N. J. MARSH.

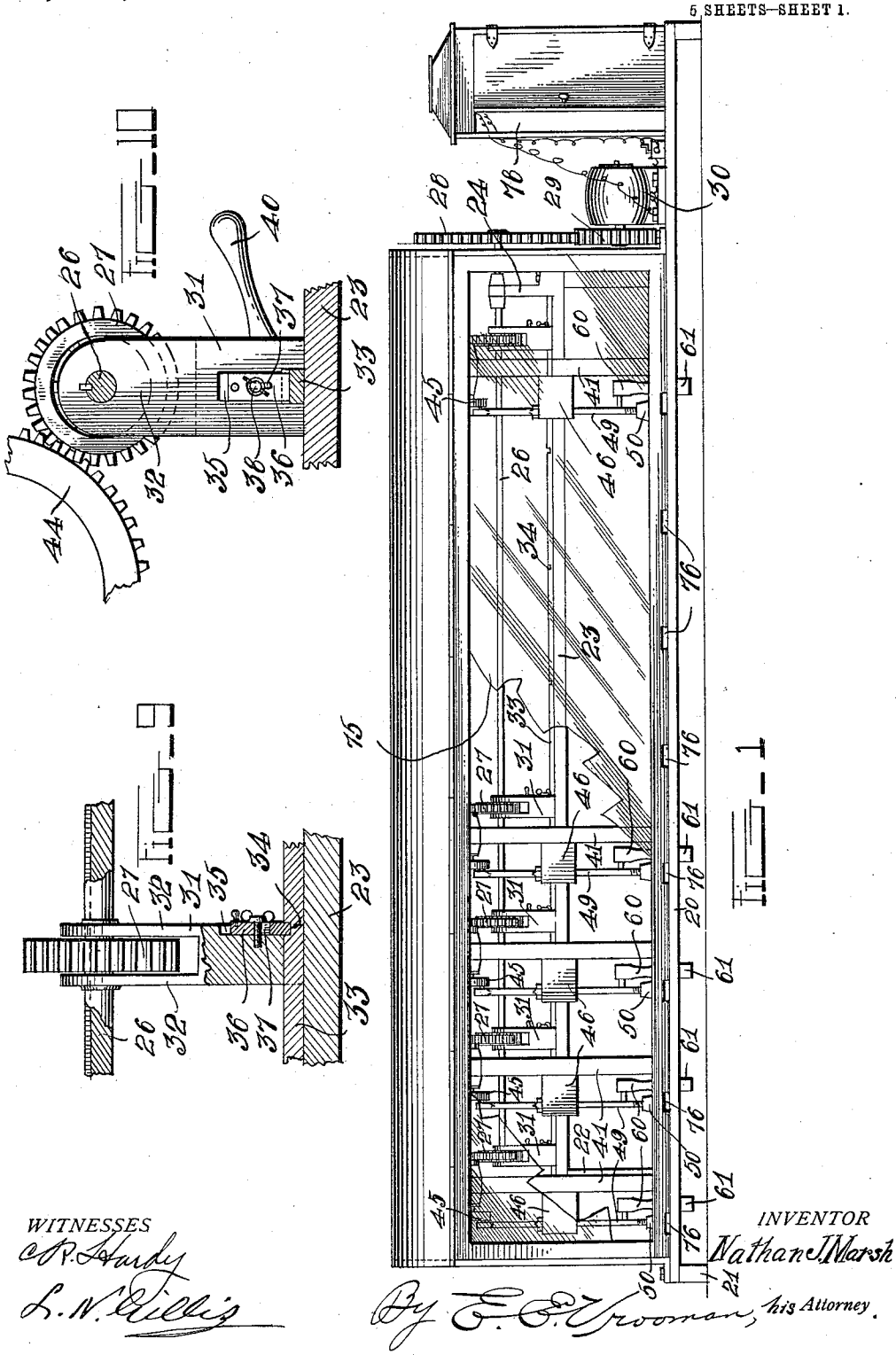
POSTAGE STAMP PERFORATING MACHINE.

