Sheet 1,
2 Sheets.

M. Ferre.

Making Buttons.

No. 2,740. Patented Jul. 28, 1842.

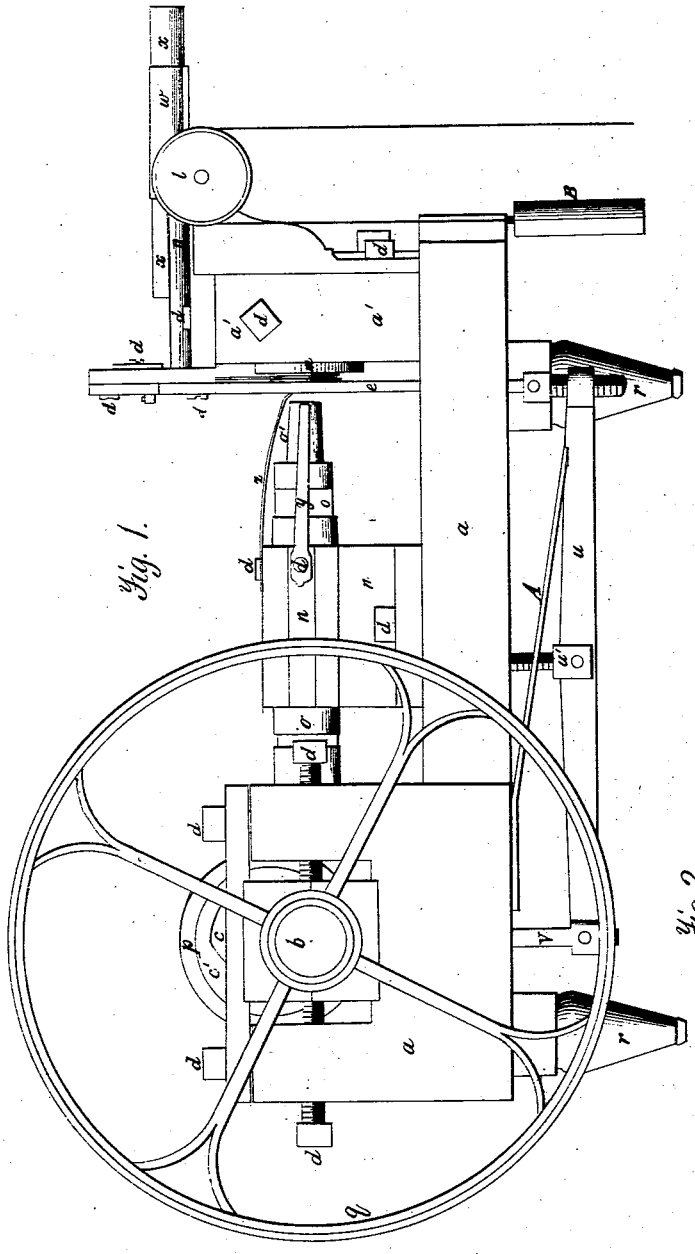

Fig. 1.

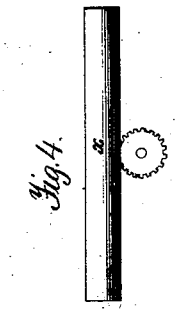

Fig. 4.

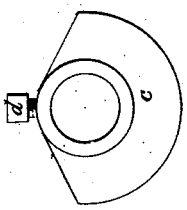

Fig. 3.

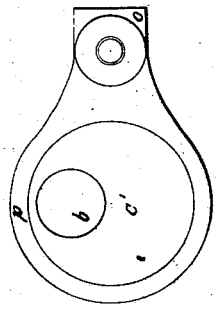

Fig. 2.

THE GRAPHIC CO. PHOTO-LITH. 39 & 41 PARK PLACE, N.Y.

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M. Ferre.

Making Buttons.

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Fig. 8.

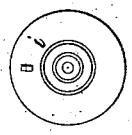

Fig. 7.

Fig. 9.

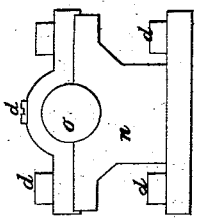

Fig. 6.

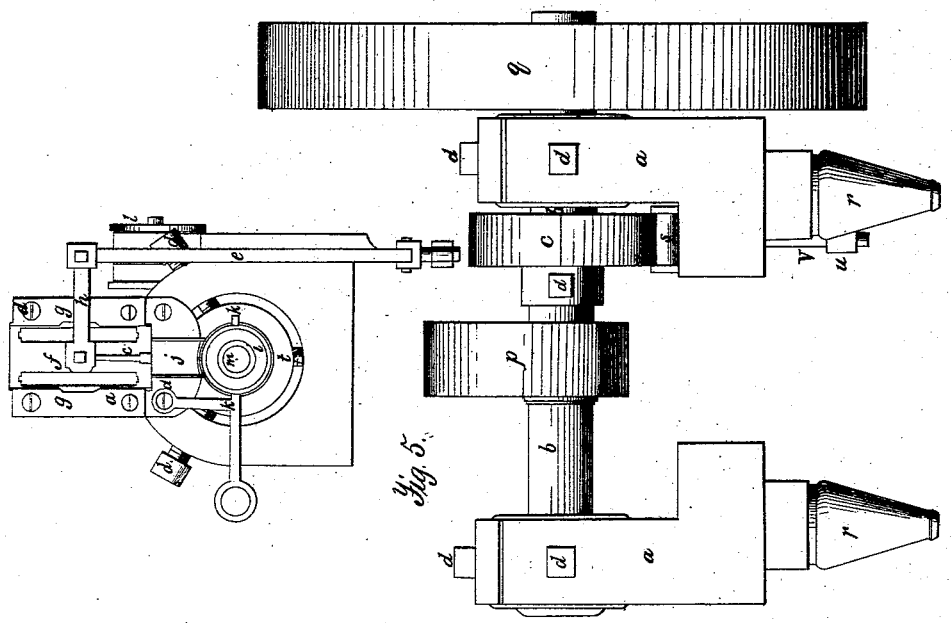

Fig. 5.

