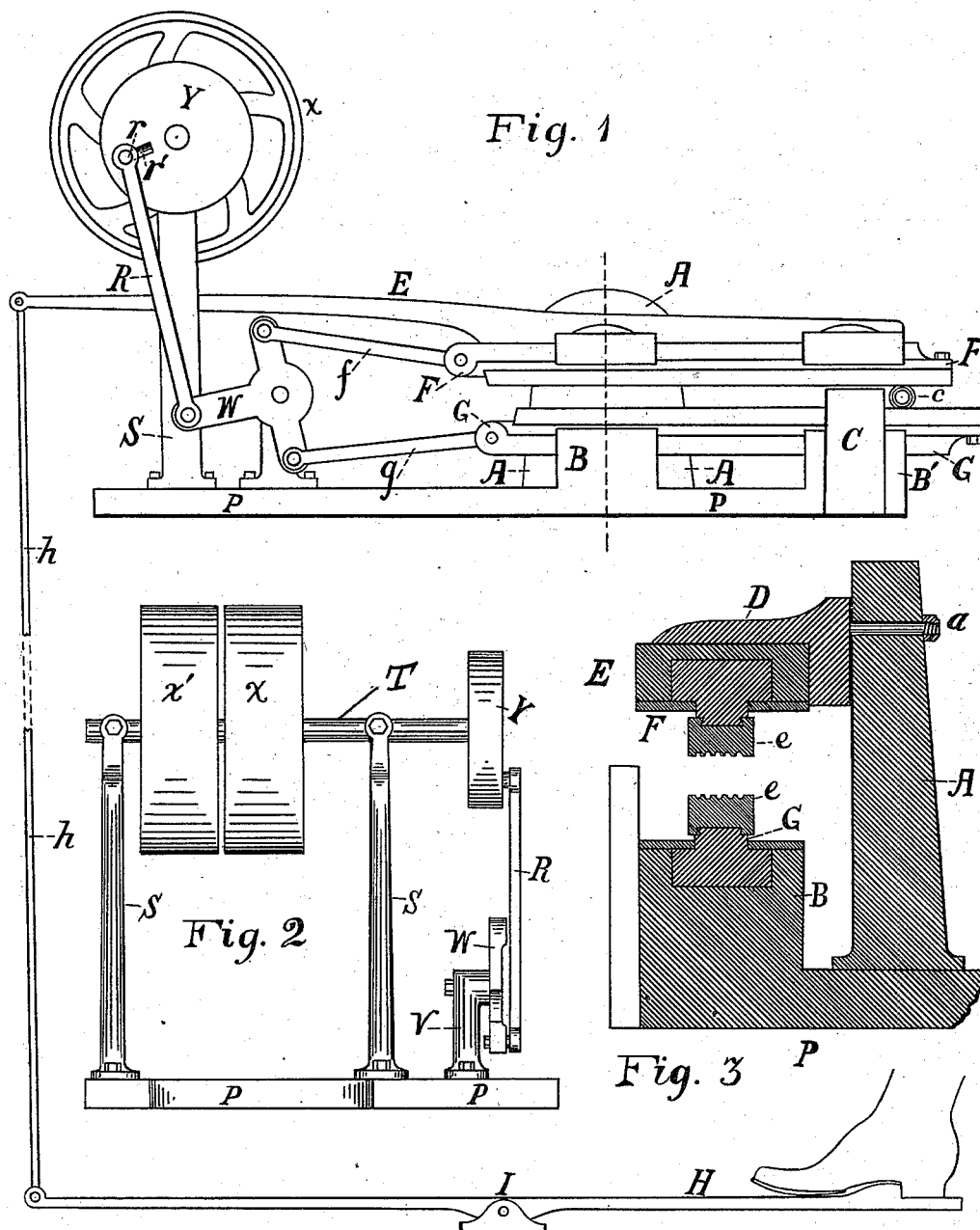


(No Model.)

W. A. HEATH.
WHIP BUTTON ROLLING MACHINE.

No. 382,230.

Patented May 1, 1888.



Witnesses.

Inventor.

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WHIP-BUTTON-ROLLING MACHINE.

SPECIFICATION forming part of Letters Patent No. 382,230, dated May 1, 1888.

Application filed February 9, 1888. Serial No. 263,495. (No model.)