APPLICATION FILED APR. 25, 1912.

1,052,680.

Patented Feb. 11, 1913.

5 SHEETS—SHEET 1.



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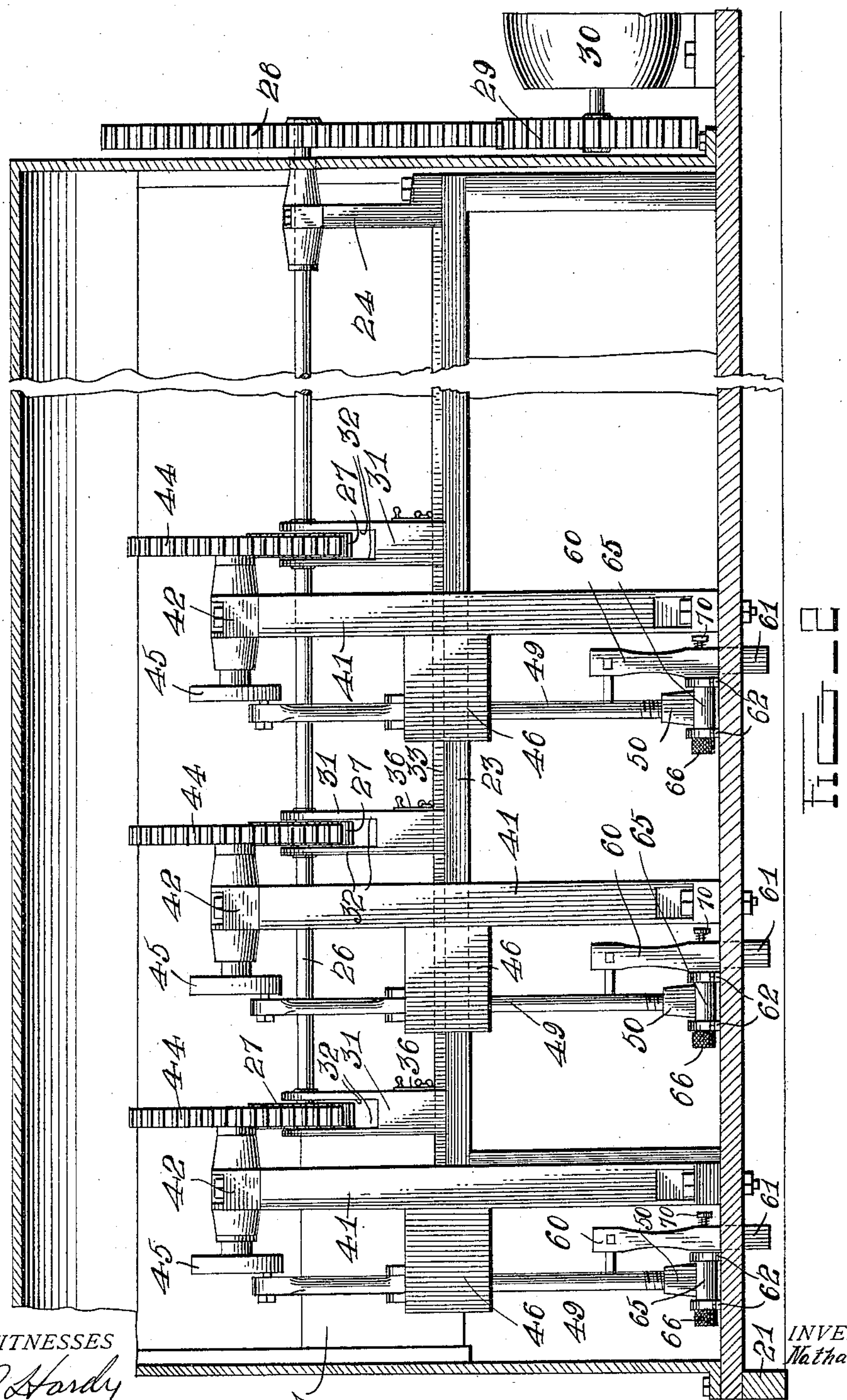
5 SHEETS—SHEET 2.



