

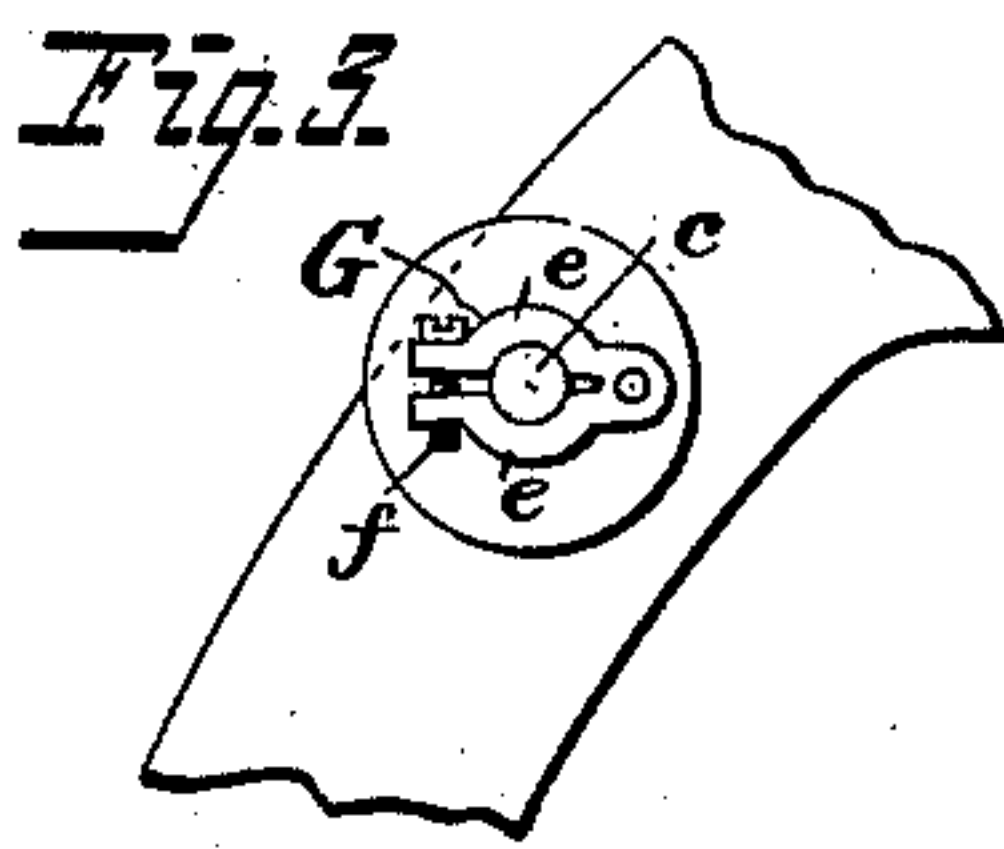
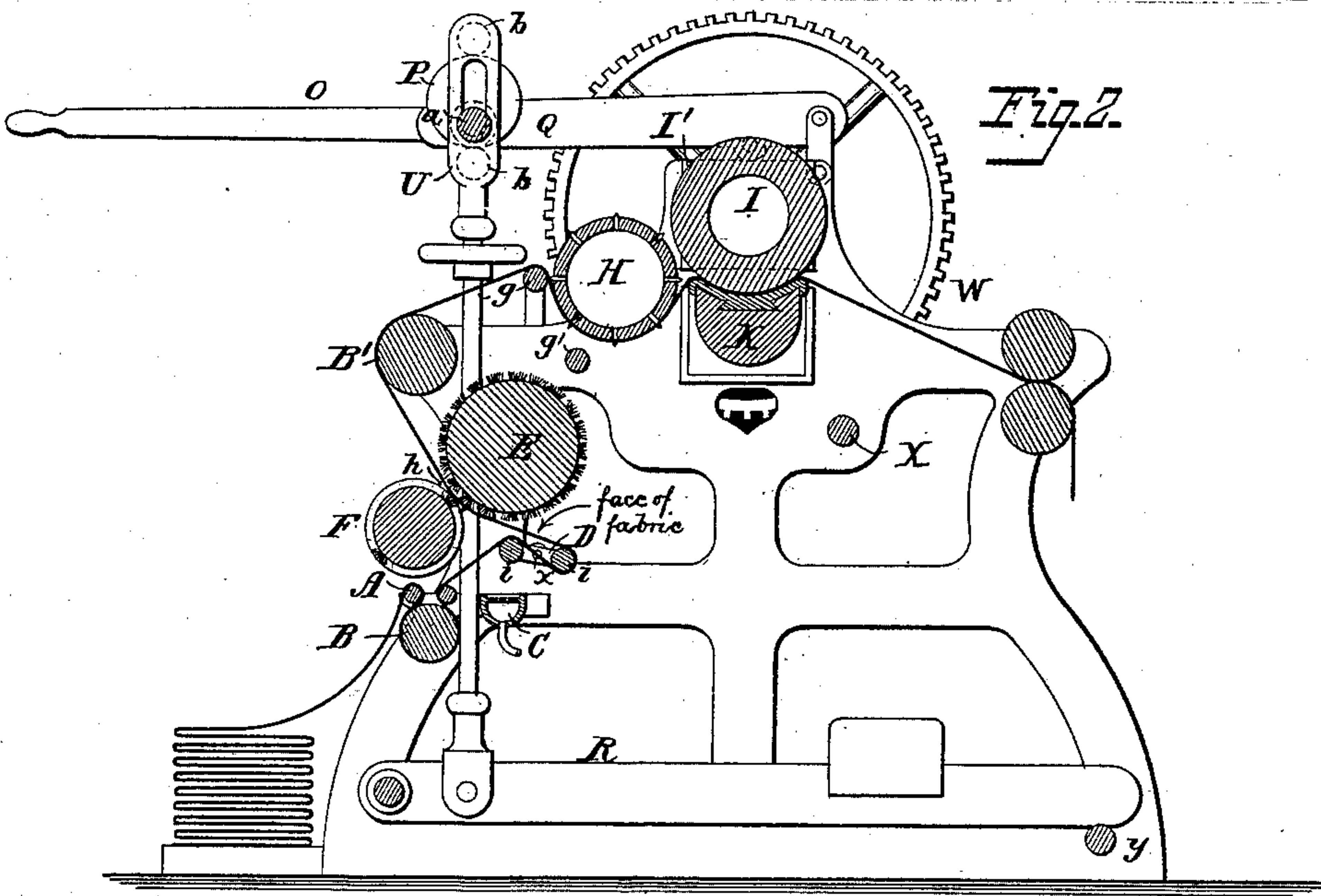
