J. Jenkinson.

Applying Clasps to Skirts.

No. 71492 Patented Nov. 26, 1867.

Fig. 1.

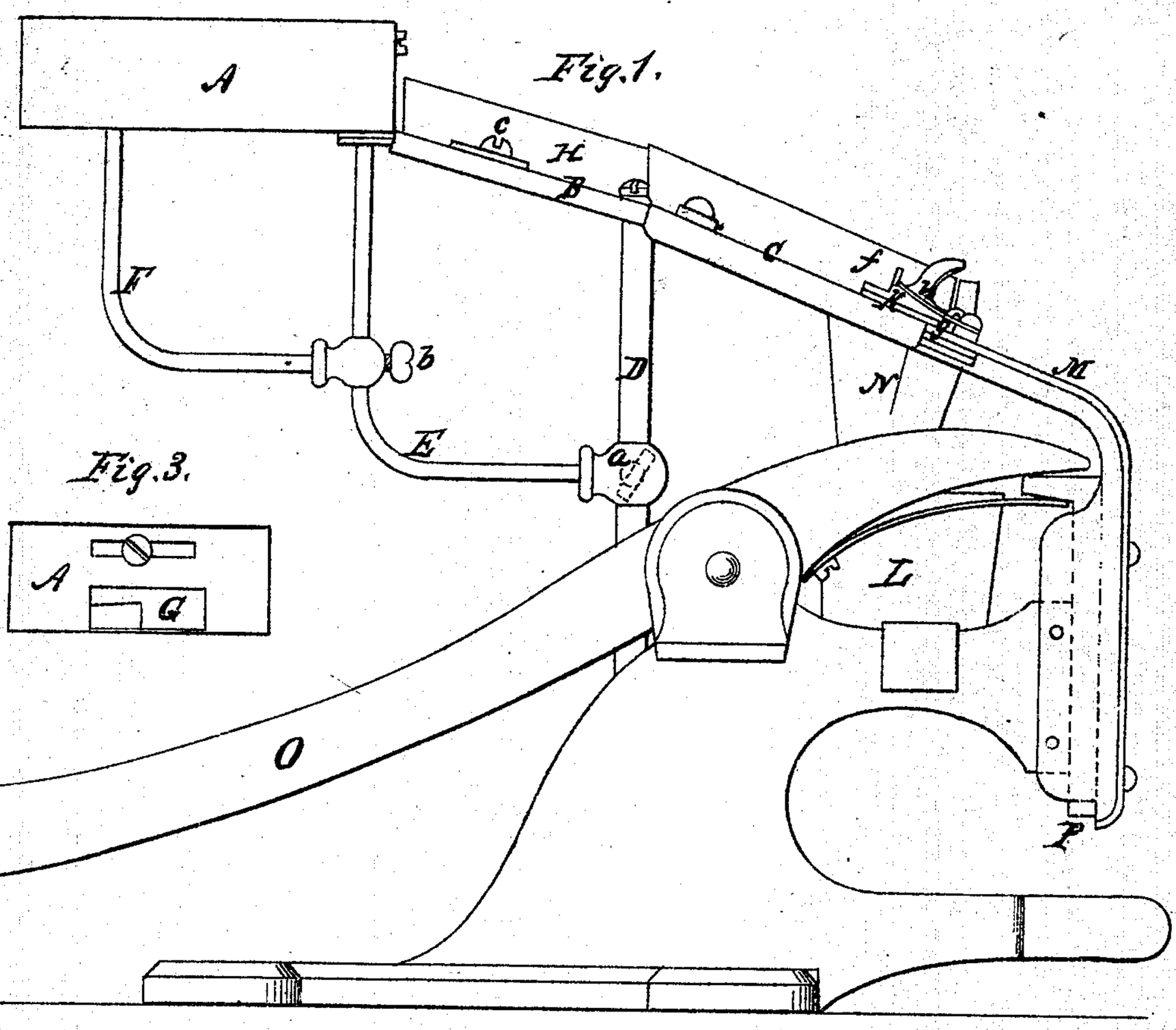
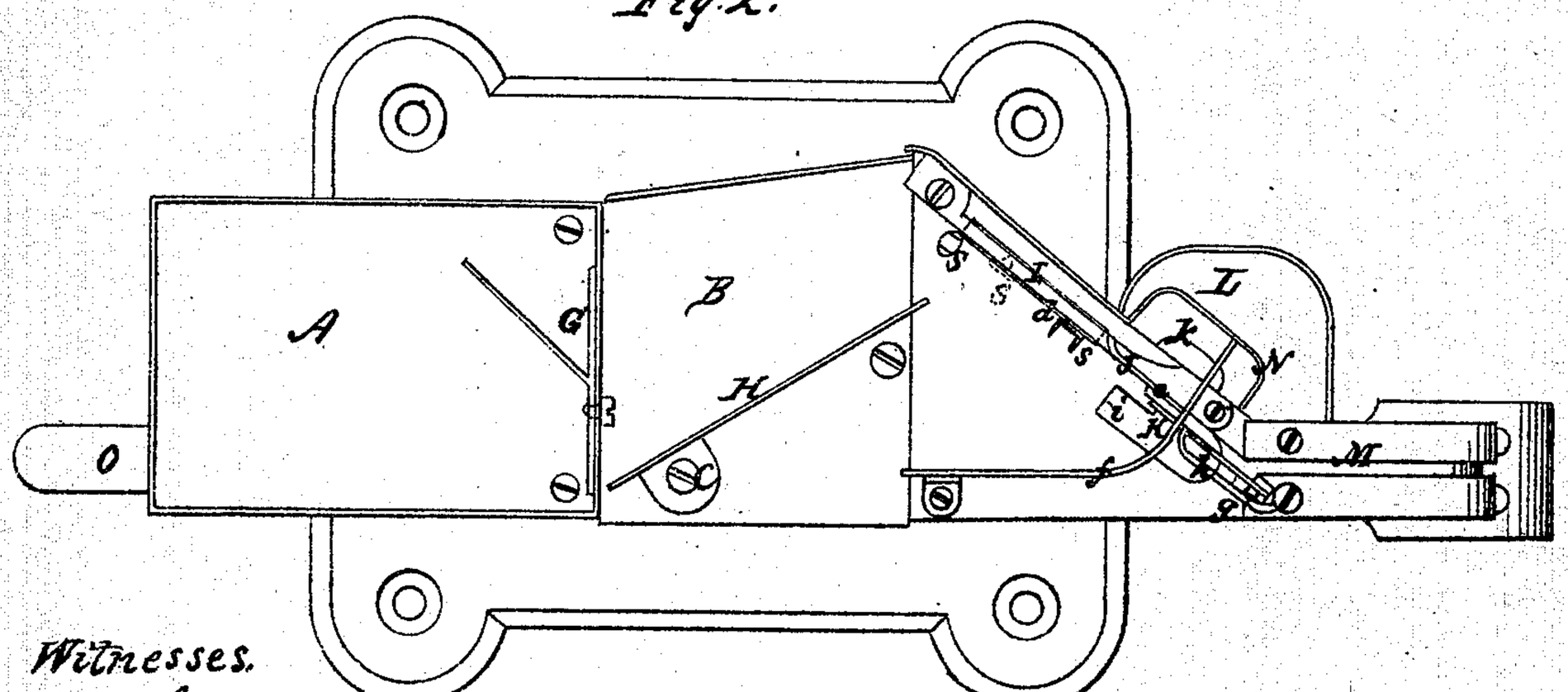