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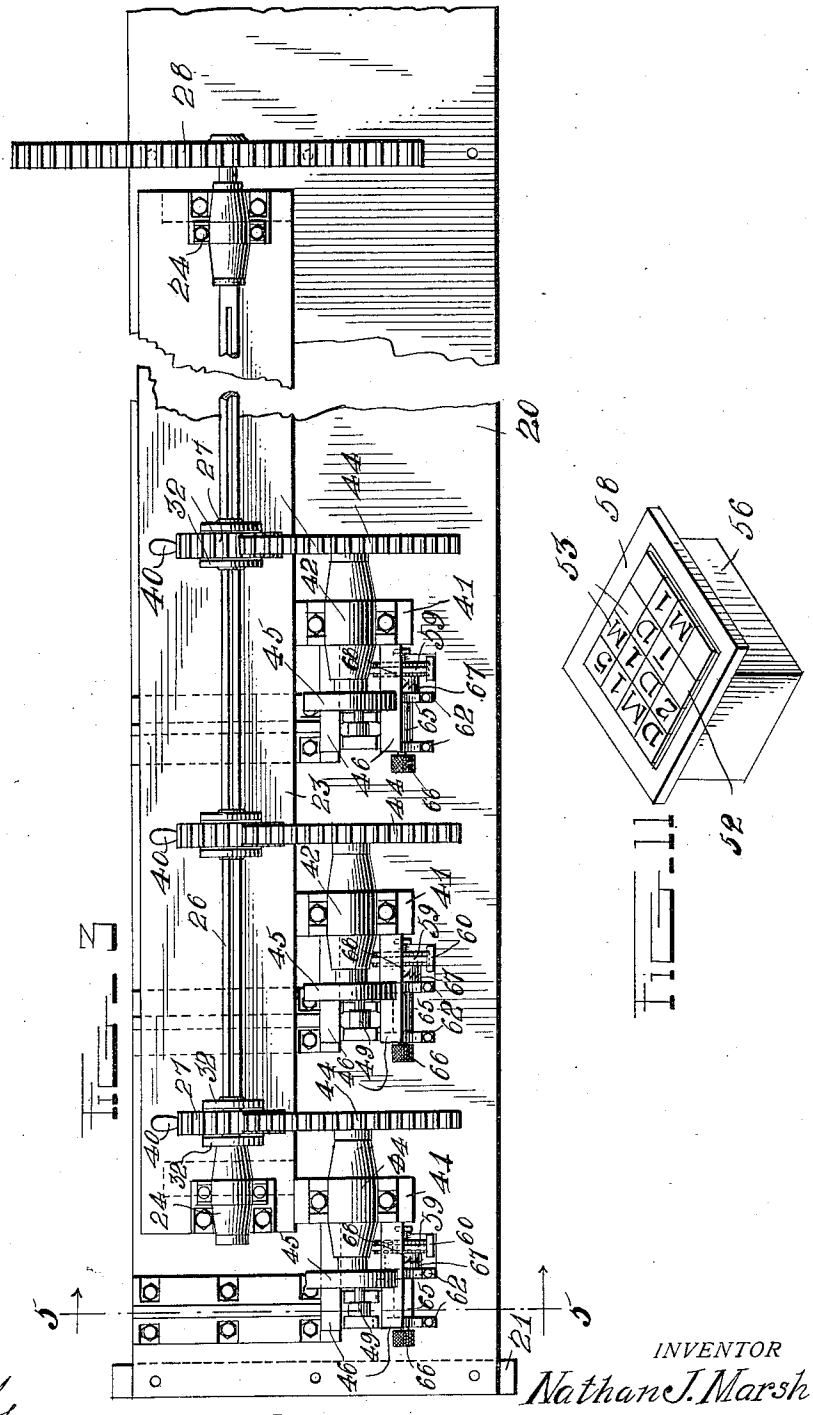

Fig. 11.

