(No Model.) 2 Sheets—Sheet 1.

# A. WITTIG.

## BUTTON MACHINE.

No. 382,786. Patented May 15, 1888.

Fig. 1

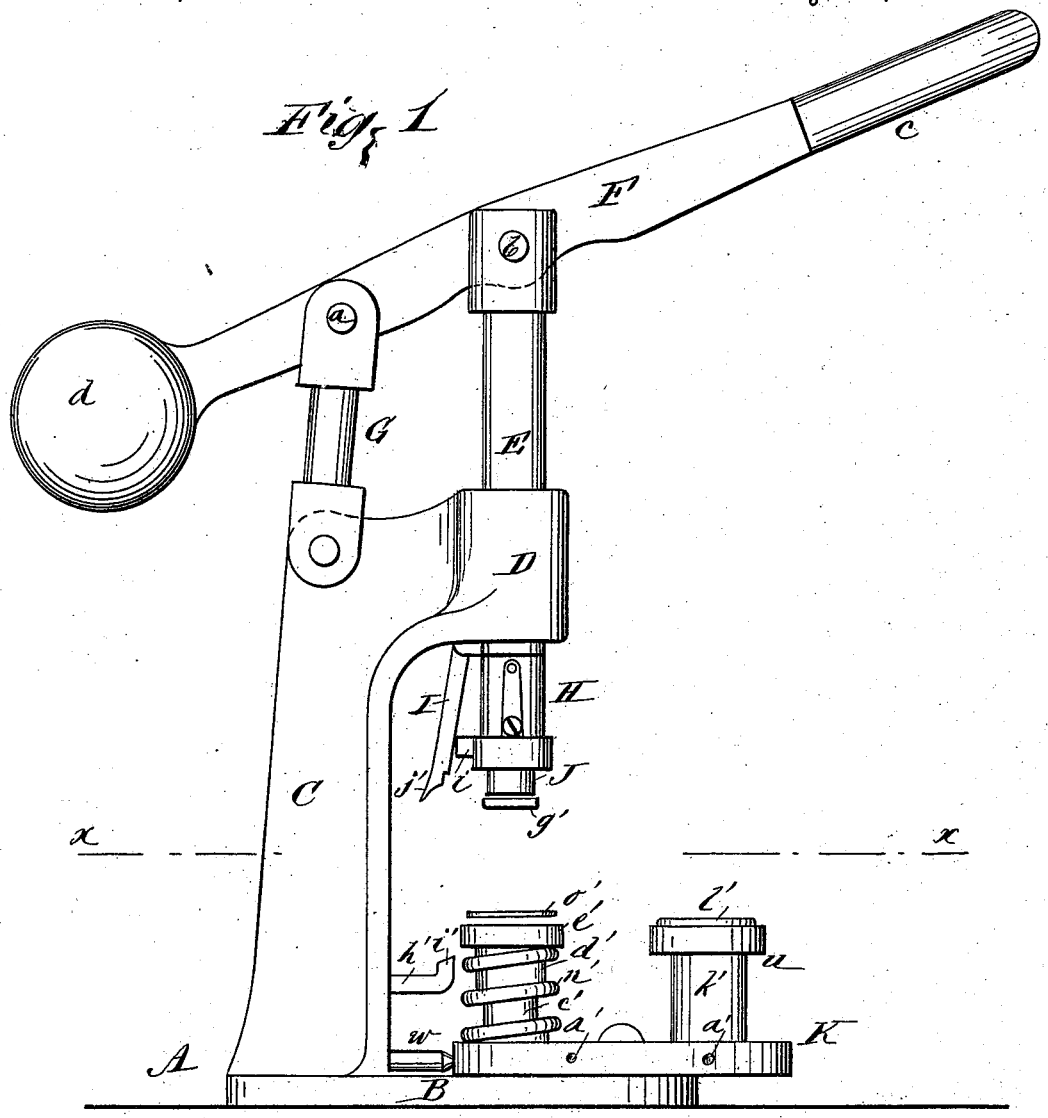
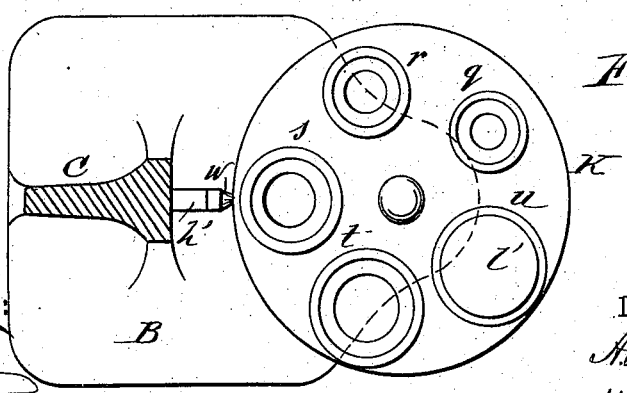



Fig. 2

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ATTORNEYS.