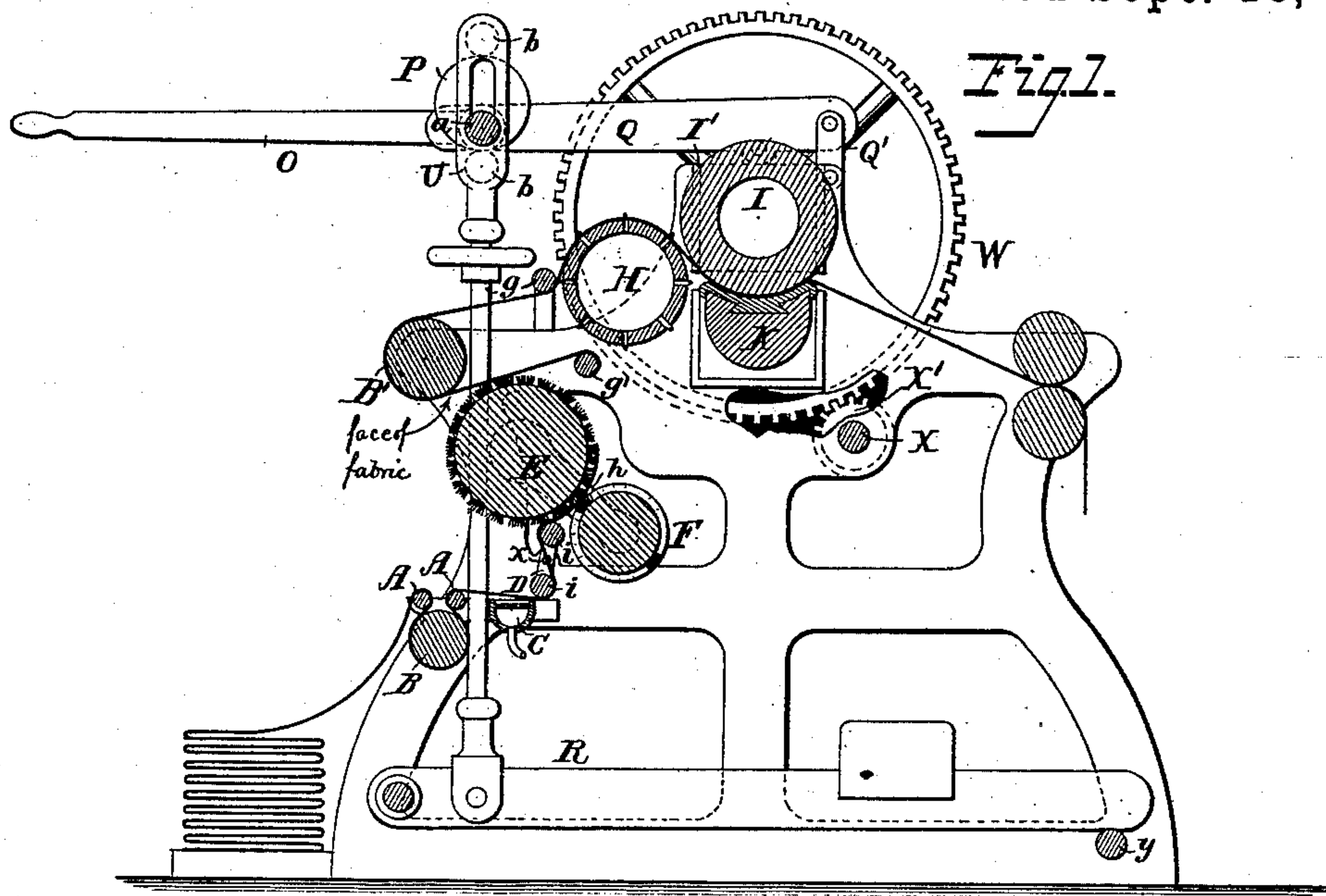
(No Model.)