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5 SHEETS—SHEET 4.

Fig. 4

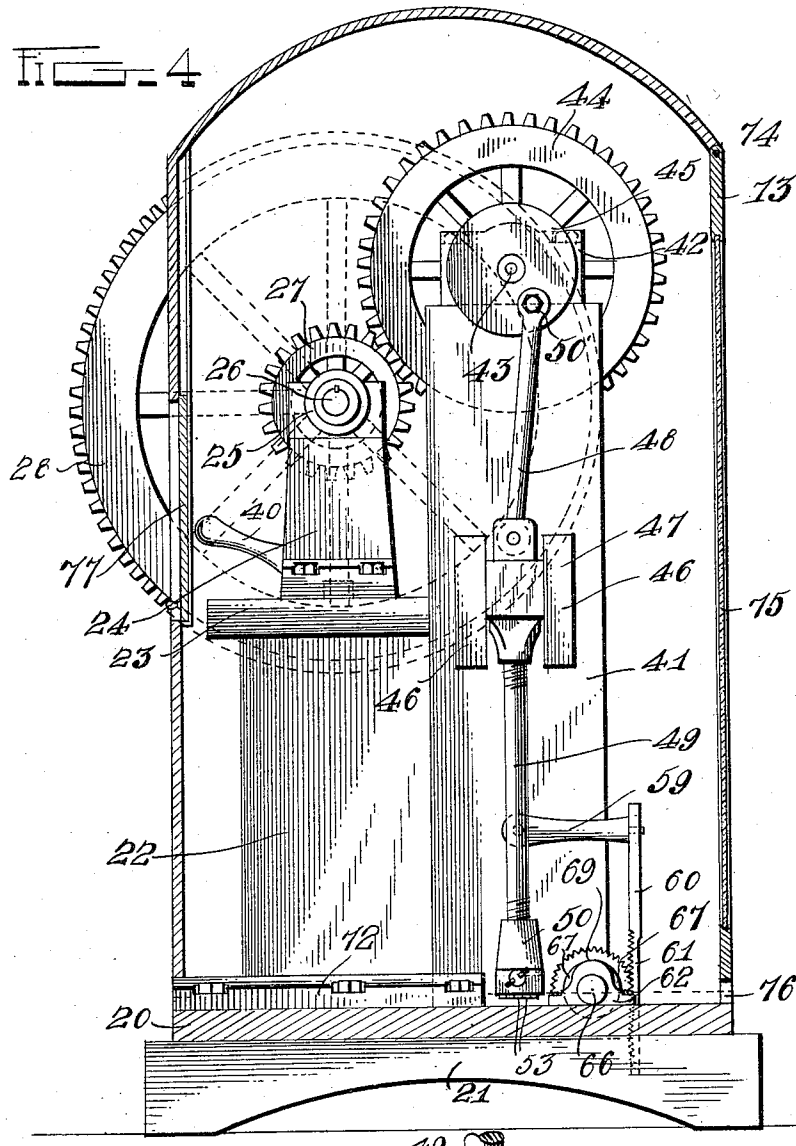
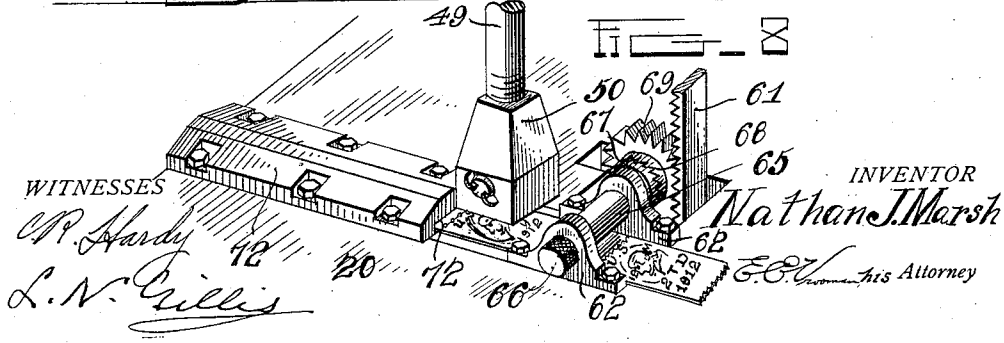


Fig. 8



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POSTAGE STAMP PERFORATING MACHINE.