(No Model.) 2 Sheets—Sheet 2.

# A. WITTIG.

## BUTTON MACHINE.

No. 382,786. Patented May 15, 1888.

Fig. 3

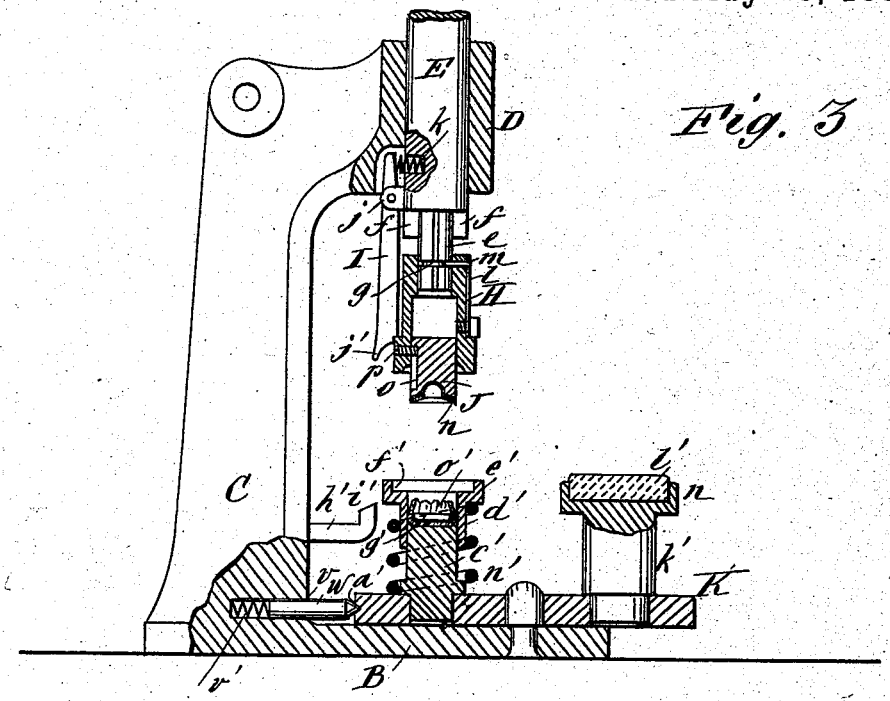


Fig. 5

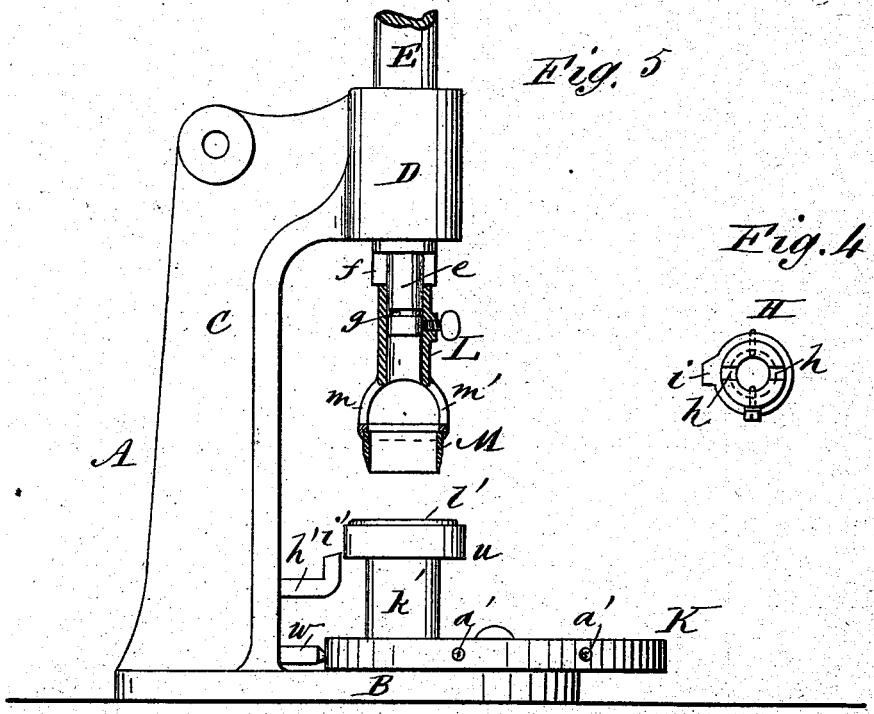


Fig. 4




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# UNITED STATES PATENT OFFICE.