G. W. MILLER.

MACHINE FOR PRESSING TEXTILE FABRICS.

No. 285,052.

Patented Sept. 18, 1883.



Attest:
Courtney & Cooper.
H. E. Lammann.

Inventor:
G. W. Miller
By his attorney
Charles E. Foster

UNITED STATES PATENT OFFICE.

GEORGE W. MILLER, OF WOONSOCKET, RHODE ISLAND.

MACHINE FOR PRESSING TEXTILE FABRICS.

SPECIFICATION forming part of Letters Patent No. 285,052, dated September 18, 1883.

Application filed April 21, 1882. (No model.)

To all whom it may concern:

Be it known that I, GEORGE W. MILLER, a resident of Woonsocket, Providence county, State of Rhode Island, have invented certain
5 Improvements in Machines for Pressing Textile Fabrics, of which the following is a specification.

My invention relates to machines for pressing cloth, paper, and other fabrics, and more
10 particularly to that class of machines described in Letters Patent of the United States issued May 9, 1882, No. 257,508; and my invention consists of certain details of construction, whereby the efficiency of the press is increased.
15 In the drawings, Figure 1 is a sectional elevation of a single cylinder-press illustrating my improvements. Fig. 2 is the same, showing the parts in a different position. Fig. 3 is a detached view, showing part of the frame
20 and a friction-clamp applied to one of the roller-shafts.

The frame of the machine is suitably constructed to support the parts hereinafter named.

25 The bed K is fixed to the frame, and the cylinder I turns in bearing-boxes I', sliding between guides on the frame, and connected each to a lever, Q, pivoted at the inner end of the frame or to a link, Q', and at the outer
30 end receiving a wrist-pin or end of a shaft, a, extending beyond an eccentric, P. The shaft a also extends through slots in two bars, U, each connected at the lower end to a weighted
35 lever, R, and upon each bar are two friction-studs, b b, above and below the eccentric, so that the turning of the latter by rocking the shaft a by an arm, O, will raise or depress the rods U and levers R, and thus throw the weight
40 of the said levers R upon or off of the levers Q, as in the machine described in my aforesaid application. In said machine, however, the lowering of the rods U merely relieved the levers Q and cylinder from pressure; but by connecting the levers Q to the bearing-boxes I', as
45 shown, the elevation of the levers Q (which results by the continued turning of the eccentric after the levers R are brought to bear on stops y) insures an elevation of the shaft a, levers Q, and boxes and cylinder, and there-
50 by removes all pressure from the fabric, which,

without stopping the machine, can travel freely over the bed without being acted upon. This is important in operating upon shawls woven in continuous lengths and other fabrics where there are parts—as fringes—which should not
55 be pressed. The parts described are so adjusted that the cylinder will be lifted from its bed before the levers Q are lifted to their full extent.

Upon one end of the cylinder-shaft is a cog-
60 wheel, W, which gears with a pinion, X', on the driving-shaft X, and the throw of the eccentrics P is such that the elevation of the levers Q to their full extent will remove the wheel W from contact with the pinion. By
65 this means the attendant, by partly turning the shaft a, can relieve the fabric from pressure without stopping the travel of the same, and by a further movement in the same direction can instantly stop the movement of the
70 machine, a single reverse motion setting the machine into operation. I do not limit myself to the use of eccentrics and the devices described for this purpose, as toggle-joints, elevating-screws, and other devices may be
75 used with like effects, it only being necessary to provide means whereby the elevation of the levers Q will first lift the cylinder from its bed, and then remove the gears from contact.