Fig. 3.

Fig. 2.



Witnesses.
J. M. Loomby
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United States Patent Office.

JAMES JENKINSON, OF BROOKLYN, NEW YORK.

Letters Patent No. 71,492, *dated November* 26, 1867.

IMPROVEMENT IN APPARATUS FOR APPLYING CLASPS TO SKIRTS.

The Schedule referred to in these Letters Patent and making part of the same.

TO ALL WHOM IT MAY CONCERN:

Be it known that I, JAMES JENKINSON, of Brooklyn, in the county of Kings, and State of New York, have invented certain new and useful Improvements on Machines for Feeding and Applying Spangles or Clasps to Hoop-Skirts, of which the following is a full, clear, and exact description, reference being had to the accompanying drawing, forming part of this specification, and in which—

Figure 1 represents a side elevation of a machine constructed according to my improvement.

Figure 2 a plan of the same, and

Figure 3 is a front view of the hopper detached.

Like letters indicate corresponding parts throughout the several figures.

This invention relates to machines used in clasping hoop-skirts that employ a hopper or supply-box, inclined feeding-plate or plates, and oblique guides or conductors, operating in connection with slots, to feed and direct, by the tremulous motion of the machine, the clasps or spangles in succession to a suitable passage-way, which conduct them in regular order to the clinching-mechanism that may be operated by the foot while the hoops and tapes of the skirt are adjusted by hand. In such machines much waste occurs, and great difficulty has been experienced in feeding to the supply-passage of the clincher the spangles, owing in part to their smallness, lightness, and peculiarity of shape, and partly to their want of uniformity in size, and liability to their clogging and rendering frequent stoppage necessary to remove imperfect ones that only obstruct, and partly owing to the tendency of such articles to overcrowd without a sufficiently free or ready escape for the surplus, and without adequate means for turning or adjusting the spangles to a proper position, or automatically removing those which cannot be readily so adjusted. These being the main difficulties in such machines, my invention seeks to obviate them; and the nature of it consists, in combination with a stationary lower inclined feed-board, of a variable or adjustable inclined preparatory feed-plate or board; likewise, in a guide-bar provided with a turn-over plate on the second or lower feed-board; and, furthermore, in a fixed gate at the bottom of the lower feed-board, with a divider or guide controlled by a spring, and in a novel arrangement of a slot or slots in said board, all of which, acting either separately or in unison, serve to accomplish the ends in view, as hereinbefore referred to.

