Z. GELINAS.

BUTTON-FEEDING DEVICE.

No. 169,433. Patented Nov. 2, 1875.

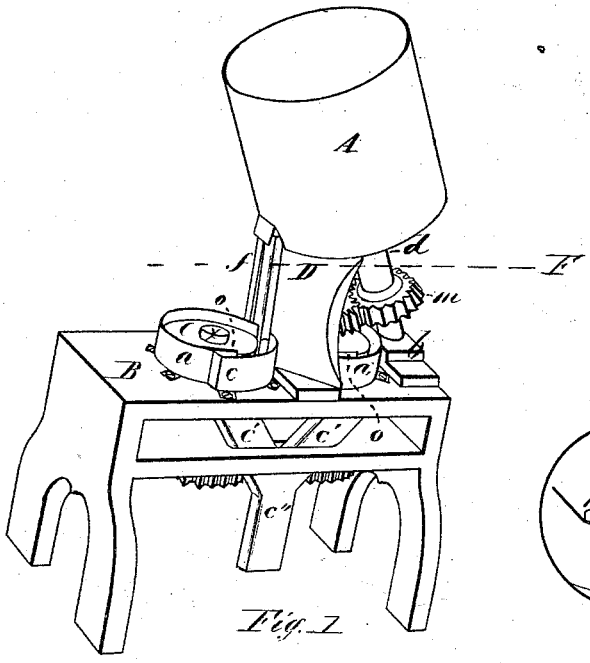

Fig. I

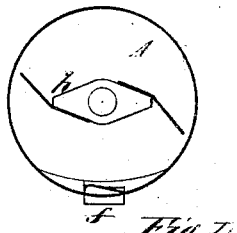

Fig. II

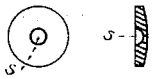

Fig. IV

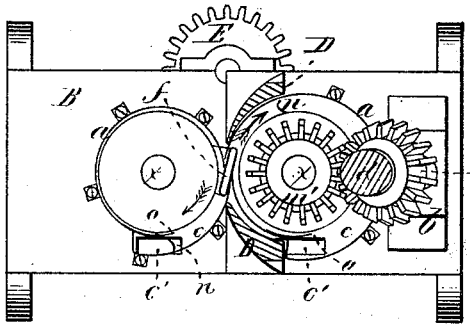

Fig. III

Witnesses,

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UNITED STATES PATENT OFFICE.

ZOEL GELINAS, OF SPRINGFIELD, MASSACHUSETTS, ASSIGNOR TO MOSES GOLDTHWAITE AND FRANK H. GOLDTHWAITE.

IMPROVEMENT IN BUTTON-FEEDING DEVICES.

Specification forming part of Letters Patent No. **169,433**, dated November 2, 1875; application filed July 16, 1875.

To all whom it may concern:

Be it known that I, ZOEL GELINAS, of Springfield, in the State of Massachusetts, have invented a new and useful Button-Feeding Device; and that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings making a part of this specification and description.

Figure I is a perspective view of my invention. Fig. II is a plan view of the hopper or receptacle for the button and the revolving bar operating therein. Fig. III is a horizontal section of the machine at line F, and Fig. IV is a plan and section of a button, showing the central recess therein.

The object of my invention is to take the buttons which are being operated upon from a promiscuous quantity, and deliver them one by one at any desired part of the machine, all arranged in regular order, and with the front side always in the same position; and to this end my invention consists of a hopper or receptacle, into which the buttons are placed promiscuously, in any large quantity, with a throat leading therefrom to a desired point below, where are arranged two or more spring-catches to draw the buttons from said throat into a chute having an entrance from two opposite directions, at the lower end of which the buttons appear in regular succession with the same side out, so that they may be taken at that point by any other mechanism, and be operated upon as may be desired.

