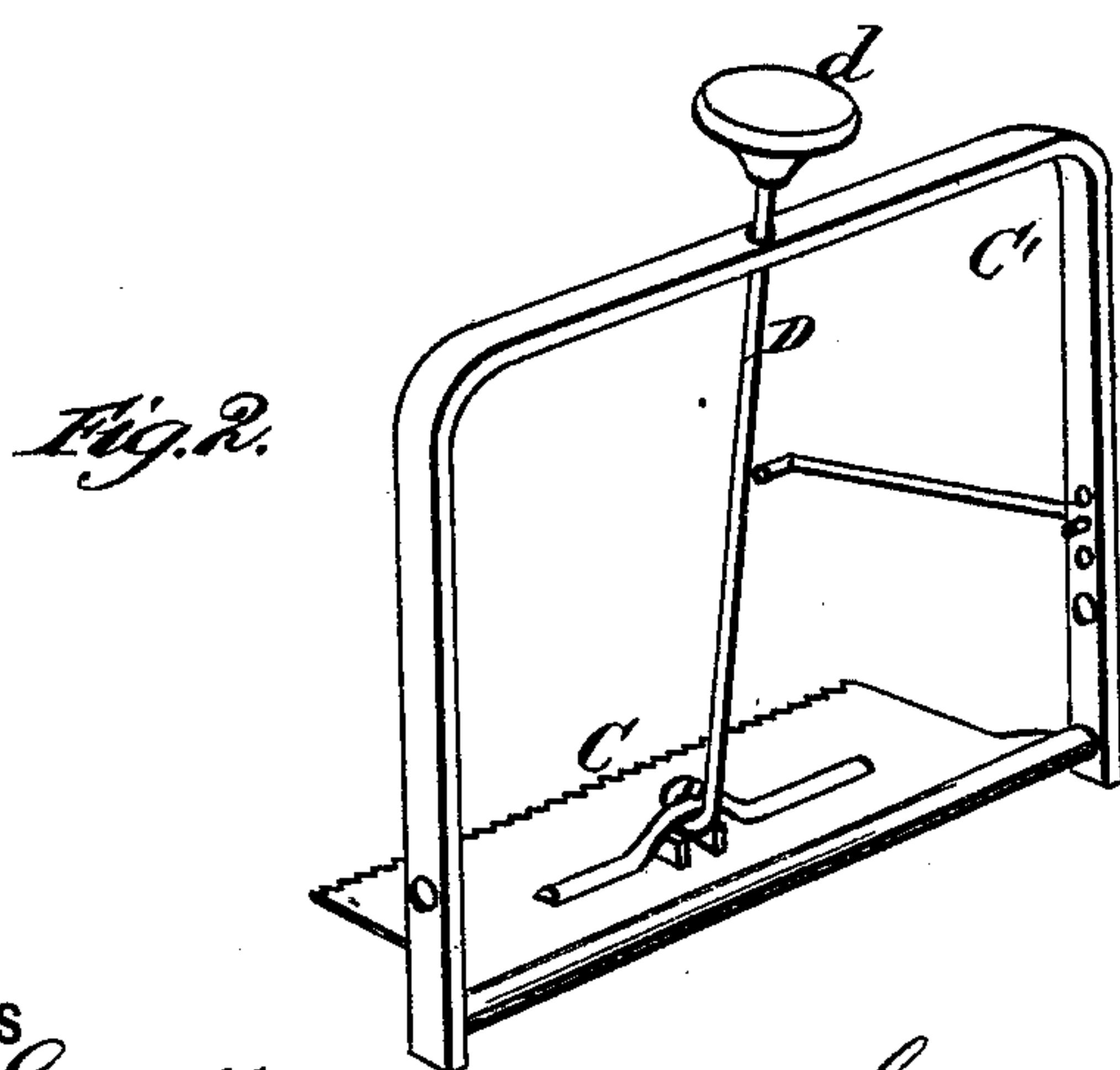
