

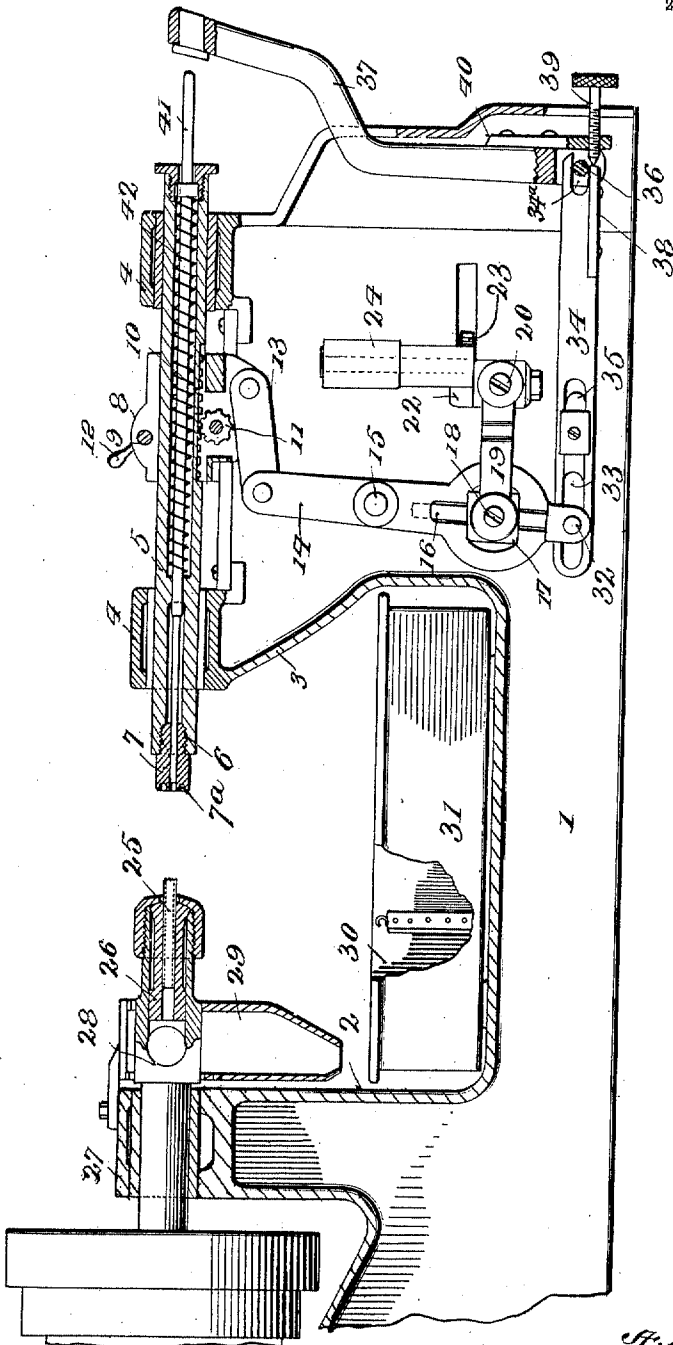
A. FEYK & F. DRDA.
 BUTTON BLANK CUTTING MACHINE.
 APPLICATION FILED AUG. 17, 1909.

983,814.

Patented Feb. 7, 1911.

2 SHEETS—SHEET 1.

Fig. 1.