In the drawings, B represents a table, upon which is an upright, D, supporting a hopper or receptacle, preferably made cylindrical and standing in an inclined position, and with a hole in the bottom at the lowest point, leading into a throat, *f*, the lower end of which opens at its opposite edges into two circular spaces inclosed by circular vertical guides *a*, having an offset at *c*, where there is an orifice, *c'*, at each offset, leading to a common chute, *c''*, below. One or more spring catches, *n*, are arranged to rotate inside each vertical guide *a*, and a projection or tripping-flange, *o*, is arranged just inside the orifice *c'*, so that as the spring-catch *n* revolves it strikes against said flange, and is bent back or inward, and during the remaining part of its revolution the end of the spring-catch bears against the vertical guide *a*. A toothed wheel E is arranged to engage with two other toothed wheels, one on the lower end of each shaft *x*, which carries the spring-catches *n*, and a toothed wheel, *m*, is attached to one shaft, *x*, which engages with a toothed wheel, *m*, fixed on a shaft, *d*, extending up into the hopper or receptacle A to rotate a bar, *h*, to agitate the buttons in the hopper and insure their falling into the throat *f*. The two shafts *x* are arranged to rotate at exactly the same speed, and the spring-catches *n* are so attached to said shafts that, at the moment the extreme end of one catch reaches the throat *f* in its revolution, the extreme end of the other catch, opposite, reaches the opposite side of the throat, and the two ends of the catches *n*, which are opposite each other, pass along over the button (if there is one in position at the lower end of the throat) at the same time, one on one side of the button, and the other on the other, but both catches passing in opposite directions, as indicated by the arrows. The chute *c''* is divided into two branches at the upper end, as shown in the drawing, at *c'''*, each branch communicating with an orifice, *c'*, so that a button dropping into either orifice *c'* is conducted directly into the common chute *c''*.

The operation of the device is as follows: The buttons being operated upon are usually made of "vegetable ivory," and are provided with a central recess, *s*, on the front side only. A quantity of these buttons or blanks being placed in the hopper or receptacle A, the machine is set in motion by power applied to the wheel E, and the buttons in the hopper being agitated by the rotating bar *h*, they follow each other in rapid succession down the throat *f*, and lodge at the lower end, remaining in a vertical position and leaving both sides of the button exposed. The throat *f* is open at both edges at the bottom, and is set at a slight inclination, so that the opening at one edge will permit the button to be drawn out on one side, and that at the opposite edge will permit the button to be drawn out on the other side. As the buttons drop to the lower end of the throat the shafts *x* rotate, carrying around the spring-catches *n*, and if the front

side of the button is exposed to one catch, the end of that catch is pressed into the central recess *s* of the button, (the end of the opposite catch passing over the smooth rear side of the button,) and draws the button out of the throat, and around against the vertical guide *a*, until the catch strikes the flange *o*, when, being thus tripped, the catch releases its hold upon the button, and the latter drops into the orifice *c'* and chute *c''* with its front or recessed side toward the shaft *x*. If the button is presented at the bottom of the throat *f* with its recessed side exposed in an opposite direction from that just described, the other catch, *n*, then takes into the recess, (the first catch passing freely over the smooth side of the button,) and draws the button around against the other vertical guide *a* until the catch is tripped against the other flange *o*, and the button dropped into the corresponding orifice *c'*, and thence into the chute *c''*, with its front or recessed side toward the shaft *x*, as before, so that whichever side out the button is presented at the bottom of the throat it is taken therefrom and carried to the chute *c''*, with its front side always in the same position, the vertical guide *a* serving to hold the button in a vertical position while the catch retains its hold upon it, and also to guide the button to the orifice *c'*.

It is evident that by this manipulation of the button, the subsequent operations to be performed upon it will be very greatly facilitated, as, for example, attaching them to cards, for packing, drilling them, &c., because, as at present practiced, the buttons are all manipulated by hand in these operations.

Having thus described my invention, what I claim as new is—

1. In a button-feeding device, the combination of a receptacle or hopper, A, to receive the buttons, a throat, *f*, open at the lower end, and one or more spring-catches, *n*, upon opposite sides of the throat, in connection with vertical guides *a*, against which the button slides, said catches operating to draw said buttons in rapid succession from the lower end of the throat to a chute, *c''*, with the front sides of all in the same relative position, substantially as described.

2. The combination of the receptacle or hopper A, the throat *f*, the spring-catches *n*, vertical guides *a*, the flanges *o* to trip the catches, and the chute *c''* divided at the upper end to receive the buttons from both sides of the throat, substantially as set forth.

ZOEL GELINAS.

Witnesses:
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