Referring to the accompanying drawing, A represents the supply-box, in which the spangles to be fed to the clinching-mechanism are placed; B, a preparatory inclined feed-board, and C a lower inclined feed-plate. This latter device, though it may have its inclination varied or adjusted in common with that of the upper feed-plate B, and, it may be, supply-box A, by means of an adjustable rod, D, is designed, after being so set, to have a fixed inclined position, as it is found that such insures greater certainty of a proper run or feed of the spangles to or against the devices arranged thereon or in connection therewith for dividing, directing, or turning and delivering the spangles, while to vary the inclination of the feed, as is from time to time necessary during the working of the machine, the preparatory board B has its inclination made adjustable by means of a rod, E, fitted to slide on the main rod D, and secured by a set-screw, *a*, and the supply-box A may be made similarly adjustable by means of a rod, F, held at any desired point on the rod E by a set-screw, *b*. Furthermore, to regulate the supply and run or feed of the spangles, I furnish the supply-box A with a sliding gate, G, adjustable by screw and slot from above, or otherwise, to regulate and determine the delivery of the spangles from the supply to the preparatory-board B, adjustable, in respect to its inclination, as described, and which is provided with an oblique guide, H, the slope or obliquity of which may be varied by a screw-attachment, *c*, or otherwise, to further regulate the feed or run of the spangles to the lower board C. This second or lower inclined delivery-plate or board C, which, as before stated, is designed in general working to have a permanent inclination, is provided with, in moderately close proximity to its one side or edge, a guiding-bar, I, having a slot, *d*, in the board beneath it for the escape of dust and dirt, and which guiding-bar has connected with it, at or near its bottom, a turn-over plate, J, on the inner side of which is a slot, *e*, that, in connection with a divider, K, performs, as will be hereinafter described, an important function. This divider projects through the rim *f* of the lower feed-board, on the opposite side of the slot *e*, to which is the turn-over plate J, and hung on a pivot, as at *g*, is controlled by a spring, *h*, and, in addition to its functions as a divider, lifts or may be lifted in case of clogging by dirt or spangles of an extreme size or shape. Otherwise this arrangement, in connection with a

suitable opening through the rim *f*, forms a fixed gate for and to control the delivery of the spangles. On the opposite side of the divider K, to which is the slot *e*, is an opening, *i*, and, on the reverse or outer side of the turn-over plate J and guiding-bar I, an opening, *k*, both communicating by a suitable chute or chutes N with a receiving-box, L. M is a grooved passage or way to conduct, as in other machines, the spangles in regular order, as they are passed from the devices before named to the clinching-punch P, operated by a lever, O, in the ordinary or any suitable manner for insertion of the spangles and securing of the hoops and tapes by them, as has heretofore been done.

The advantages of the construction and operation of the devices for regulating the feed, as herein described, having already been specified, it will suffice, in conclusion, to state that such spangles that, in their feed down the inclined board C, assume the position represented for the spangle *s*, as represented by black lines in fig. 2, and directed by the guiding-bar I, are separated from the rest, and led, by the tremulous motion of the machine, through the fixed gate at the bottom of the board C directly and in proper order into the grooved passage M, while such spangles as assume the position shown for the spangle *s*, by red lines, are caught by their one prong by the turn-over plate J and set or turned over into a right position to pass through the fixed gate and enter the grooved passage M, whereas such spangles as occupy the position for the spangle *s*, shown by blue lines, are, through their bodies entering the slot *e*, and by the action of the divider, delivered by the chute N into the receiving-box L, as are all other spangles assuming other improper positions, or of extreme size or shape, and all surplus spangles, the openings *i* and *k* furnishing a ready escape for them. In this way are stoppages of the machine for adjustment rendered less necessary, less waste and loss of time is incurred, and the spangles, if even assuming a wrong position at first, are fed in proper order for clinching.

What I claim as my invention, and desire to secure by Letters Patent, is—

1. The combination, with a supply-box or hopper, A, and stationary inclined feed-board C, of the preparatory or intermediate feed-board or plate B made adjustable as regards the inclination of its surface, substantially as specified.

2. The turn-over plate J, in combination with the guide-bar I, for operation essentially as and for the purpose or purposes herein set forth.

3. The arrangement of the slot *e* in the inclined feed-board or plate C, with relation to the divider K, for action together, as herein set forth.

4. The divider K, hinged at its outward end, so as to be capable of being raised for the passage of the dirt or clearance of an imperfect spangle without removing the gate, substantially as specified.

J. JENKINSON.

Witnesses:

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G. W. REED.