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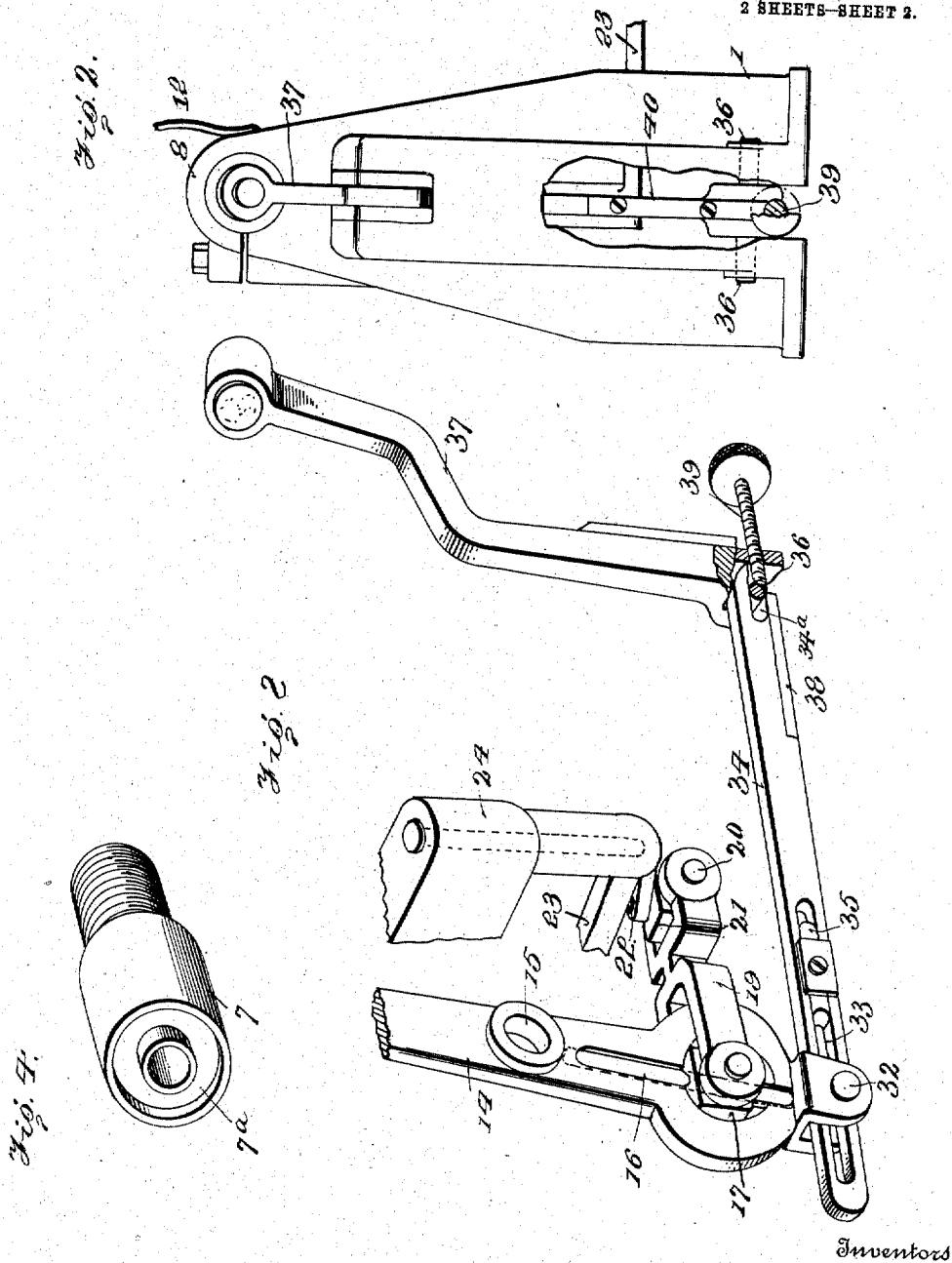
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2 SHEETS-SHEET 2.



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UNITED STATES PATENT OFFICE.

ANTON FEYK AND FRED DRDA, OF LONG ISLAND CITY, NEW YORK, ASSIGNORS TO
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BUTTON-BLANK-CUTTING MACHINE.

983,814.

Specification of Letters Patent.

Patented Feb. 7, 1911.

Application filed August 17, 1909. Serial No. 513,255.

To all whom it may concern:

Be it known that we, ANTON FEYK and FRED DRDA, citizens of the United States, residing at Long Island City, in the county of Queens and State of New York, have invented certain new and useful Improvements in Button-Blank-Cutting Machines, of which the following is a specification.

This invention comprehends certain new and useful improvements in button blank cutting machines designed particularly for use in the manufacture of pearl buttons, and the present invention has for its primary object improved means for ejecting or striking the blanks from the cutter.

The invention consists essentially in a button blank cutting machine in which is embodied a blank striking or ejecting pin arranged to strike the blanks rearwardly from the cutter at the completion of the cutting operation, the blank being discharged by being pushed through the cutter to the rear end thereof, and automatically dropped into any suitable receptacle, instead of striking the blank out of the cutting end of the cutter as heretofore practiced, the cutter teeth being thereby preserved, it being understood that in grinding the cutting edge of the cutter is turned slightly toward the center of the cutter, and in striking the blank outwardly instead of inwardly through the cutter, the cutting edge is liable to be dulled.