APPLICATION FILED APR. 26, 1912.

1,052,680. Patented Feb. 11, 1913.

5 SHEETS—SHEET 5.

FIG. 5

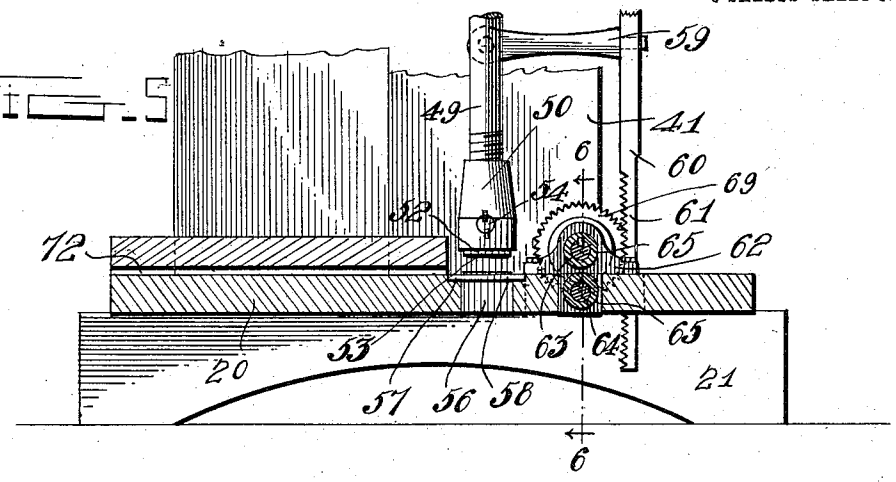


FIG. 6

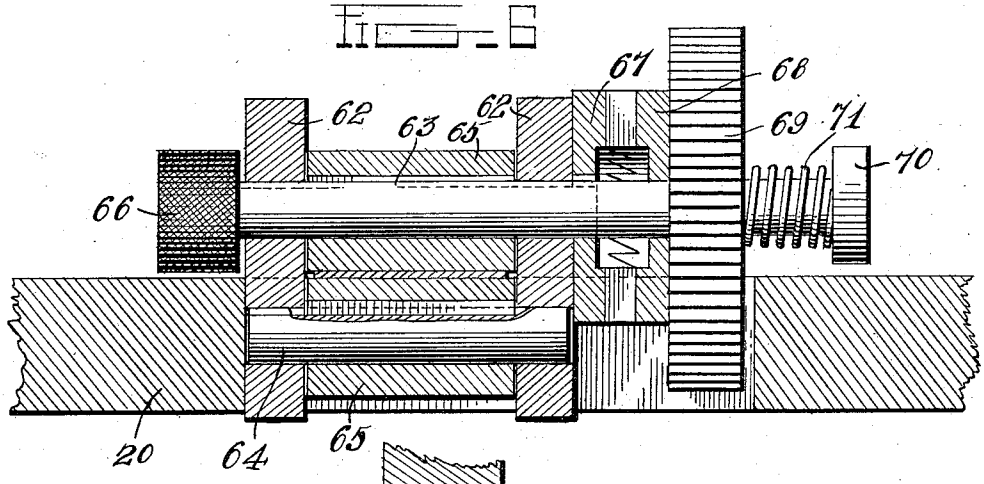
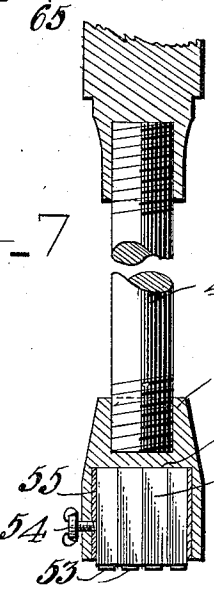


FIG. 7



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NATHAN JOSEPH MARSH, OF MEADOW CREEK, WEST VIRGINIA.