ALBERT WITTIG, OF NEW YORK, N. Y.

## BUTTON-MACHINE.

SPECIFICATION forming part of Letters Patent No. 382,785, dated May 15, 1888.

Application filed August 12, 1887. Serial No. 246,781. (No model.)

*To all whom it may concern:*

Be it known that I, ALBERT WITTIG, of the city, county, and State of New York, have invented a new and Improved Button-Machine, of which the following is a specification, reference being had to the annexed drawings, forming a part thereof, in which—

Figure 1 is a side elevation of my improved button-machine. Fig. 2 is a plan view taken in section on line *x x* in Fig. 1. Fig. 3 is a side elevation, partly in section. Fig. 4 is a plan view of one of the followers; and Fig. 5 is a side elevation, partly in section, showing the cloth-cutting device.

Similar letters of reference indicate corresponding parts in all the figures.

My invention relates to the class of machines employed in covering buttons with cloth of the same kind as that of the garment to which the buttons are to be applied, and is designed for the use of tailors, drapers, dress, and cloak makers, to enable them to provide buttons which will match the garment.

My invention consists in a press provided with a revolving bed carrying a series of dies for making buttons of different sizes and provided with a cutting-block for supporting the cloth while blanks are being cut for the covers of the buttons, the press being supplied with a duplex follower, which serves the double purpose of applying the cover to the button-cap and of inserting the button-back into the cap, all as hereinafter more fully described.

The frame A of the press is provided with the base B and with an arm, C, which extends upward and is furnished with a sleeve, D, for guiding the rod E in a direction at right angles with the base-plate B. The rod E is pivotally connected with the lever F, and is connected with the arm C by a link, G, pivoted to the lever by a pin, *a*, and pivotally connected with the arm C by a pin, *b*. The lever F is provided with a handle, *c*, at one end and with a counter-weight, *d*, at the opposite end.

The lower end of the rod E is reduced in diameter, forming a guide, *e*, for the follower H. The guide *e* is provided with two feathers, *f*, on diametrically-opposite sides thereof, and is furnished with a circumferential groove, *g*. The follower H, which is fitted to the guide *e*, is provided with slots *h* in its upper end at diametrically-opposite sides for receiving the feathers *f*. It is also provided with a beveled projection, *i*, opposite one of the slots *h*, for engagement with the spring-actuated detent-lever I, pivoted between ears *j*, projecting from the rod E, the said projection being square on the top and beveled on one of its sides, the beveled side being designed to facilitate the raising of the detent-lever I preparatory to bringing it into engagement with the top of the projection, the raising of the detent-lever being effected by turning the follower H, so as to bring the beveled side of the projection *i* into engagement with the inner side of the detent-lever I. The upper and shorter arm of the lever I is pressed by a spiral spring, *k*, resting in a cavity formed in the rod E.

The follower H is provided with a detent-spring, *l*, carrying a pin, *m*, which is capable of entering the slot *g* of the guide *e*. The lower part of the follower H is counterbored to receive a magnetized block, J, which is concaved in its lower surface to receive the button-back *n*. The block J is provided with a longitudinal slot, *o*, which receives the end of a screw, *p*, extending through the side of the follower H. The lower end of the follower H is concaved or countersunk around the bore thereof.

On the base-plate B is pivoted a disk, K, which carries a number of dies, *q r s t*, of different sizes, and a punching-block, *u*, all arranged to be brought axially in line with the rod E by the turning of the disk K.

In a hole, *v*, formed in the arm C, is inserted a stop-pin, *w*, having a beveled outer end for engagement with conical cavities *a'* in the periphery of the disk K. Between the inner end of the stop-pin *w* and the bottom of the hole *v* is placed a spiral spring, *v'*, which presses the stop pin *w* outward. The conical cavities *a'* are made exactly opposite the dies *q r s t* and the block *u*, so that when the disk is stopped by the entrance of the stop-pin *w* into one of the conical cavities *a'* the die opposite that cavity will be exactly in line with the rod E and follower H.

The dies *q r s t* are alike except as to size, and the number of such dies required for the

machine will depend upon the number of sizes of the buttons to be cut. Each die is composed of a standard, $c'$, to which is fitted a sleeve, $d'$, provided with a flange, $e'$, at its upper end having an annular recess, $f'$. The bore of the sleeve $d'$ corresponds in diameter with the button-cap $g'$ with the button-cover added, and the diameter of the annular recess $f'$ is the same as that of the button-cover to be applied. The sleeve $d'$ is supported normally with its end a short distance above the standard $c'$ by a spiral spring, $n'$, surrounding the standard $c'$ and the sleeve $d'$ and abutting against the under surface of the flange $e'$.