Another advantage of our present invention which is produced by striking the blank into the cutter instead of ejecting the same from the cutting edge resides in the fact that the blank obviously goes inwardly more freely than outwardly thereby rendering the ejecting operation easily performed and positively at every operation, thereby saving time and exertion.

A further advantage is that the operation of moving the blank rearwardly into the cutter instead of ejecting it forwardly therefrom, avoids chipping off the edge portion of the blank.

With these and other objects in view, our invention consists in certain constructions, arrangements and combinations of the parts that we shall hereinafter fully describe and claim.

For a full understanding of the invention, reference is to be had to the following de-

scription and accompanying drawings in which:

Figure 1 is a longitudinal sectional view of a button blank forming machine embodying the improvements of our invention. Fig. 2 is a rear elevation thereof with parts broken out; Fig. 3 is a fragmentary perspective view of a portion of the actuating mechanism and illustrates the means for projecting the blank ejecting pin during the forward movement past the feed shaft; and Fig. 4 is a detail perspective view of a button blank holder.

Corresponding and like parts are referred to in the following description and indicated in all the views of the accompanying drawings by the same reference characters.

The casing or frame 1 of our improved pearl button blank cutting machine may be of any desired design and construction and in the present instance embodies opposing standards 2 and 3 in which the operating parts of the machine are mounted. The standard 3 is provided with spaced bearings 4 in which the feed shaft 5 is mounted for a longitudinal reciprocating movement, the feed shaft being provided at one end with the usual socket 6 in which the shell 7 is secured.

8 designates a split sleeve which is adjustably mounted upon the shaft 5 between the two bearings 4, and which is intended to be clamped to the shaft by means of a clamping bolt 9. The shaft 5 is formed with a rack 10 the teeth of which are in meshing relation with a spur pinion 11 journaled in the sleeve operated by means of a handle 12. By this means the shaft 5 may be projected or retracted relative to the sleeve 8 by merely loosening the bolt 9 and turning the handle 12 in one direction or the other. After this adjustment has been effected, the bolt is tightened up again to hold the sleeve and shaft rigidly connected together.

A link 13 is connected at one end to the sleeve 8 underneath the shaft 5, the opposite end of said link being connected to a vertically disposed lever 14 fulcrumed intermediate of its ends in the standard 3 as indicated at 15. The lower arm of the lever 14 is slotted and is provided in said slot with a vertically disposed post 16 upon which a block 17 is mounted, said block being formed

with oppositely projecting studs 18 upon which the bifurcated forward end of a link 19 is mounted, the rear bifurcated end of said link being correspondingly mounted upon studs 20 projecting outwardly from another block 21. This last named block 21 is connected to the crank 22 of a hand lever 23 mounted within the standard as indicated at 24.

25 designates the cutter which is hollow as shown and which is mounted in axial alinement with the blank holder 7, the cutter being mounted within the hollow portion of a shaft 26 mounted within a bearing 27 on the standard 2 and arranged to be operated by pulleys or the like. The shaft 26 is formed with an aperture 28 designed to communicate with a depending discharge chute 29 leading to and terminating a short distance above the compartment 30 of a collecting chamber 31 supported within the framework between the two standards 2 and 3.

The lever 14 carries at its lower extremity a transversely extending pin 32 which is designed to work within a slot 33 formed in a longitudinally disposed arm 34 mounted within the standard 3, the pin being adapted to strike an adjustable block 35 mounted in the slot 33, the adjustment of said block permitting it to be struck by the pin 32 near the end of the movement of the latter in the cutting operation so as to vary the movement of the arm 34 as required by the particular work in hand. The outer end of the arm 34 is recessed as at 34^a to take over and thereby be supported upon a pivot stud 36 upon which an upwardly projecting rocker arm 37 is fulcrumed. A bar 38 is secured to the lower edge of the arm 34 at the outer end thereof underneath the pivot stud 36 and is designed to engage the inner end of a set screw 39 working in and carried by another bar 40 secured to the rear edge of the rocker arm 37 and projecting below the pivot pin thereof. By this means it will be seen that when the handle lever 23 is pulled in a direction to move the lower arm of the lever 14 in the direction of the rocker arm 37 the pin 32 will at the proper time strike the block 33 and cause the arm 34 to push outwardly against the screw 39 so as to move the upper end of the rocker arm 37 in a direction to strike against and move the ejecting pin 41 longitudinally of the hollow shaft 5 in which it is mounted in a direction for the end of the pin 41 to enter the hollow cutter 25, thereby pushing the blank rearwardly in the cutter. The blank will finally drop through the aperture 28 and be dropped through the chute 29 into the compartment 30 of the receptacle 31. A spring 42 encircles the blank ejecting pin 41 and serves to return the ejecting parts to their normal positions upon the