POSTAGE-STAMP-PERFORATING MACHINE.

1,052,680. Specification of Letters Patent. Patented Feb. 11, 1913.

Application filed April 25, 1912. Serial No. 693,144.

To all whom it may concern:

Be it known that I, NATHAN J. MARSH, a citizen of the United States, residing at Meadow Creek, in the county of Summers and State of West Virginia, have invented certain new and useful Improvements in Postage-Stamp-Perforating Machines, of which the following is a specification, reference being had therein to the accompanying drawing.

This invention relates to perforating machines and has special reference to a machine for perforating postage stamps, either for the purpose of private cancellation or for the prevention of the use of the stamps by others that the owners thereof.

The principal object of the invention is to improve and simplify the general construction of devices of this character and to provide a plurality of simultaneously or independently operated perforating devices having means for perforating separate and individual marks on different values of stamps.

A second object of the invention is to provide an improved device for feeding the stamps successively under the perforator automatically.

With the above and other objects in view, this invention consists in general of certain novel constructions, combinations and arrangements of parts, as will be hereinafter fully described, illustrated in the accompanying drawings, and specifically claimed.

In the accompanying drawings, like characters of reference indicate like parts in the several views, and:—Figure 1 is a side elevation of a device constructed in accordance with this invention, a portion of the glass front thereof being broken away better to disclose the operative parts. Fig. 2 is an enlarged detail section through the casing of the device, disclosing the operative parts. Fig. 3 is a plan view of the device with the casing removed. Fig. 4 is an end view of the device with the casing shown in section. Fig. 5 is an enlarged detail section of the lower part of the device, on the line 5—5, Fig. 3. Fig. 6 is an enlarged detail section on the line 6—6, Fig. 5. Fig. 7 is an enlarged detail partly in section showing the manner of retaining the perforating punches in the punch head. Fig. 8 is a detail perspective view of the lower part of the perforating device. Fig. 9 is a detail face view of a certain driving pinion used in connection herewith showing the manner in which it is held in adjusted position. Fig. 10 is a detail side view of the same. Fig. 11 is a view of the punch head in perspective.

In the present embodiment of the device there is provided a base 20 which is supported in spaced relation to the table or floor on which the device is being used by means of strips 21. Extending up from the base 20 are standards 22 whereon is held a platform 23 having at each end thereof a standard 24. The upper ends of the standards 24 are provided with journal bearings 25 and revolubly mounted in these bearings is a shaft 26 whereon is a series of pinions 27, the latter being splined to permit of movement longitudinally of the shaft while at the same time as the shaft is revolved so will these pinions be revolved. On the end of the shaft 26 is a gear 28 wherewith meshes the driving gear 29 of a suitable motor 30. Slidably mounted on the platform 23 are shifters 31, each provided with a pair of arms 32 which embrace the respective pinion 27. These shifters 31 are each provided with a centrally disposed groove which travels over a rib 33 extending longitudinally of the platform 23 and this rib is provided at spaced intervals with suitable notches 34. Each of these shifters 31 is provided in one face with a recess 35 wherein is slidably mounted a locking plate 36 provided with a slot 37 through which passes a thumb screw 38 for the purpose of holding the locking plate in adjusted position. For the purpose of moving the plate up or down a pin 39 is employed and in order to move the shifter longitudinally the same is provided with a handle 40. At spaced intervals along the base 20 are standards 41 and on the top of each of these standards is a bearing 42 wherein is mounted a shaft 43 having one end provided with a gear 44 and the other end has a crank disk 45 provided with a crank pin 50. Each of the gears 44 is adapted to mesh with one of the pinions 27 when the latter is moved into proper position by its respective shifter. It is preferred that there should be as many of the pinions 27 as there are of the gears 24 although if it be only desired to operate certain of the gears 44 at a time the number of gears 27 may be reduced to cover just the number of gears 44 which it is desired to operate. Mounted on each of the stand-