To all whom it may concern:

Be it known that I, WATSON A. HEATH, a citizen of the United States, residing at Binghamton, in the county of Broome and State of New York, have invented certain new and useful Improvements in Whip-Button-Rolling Machines; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to letters or figures of reference marked thereon, which form a part of this specification.

Similar letters refer to similar parts throughout the several views.

My invention is that of a whip-button-rolling machine for rolling down and shaping the buttons on whips, and is designed to receive dies to roll any form of buttons desired. These buttons are formed by winding soft fibrous material—such as wicking or like substance—saturated with glue or cement, on the body of the whip sufficient to form the button, and then rolling it between the dies under pressure to the desired form. The machines heretofore in use for this purpose have been in the form of wheels having upon their periphery the die or former for the button. My invention is intended to perform this rolling process between straight and parallel surfaces having reciprocating motion and moving always in opposite directions, and by which a more perfect form can be given to the button, and in less time, than by the machines heretofore in use.

In the accompanying drawings, Figure 1 is a side elevation of the machine. Fig. 2 is a back view of the driving mechanism, and Fig. 3 is a vertical cross-section on the dotted line in Fig. 1.

PP is the bed-plate of the machine, intended to be set on a bench of the requisite height, and upon this bed-plate all the machinery is fastened. At the back end of the plate are the standards S S, forked at the upper end to receive the boxes of the counter-shaft T, which drives the machinery. Between these standards, on the shaft, are the driving and loose pulleys X X'. At the end of the shaft outside

the standard is a crank-wheel, Y, having on its face a wrist, *r*, to which the pitman R is attached. The stroke of the runners carrying the dies is regulated by moving the wrist *r* in the slot in which it is set. A shorter standard, V, having its upper end turned at right angles, is fastened on the plate at about the relative position shown in the drawings, and upon the face of this standard the three-armed rock-shaft W is pivoted, its horizontal arm having a wrist to receive the pitman R, by which it is driven. The upright arms also have wrists to receive the pitmen *f* and *g* for driving the runners F and G. On the right side of the plate is a standard, A, (shown in outline in Fig. 1 and in section in Fig. 3,) having an arm, D, at its upper end, attached by a bolt, *a*, which must be loose enough to allow the arm to rock upon the face of the standard. To this arm the long sweep E is fastened and rocks with it; or the sweep and arm may be made in one piece. The sweep is channeled on its under side and the runner F is fitted to run in this channel, being held in by guard-plates lapping over its sides. The runner is driven by the upper arm of the rock-shaft, to which it is attached by the pitman *f*. On the left side of the plate, and integral with it, are two benches, B B, fitted with a way on the upper side, in which the runner G slides, driven by the lower arm of the rock-shaft, with which it is connected by the pitman *g*. This lies directly under the runner F, and when in use they are intended to run substantially parallel with each other. These runners have removable dies *ee* dovetailed or otherwise fastened upon their faces, between which the button is rolled; and any form of dies may be used. Near the front end of the machine is a guide, C, against or near which the whip is held when the button is rolled.

The sweep E is extended back of the bed-plate, and has at the back end a rod, *h*, connected with the treadle H, which is pivoted on the floor. This treadle, controlled by the foot of the operator, is for regulating the pressure upon the button. The sweep and its slide, rocking upon the bolt *a*, will tilt up a little at the front when the pressure on the treadle is re-

5 moved, to admit of putting in and removing the whip. When the whip is put in, the pressure on the treadle brings the upper die down upon the button, and the pressure is increased as the button is rolled down until it is hard and solid.

10 The operation of the machine will be readily understood from this description. The runners F and G, receiving their motion from the opposite ends of the rock-shaft W, will all the time be moving in opposite directions to each other, both reversing at the same time, and any tendency to flatten the button is done away with.

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

1. A whip-button-rolling machine having

parallel runners F and G, with dies *e e* upon their faces, said runners being driven always 20 in opposite directions by means of the rock-shaft W, all constructed and operating substantially as shown and described.

2. The combination, in a whip-button-rolling machine, of a driving-shaft having crank- 25 wheel Y, a rock-shaft, W, parallel runners F and G, having changeable dies *e e* on their faces, a rocking sweep, E, carrying the upper runner, and treadle H, for regulating the pressure upon the button, all constructed and operating substantially as shown and described. 30

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Witnesses:

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