

2 Sheets—Sheet 1.

Patented May 30, 1893.



WITNESSES:

E. B. Bolton

E. K. Sturtevant

BY

INVENTORS

Adolf Stranes
Robert Ripp

Richard D.
ATTORNEYS

(No Model.)

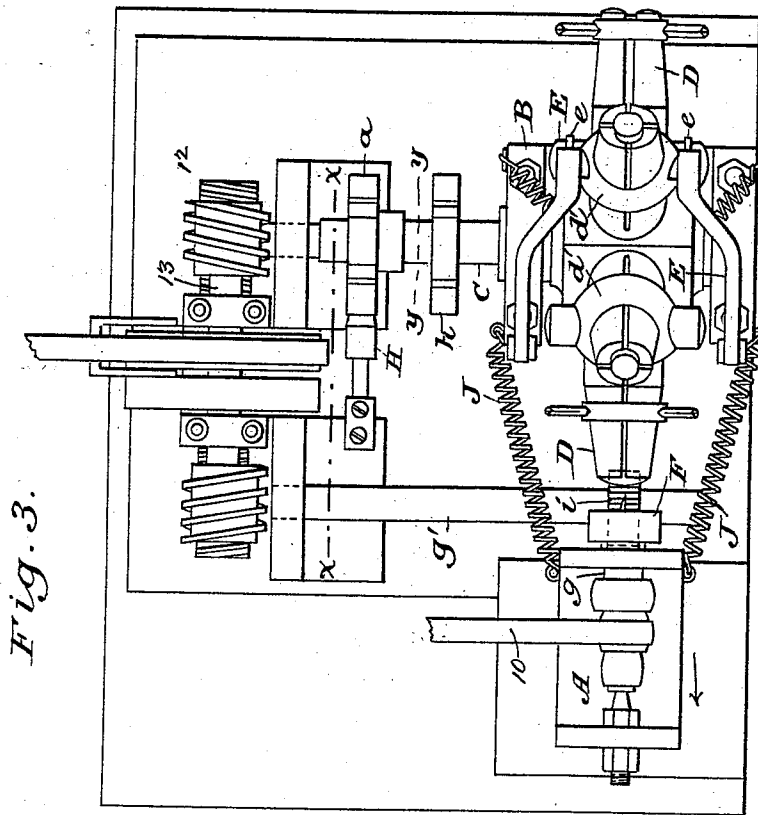
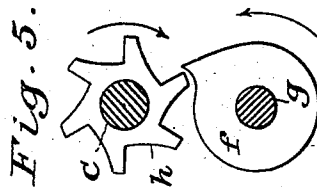
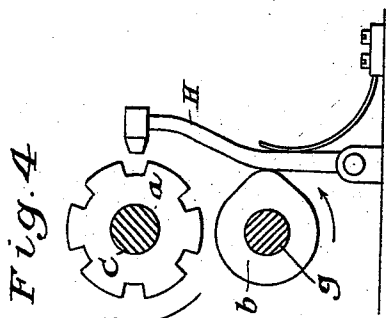
2 Sheets—Sheet 2.

A. STRAUSS & R. RIPP.

BUTTON MACHINE.

No. 498,411.

Patented May 30, 1893.



WITNESSES:

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Robert Ripp

BY

Richard

ATTORNEYS

UNITED STATES PATENT OFFICE.

ADOLF STRAUSS AND ROBERT RIPP, OF LODZ, RUSSIA.

BUTTON-MACHINE.

SPECIFICATION forming part of Letters Patent No. 498,411, dated May 30, 1893.

Application filed December 23, 1891. Serial No. 416,015. (No model.) Patented in Germany January 29, 1891, No. 59,583; in England June 30, 1891, No. 11,147, and in Austria-Hungary July 15, 1891, No. 1,947 and No. 26,011.

To all whom it may concern:

Be it known that we, ADOLF STRAUSS, a subject of the King of Prussia, and ROBERT RIPP, a subject of the Emperor of Russia, both residents of Lodz, Poland, Russia, have invented certain new and useful Improvements in Button-Machines, of which the following is a full, clear, and exact description.

This invention has been patented to us in Germany, dated January 29, 1891, No. 59,583; in Austria-Hungary, dated July 15, 1891, No. 1,947, and 26,011, and in Great Britain, dated June 30, 1891, No. 11,147.