UNITED STATES PATENT OFFICE.

MOSES FERRE, OF WILLIAMSBURG, MASSACHUSETTS.

MACHINE FOR FORMING COLLETS, WASHERS, AND OTHER ARTICLES FOR THE MANUFACTURE OF BUTTONS AND OTHER PURPOSES.

Specification of Letters Patent No. 2,740, dated July 28, 1842.

To all whom it may concern:

Be it known that I, MOSES FERRE, of Haydensville, Williamsburg, Hampshire county, Massachusetts, have invented certain new and useful improvements in machines for forming collets, washers, and other articles from metallic disks for the manufacture of buttons and for other purposes; and I do hereby declare that the following is a full and exact description thereof.

The principal improvement in my machine consists in the manner in which I have constructed and arranged that part of the apparatus by which the feeding of the blanks into the die box is effected, and in which they are to be operated upon by the die and punch.

In the acompanying drawing, Figure 1, is a side elevation of the whole machine; Fig. 4, an end elevation at the back part thereof, and Fig. 6, a view of the inner face of the feeding apparatus, the die box and their appendages. The other figures represent individual parts in detail, like parts being designated by the same letters of reference.

a, *a*, is the frame of the machine, which may be in part of wood, but which I prefer to make altogether of metal; it is represented as supported upon feet *r*, *r*. The driving, or main, shaft *b*, *b*, has on one end a band wheel *q*, by which the motive power is to be communicated to it. The shaft *b*, carries a cam *c*, shown separately in Fig. 3; and also an eccentric *c'*, which is surrounded by a hoop, or ring, *p;* this latter is connected to the piston *o*, *o*, by a joint, as represented separately in Fig. 2, and operates as a crank, in a manner well known.

The piston *o*, slides in a box *n*, *n*, attached to the frame, and shown endwise in Fig. 9. The outer end of the piston *o*, is made to receive punches *o'*, of different forms, adapting them to the particular duty they are intended to perform; whether it be to cut a piece out from the center of a blank, to turn up a rim on its edge, or edges, or otherwise. The head *a'*, of the machine is also made to receive different die boxes *m*, one of which is shown separately at Fig. 7; these die boxes are held in place by set screws, in the usual manner; the several screws marked *d*, *d*, are set screws for this and other purposes.

I will now proceed to describe the manner of constructing the feeding apparatus, and the parts auxiliary thereto.

D, D, is a semi-cylindrical trough in which the blanks are placed edgewise.

x, *x*, is a follower which slides through a tube W, and is carried up against the blanks by the weight B, attached to a leather strap which passes around a roller *l*, the shaft of which roller forms a pinion that takes into a rack on the underside of the follower W, shown separately in Fig. 4. By this arrangement, the blanks are kept in contact with the feeding apparatus.

In Fig. 6, *f*, is what I denominate a saw-gate-feeder, which is made to slide up and down in grooved guide pieces, *g*, *g*. Against the back of this saw-gate-feeder the blanks are borne up by the follower W, and at every vibration of the gate one is carried down into the die box through the channel *j*, made of a suitable width and depth for that purpose. C, is a spring attached at its lower end to the gate, and carrying a pin, or catch, at its upper end, which pin passes through the gate and insures the bringing down of a blank. A cap *i*, is adapted to the face of the die box, and to the kind of blank to be operated upon; this cap is held in place by hooks, or catches, *k*, *k*, and may be shifted at pleasure. Between this cap and the die there is a space, coresponding with that of the channel *j*, for admitting the blank.

The following is the manner of vibrating the saw-gate-feeder. *u*, is a lever working on a fulcrum at *u'*, and which is made to vibrate by the cam *c*, that acts upon a roller S, on the upper end of the staff, or rod, *v*, which passes through an opening in the frame, and the lower end of which is connected to the lever *u*. From the opposite end of this lever ascends a rod, or staff, *e*, which carries the arm *h*, attached to it and to the gate *f*, which it raises in its ascent, and which is carried down by the spring A, bearing on the lever *u*. At every revolution of the cam *c*, there will, therefore, be a complete vibration of the feeding gate, and a blank will be brought down. On each side of the punch *o'*, there is a spring *y*, attached the box *n*, the ends of which curve inwards, in front of the punch, and serve to force off the collets from its end as it retracts from the die, and the spring *z*, causes them to drop down as they are forced off, and removes all danger of their flying back into the die box.

Having thus, fully made known the man-

ner in which I construct and arrange the respective parts of my improved machine for forming collets, washers, and other articles, from metallic disks, for the manufacturing of buttons, or for other purposes, what I claim therein as new, and desire to secure by Letters Patent, is—

The manner in which I have combined and arranged the respective parts constituting the feeding apparatus, as herein set forth; that is to say I claim, in combination, the trough D, with its follower; the gate *f*, with its spring catch C; the channel *j*, and the cap *i*, operated upon, and coöperating with each other, in effecting the purpose described, and substantially in the manner herein made known.

MOSES FERRE.

Witnesses:
WM. HUTCHINS,
S. WELLS.