movement of the handle 23 in the reverse direction and the corresponding reverse movement of the lever 14.

Preferably the holder 7 is formed with a groove 7^a permitting the cutter 25 to sink into it thus increasing the motion and allowing the operation of striking out the blank to be performed.

From the foregoing description in connection with the accompanying drawings, the operation of our improved blank cutting machine will be apparent. In the practical use of the device, it is obvious that when the handle 23 is pulled in a direction to move the shaft 5 toward the cutter 25, the initial movement of the shaft will be unaccompanied by any movement of the arm 34, the latter remaining stationary owing to the slotted connection between the lever 14 and arm, but at the proper time, namely at the completion of the cutting operation and during the continued forward movement of the shaft 5 and at the completion of the movement thereof, the pin 32 will strike the block 33 and cause the arm 34 to swing the rocker arm 37 into engagement with the ejecting pin 41 and the latter will move against the tension of the retracting spring 42 and protrude from the holder 7 projecting into the cutter 25 so as to eject the blank as above described.

It is to be observed that not only by this arrangement and construction of parts and operation of the same are the advantageous results accomplished that are set forth at the outset of the specification, but in addition thereto, by the use of a receptacle such as that illustrated in Fig. 1 designated 31, containing two compartments, the blanks may be deposited in the compartment and be kept entirely separate from the dust and waste, thereby saving the labor of sorting the blanks from the dust or the like.

Having thus described the invention, what is claimed as new is:

1. In a button blank cutting machine, a feed shaft arranged to move toward the cutter, means including a lever for actuating said feed shaft, a rocker arm, an ejecting pin mounted in the feed shaft and arranged to be engaged by said rocker arm, and a slotted arm mounted to move said rocker arm, the lever being provided with a pin working in the slot of said slotted arm.

2. In a button blank cutting machine, a feed shaft arranged to move forward toward the cutter, means including a lever for actuating the feed shaft, a rocker arm, an ejecting pin mounted in the feed shaft and arranged to be engaged by said rocker arm, a slotted arm adapted to move said rocker arm, the lever being provided with a pin working in the slot of said slotted arm, and an adjustable block mounted in said slot and adapted to be engaged by said pin.

3. In a button blank cutting machine, a
cutter, a feed shaft arranged to be moved
toward the cutter, an ejecting pin mounted
in said feed shaft, a rocker arm arranged to
5 engage said pin and move the same, a stud
upon which said rocker arm is mounted,
means including a lever for actuating said
feed shaft, the lever being provided with a
pin, a slotted arm in the slot of which said
10 pin is received, a bar secured to the outer
end of said slotted arm, a bar secured to the
rear edge of the rocker arm, and a set screw
working in said last named bar below the
pivot stud of the rocker arm and designed
15 for engagement by the first named bar as
and for the purpose set forth.

4. In a button blank cutting machine, a
cutter, a feed shaft arranged to be moved
toward the cutter, an ejecting pin mounted

in said feed shaft, a rocker arm arranged to 20
engage said pin to move the same, a stud
upon which said rocker arm is mounted,
means including a lever for actuating said
feed shaft, the lever being provided with a
pin, and a slotted arm in the slot of which 25
said pin is received, the slotted arm being
also formed with a recess by which it is
mounted on said stud, said arm being adapt-
ed to be moved by said lever so as to in turn
move the rocker arm in a direction to strike 30
the ejecting pin.

In testimony whereof we affix our signa-
tures in presence of two witnesses.

ANTON FEYK. [L. S.]
FRED DRDA. [L. S.]

Witnesses:

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FRANK LOU RUSS.