This invention relates to button making machines and consists in the improved construction hereinafter described, whereby the material may be quickly and conveniently adjusted for cutting and thereafter positively presented to the cutter and automatically dropped from the button clamp.

In the accompanying drawings forming part of this specification: Figures 1, 2 and 3 are a side, end and plan view respectively of an apparatus embodying my improvements. Figs. 4 and 5 are detail sectional views on the lines $x-x$, and $y-y$, Fig. 2, and Fig. 6 is a detail view of the stock adjusting cam.

Generally workers designed for the manufacture of buttons wherein the material was cut by a knife to form the button, consisted principally of a stationary knife stock, and a button holder movable in relation thereto.

In carrying out our improvements we reverse the relation of the knife stock and button holder, and make the former movable and the latter adjacent to the knife carrying stock A, and preferably on the same base plate is a frame B, in which bears a shaft C, carrying a series of radially arranged and tapering holders D, each consisting of a series of spring sections 1, 2, 3 and 4 designed to receive the material to be cut and shaped into the button. The material is retained in each holder by means of a ring d' embracing the sections 1, 2, 3, 4, and provided at each side with a horizontally projecting lug 5.

Pivoted arms E are located at either side of the radial tool holders and are curved as shown in Figs. 2 and 3, so that rollers e seated in the ends will be in the path of and be struck by the lugs 5. Contracting springs

6 attached to the frame B and to the said arms serve to maintain the latter in a depressed position, to insure the contact of the rollers with the lugs 5, as the holders D are moved and cause the rollers to force the rings d' down on the said holders and firmly clamp the material therein. Fixed brackets 7 secured to the lower part of the frame on the inner face of the sides thereof, are provided with rollers c located to strike said lugs e of each clamp as the holder thereof descends from a horizontal to a depending position and move the said clamp toward the outer end of the holder and release the material so that it will readily drop from the holder.

The shaft C is extended beyond the frame at one side and has keyed thereon a tappet wheel h , and the notched disk a , the tappets and notches of which correspond in number with the holders D. On a countershaft g beneath are mounted two cam disks b, f , the latter being adapted to intermittently actuate the tappet plate while the latter is designed to periodically force a spring pressed pawl H out of engagement with one of the notches of the ratchet plate a . A shaft g' carries a cam i adapted to contact with the knife stock A and force it in the direction indicated by the arrow Fig. 3. The stock A is normally held by springs J, so that its knife is in contact with the material contained in the holder D, on a line therewith. The knife spindle 9 carries a band pulley driven by a belt 10 from any suitable source of power. The several shafts C, g, g' , are driven from the drive shaft 11, through the medium of worm gearing 12.

The adjustment of the parts is such that the spring pawl H, is disengaged from the notched plate just previous to the contact of the cam f with one of the tappets of the wheel h so that the holders are intermittently moved into position, rigidly held to admit of the cutting of the button and thereafter moved out of position to discharge the button. Further as each holder is to be moved out of position, the cam i forces back the stock A, thereby withdrawing the knife from its cutting position, until the succeeding holder comes into position.

From the foregoing it will be apparent that by the use of our improved machine, buttons

are not only cut more rapidly than heretofore, but that by having the shaft C mounted in rigid support, the buttons are more positively and evenly cut and shaped.

5. We claim—

1. In a button machine, a series of radially arranged divided holders, clamping rings encircling the same, arms E E adapted to engage the rings to force them in place, a cutter
10 mounted on the end of a shaft extending in a radial line from the hub of the holders, a movable frame carrying said shaft and means for moving said frame intermittingly, substantially as described.
- 15 2. In a button machine, a series of radially arranged divided holders, clamping rings encircling the ends of the same, lugs on the said

rings at each side, arms E E in the path of said lugs and adapted to force the rings in place and brackets 7 in the path of the lower
20 travel of the holders for engaging the lugs on the ring and forcing them off, substantially as described.

In testimony whereof we have hereunto set our hands in the presence of two subscribing
25 witnesses.

ADOLF STRAUSS.
ROBERT RIPP.

Witnesses:

MARECTI BRESZEL,

Warsaw,

MAKIEIN BRYELUTIS,

Erywsinska.