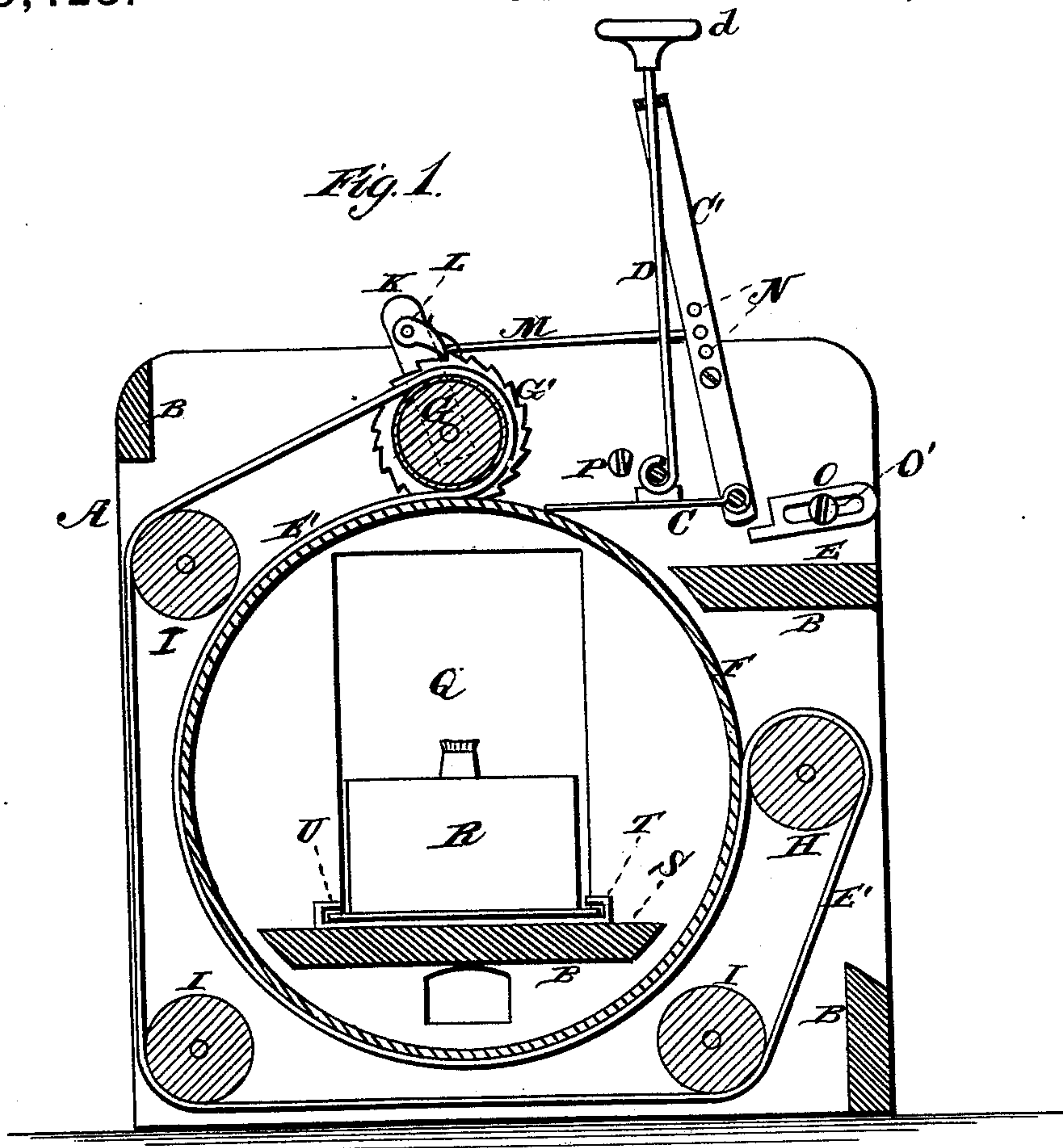