The releasing-arm $h'$, projecting from the arm C, is provided with an upwardly-turned beveled end, $i'$, which engages a finger, $j'$, on the lower end of the detent-lever I when the follower H is forced down in the operation of covering a button, as will presently be described.

The punching-block $u$ consists of a standard, $k'$, projecting from the disk K, and is chambered in its upper end to receive a disk, $l'$, of rawhide or analogous material. When it is desired to punch blanks for covering buttons, the follower H is removed from the rod E and is replaced by a sleeve, L, provided with arms $m$ $m'$, which carry the hollow punch M.

The operation of covering a button is as follows: The punch M and the punching-block $u$ are placed in the position of use, as shown in Fig. 5, when blanks of the required size are cut. The punch M is then removed from the guide $e$ and the follower H is placed in position on the said guide, as shown in Fig. 1. One of the dies $q$ $r$ $s$ $t$ corresponding to the size of the button to be covered is placed in position for use underneath the follower H in the manner before described. A cloth button-cover, $o'$, is placed in the annular recess $f'$ and the button-cap $g'$ is placed on the lower end of the block J, where it is held by the magnetism of the block. The lever F is now depressed, bringing the block J, with the attached button, back down upon the center of the button cover $o'$ and forcing the said cover into the sleeve $d'$, the spring $n'$ supporting the said sleeve in its normal position during this part of the operation. The follower H and rod E are then raised by means of the lever F, leaving the button-cover $o'$ and the button-cap $g'$ in the sleeve $d'$ and resting upon the upper end of the standard $c'$. The follower H is now drawn down upon the guide $e$ and the projection $i$ is brought into engagement with the detent-lever I, which holds the follower H in an extended position. The button-back $n$ is then placed upon the magnetized block J and the button back and block are both pushed upward into the follower, and the rod E is carried down forcibly by means of the lever F. When the follower H enters the annular recess $f'$ of the flange $e'$ of the sleeve $d'$, the concaved end of the follower, together with the concave inner surface of the button-back $n$, causes the edge of the button-cover to turn inward as the follower H is carried downward carrying with it the sleeve $d'$ against the pressure of the spring $n'$. The edges of the button-cover $o'$ are drawn in ready for the insertion of the button-back $n$ into the button-cap $g'$ by the time the detent lever I reaches the beveled end $i'$ of the arm $h'$, and the engagement of the said detent-lever with the arm releases the follower H and permits the guide $e$ to be forced downward through the follower, carrying the button-back $n$, together with the edges of the button-cover $o'$, into the button-cap $g'$. The further movement of the follower H brings the concaved under surface of the follower into engagement with the edge of the button-cap $g'$ and contracts it around the button-back $n$, thus completing the button.

Having thus fully described my invention, I claim as new and desire to secure by Letters Patent—

1. In a button machine, the combination, with the sliding rod E, provided with the guide $e$, of the follower H, the movable magnetized cylindrical block J, and the die formed of the standard $c'$ and sliding spring-supported sleeve $d'$, having the recessed flange $e'$, substantially as specified.

2. In a button-machine, the combination of the rod E, provided with the guide $e$, the movable follower H, having the beveled projection $i$ and concaved sliding cylindrical block J, the spring-actuated detent-lever I, the die formed of the standard $c'$ and sliding spring-supported sleeve $d'$, having the recessed flange $e'$, and the disengaging-arm $h'$, provided with the beveled end $i'$, adapted to engage the detent-lever, substantially as specified.

3. In a button-machine, the combination, with the follower E and revoluble plate K, of the hollow punch M, secured to the follower E, and the punching-block $u$, carried by the plate K and provided with the rawhide disk $l'$, substantially as specified.

4. In a button-machine, the combination, with the sliding rod E and revoluble plate K, of the punch M, fitted to the said rod E, and the punching-block $u$, carried by the plate K, substantially as specified.

5. In a button-machine, the combination of the sliding spindle E, provided with the guide $e$, the follower H, fitted to the guide $e$, the concaved magnetized cylindrical block J, carried by the follower H, the detent-lever I, releasing-arm $h'$, and the die formed of the standard $c'$ and spring-supported sleeve $d'$, having the recessed flange $e'$, substantially as specified.

ALBERT WITTIG.

Witnesses:
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