At the front of the machine turn two rolls,
80 B B', the shaft c of each of which extends between the jaws e e of a clamp, G, secured to the frame, a screw, f, serving to spread and bring together the jaws, to act with greater or less pressure upon the shaft. Guide-rolls A
85 A are arranged parallel to and above the roll B.

Adjacent to the press-bed turns a stretching-cylinder, H, near the periphery of which are guide-rollers g and g', arranged as shown, and
90 below the stretching-cylinder turns a cylindrical brush, E, driven from the driving-shaft by belts or gear. From the shaft of the brush E swing arms h, that carry a small cylinder-brush, F, driven by a belt or gears from the shaft of
95 the main brush, and between the brushes and the roller B is interposed a frame, D, provided with cross-bars i i, and pivoted at x, so that it may be turned to either of the positions shown in Figs. 1 and 2.

Between the pivoted frame D and the roller B is a steamer, C, by which the fabric may be dampened.

At the rear of the cylinder are feed-rolls by which the cloth is carried through the machine; or a single beam driven from one of the shafts may be used.

The cloth, Fig. 1, enters the machine over one of the guide-rolls A, passing round the friction-roller B, over the other guide-roll A, over the steamer, through the frame D, between the brushes E F, thence in contact with the friction-roll B' and with the stretcher-cylinder H, and then between the press-bed and cylinder to feed-rolls or take-up beam.

By the adjustment of the clamps G, so as to increase or decrease the friction upon the journals of the rolls B B', the tension upon the fabric while being operated upon by the brushes E F may be varied to any required extent.

Friction devices of different forms may be substituted for the clamps G.

I am enabled thus to secure an equal tension across the entire width and a "straight" feed, so that the cross-threads or woof are maintained at right angles to the warp, this being a matter of much importance when plaid or checked goods are pressed, as otherwise the pattern appears crooked and the value of the goods is impaired.

It is desirable to press some goods with the faces in contact with the bed K, and others with the backs in contact with the bed; but the face in all cases requires the greatest amount of brushing, and the stretcher-roll must not come in contact with the face. I am enabled to readily adjust the machine to make these changes by the means described. Thus, when the face is to be pressed upon the bed, the parts are adjusted as in Fig. 2, the brush F being swung to the left and the guide-frame D directing the fabric to the brushes, so that the face shall be acted on by the main brush E, the guide-roll g directing the fabric, so that its back shall pass in contact with the stretcher-roll and its face with the bed. In Fig. 1 the brush F is swung to the other side and the fabric guided to present its face to the main brush E; but by being passed first around the roller g', and then round the roll B', roller g, and over the stretcher-roll, the fabric is presented with its back to the latter roll and to the bed. The

fabric may thus be pressed with either side uppermost, but is always carried with its back against the stretching-cylinder and with its face toward the main brush, while the auxiliary brush operates upon the back.

The frame D serves as a guide to the fabric, and, being pivoted, holds the fabric close to the edge of the brush, regardless of the fact that the latter decreases in diameter as it wears. The frame, having two bars, also acts to create a slight tension that smooths the fabric.

I claim—

1. The combination of the pressing devices with revolving brushes arranged to act upon the fabric, roller B, round which the fabric passes to the brushes, roller B', arranged between the brushes and pressing devices, and adjustable friction devices constructed to retard the revolution of the rollers B B', substantially as specified.

2. The combination, with the pressing bed and cylinder and guide-rolls, of rotary brushes E F and means for adjusting the latter brush to different sides of the brush E, substantially as set forth.

3. The combination of the brushes with the friction-roll B and swinging guide-frame D, substantially as set forth.

4. The combination of the bed, cylinder carried by sliding bearings, and levers Q, connected to said bearings, with the weighted levers R, stops y, rods attached to the levers R, and connections, as described, between the levers Q and rods, whereby the levers Q may be raised after the levers R take their bearings, and the cylinder is thereby lifted from the bed, as set forth.

5. The combination of the bed, cylinder turning in sliding bearings, and toothed wheel W, with levers Q and R and connections, as described, and a driving-shaft and pinion arranged below the wheel W, whereby to first lift the cylinder from its bed and then the wheel from the pinion by one continued movement of said connections, as specified.

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

GEO. W. MILLER.

Witnesses:

ARAM J. TOTHIER,
JAMES E. COOK.