G. W. KENDALL.
Plaiting Machine.

No. 229,423.

Patented June 29, 1880.



WITNESSES
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UNITED STATES PATENT OFFICE.

GEORGE W. KENDALL, OF ST. ALBANS, VERMONT.

PLAITING-MACHINE.

SPECIFICATION forming part of Letters Patent No. 229,423, dated June 29, 1880.

Application filed January 3, 1880.

To all whom it may concern :

Be it known that I, GEORGE W. KENDALL, of St. Albans, in the county of Franklin and State of Vermont, have invented certain new and useful Improvements in Plaiting-Machines; and I do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the annexed drawings, making a part of this specification, and to the letters and figures of reference marked thereon.

Figure 1 of the drawings is a representation of a vertical transverse central section of my plaiting-machine, and Fig. 2 is a perspective view of the yoke-frame.

The main frame of my improved plaiting-machine is essentially composed of the two sides A, (only one of which is shown,) rigidly connected together by cross-bars B. The plaiting-knife C is hinged to the ends of a yoke-shaped frame, which, in turn, is pivoted to the sides of the main frame. The knife and its supporting yoke-frame C' have a common vibratory movement, while the knife has an independent oscillatory motion upon its hinged bearings, such movement being controlled by means of a rod, D, which passes through an opening in the top portion of the vibratory yoke, and is linked at its lower end to the knife. This rod is provided with a knob, d, at its upper end, by means of which it may be conveniently manipulated and the knife raised or lowered upon its hinged bearings. The yoke C' is pivoted in such position that the knife which it carries will be somewhat above the level of a shelf, E, and also nearer toward the center of the machine than the same, so as to rest upon a cylinder or drum, F, when it is not raised by the rod D. This drum is suspended within the main frame by means of an endless belt, E', which passes around a portion of the same and sustains it against an upper roller, G, the rotation of which causes the travel of the endless band and the consequent rotation of the drum. This endless band, which is composed of any suitable fabric, passes around the roller G at the top of the main frame, and also around a roller, H, which is journaled in the sides of the frame below the shelf E. After passing around the rollers G and H and that portion of the cylinder-face which is intermediate of

the said two rollers, the belt passes around three rollers, I I, which are journaled in the sides of the main frame, as shown. These last three rollers serve merely to guide the belt as it returns from the lower roller, H, to the upper roller, G. This roller G is provided with a ratchet-wheel, G', and upon the axis of said roller is loosely mounted an arm, K, carrying a pawl, L, which takes into the ratchet of the roller. A connecting-rod, M, connects the arm K with the vibrating yoke C', so that as the yoke is vibrated the arm K will be oscillated upon its axis, and hence the roller G be rotated during the forward movement of the pawl.

The yoke is formed with a series of holes, N, in order that the throw of the arm and pawl may be determined by the position of the connecting-rod in said series.

O designates a slotted stop-plate, which is arranged upon the side of the main frame by means of a pin, O', which passes through the slot of the said plate. As the yoke is vibrated so as to swing the knife which it carries away from the line of juncture between the roll G and the cylinder the lower end of one of the yoke-arms strikes against the stop O, which thus limits its extent of vibration. This arrangement determines the number of teeth over which the pawl will ride during its backward movement, and hence also determines the intervals of the plaits. This stop may be adjusted so as to regulate these intervals by loosening the screw and shifting the stop-plate.

P designates a stop, which is arranged so that when the knife is thrown forward the yoke will strike against it, thus limiting the extent to which the knife will pass between the cylinder and the upper roller.

The sides of the main frame are formed with open doorways Q, through which the lamp R may be passed in and out of the cylinder F. A shelf, S, extends from side to side of the main frame, so as to constitute a support for the lamp, the said shelf passing through the cylinder, as shown.

T designates a bed-plate upon the shelf S, said plate being formed with guides at its sides for the flanges U at the base of the lamp-body.

In operating the machine the fabric to be plaited will be passed along the shelf E to-

ward the line of contact between the cylinder and the band surrounding the upper roll. The knife is then operated so as to take hold of the fabric by vibrating the yoke, and as such operation is continued the cloth is plaited and carried round by the rotation of the cylinder and the travel of the band or belt. As soon as the plaiting has been completed the lamp will be withdrawn from the cylinder, to prevent undue heating thereof and consequent scorching of the goods. By now allowing the plaited fabric to remain for awhile around the drum all steam generated will be passed off through the belt and openings in the main frame, and the plaits will be effectively set.

The function of the handle, which is linked to the knife, is to raise the knife during operation, so that any number of plaits may be skipped, as desired.

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

1. The yoke *C'*, with a series of holes, *N*, in combination with the hinged plaiting-knife,

cylinder, endless belt, ratchet upon the roller *G*, pawl, and connecting-rod, substantially as set forth.

2. The drum or cylinder *F*, supported against the upper roller by means of the endless belt, substantially as set forth.

3. The main frame, with doors for passing the lamp into and out of the cylinder, and the shelf for supporting the lamp, arranged to extend through the cylinder, in combination with the endless belt, cylinder, and upper feed-roll, substantially as set forth.

4. The herein-described arrangement of rotary heating cylinder, endless belt, upper feed-roll, vibratory knife, stops, and shelf, substantially as set forth.

In testimony that I claim the above I have hereunto subscribed my name in the presence of two witnesses.

GEORGE W. KENDALL.

Witnesses:

MYRON W. BAILEY,
LENOX TITUS.