ards 41 are spaced guides 46 and between these guides 46 moves a cross head 47 which is connected to the crank pin 50 by a pitman 48. Fixed to the cross head 47 is a plunger 49 on the lower end whereof is secured a head 50′ provided with a recess 51 opening downward therefrom, and in this recess 51 is adapted to be held a series of punches 52 having raised characters 53 resembling stencils held thereon. The punches are held in position by means of a set screw 54 which presses against a follower plate 55 and frictionally engages the punches with each other and with the opposite wall of the recess 51. Beneath each of the heads 50′ the base is provided with an opening 56 having a rabbet 57 formed around its upper periphery for the reception of a die plate 58 provided with openings corresponding to the characters held in the head 50′. Extending laterally from the plunger 49 is an arm 59 whereto is fixed a downwardly extending bar 60 provided with rack teeth 61 to constitute a rack bar. Mounted on the base adjacent each of the standards 41 is a pair of bearing plates 62 wherethrough passes a shaft 63 and these bearing plates are likewise provided with bearing openings to receive a similar shaft 64 positioned below the first mentioned shaft. On each of these shafts between the plates is a suitable friction roller 65 and the upper roller is keyed or otherwise secured to the shaft to revolve therewith. The shaft 63 is provided at one end with a knurled head 66 and fixed on this shaft adjacent the plate 62 nearest the remaining end is a ratchet clutch member 67 which is normally engaged by a similar ratchet clutch member 68 attached to a gear 69 which meshes with the rack bar 60. At the end of the shaft 63 there is provided a collar 70 and between the collar 70 and the gear 69 is a spring 71 which normally urges the ratchet members 67 and 68 into driving engagement, it being understood that the ratchet member 68 and the gear 69 are free to revolve in one direction without revolving the shaft 63. Adjacent each of the die plates 58 is a guide 72 wherethrough the stamps may be fed to respective friction rollers 65. All of these parts, with the exception of the motor, are preferably incased in a casing 73 having the upper part of the rear and the top hinged to the front as at 74 so that access may be readily had to the working parts. Furthermore, the front of this casing is provided with a suitable glazing 75 which permits the operation to be observed and with suitable openings 76 for the egress of the punched stamps. At the rear of the casing there is also provided a plurality of small sliding doors 77 to permit the operator to have access to the handles 40 in order to throw one or more of the punching devices into operation. At one end of the machine there is furthermore provided a suitable locker or closet 78 for the reception of tools, stamps, or other desired material.

In the operation of the device the operator first of all selects the proper punches and die plate and arranges the same in the head and in the recess. He then opens one of the rear doors 77 and slides the shifter to such position that the gears 27 and 44 cooperate. The operator then feeds a strip of stamps through the respective guide 72 until one of the stamps is in position to be engaged by a punch. Then upon starting the motor the punch will come down upon the stamp and perforate the same while at the same time the rack bar will rotate the gear 69 in such direction as to leave the roller 65 stationary. Upon the next feeding of the stamp the first stamp engages in the rollers as the same are rotated by the rack bar 60, moving upward and causing the clutch members 67 and 68 to rotate together. Thereafter this operation will be continued as long as stamps are supplied, and it will be obvious that as many of the perforating devices may be used at the same time as may be necessary since the stamps can be manufactured in long rolls and continuously fed from these rollers.

There has thus been provided a simple and efficient device of the kind described, and for the purpose specified.

It is obvious that many minor changes may be made in the form and construction thereof, without departing from the spirit of the invention, and it is therefore not wished to confine the invention to the exact form herein shown and described but it is wished to include all such as properly come within the scope claimed.

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

1. In a stamp perforating machine, a base, a pair of standards extending upward from said base, a platform carried by said standards, guides extending longitudinally of said platform, and bearings supported in spaced relation above said platform, a shaft rotatable in said bearings, a gear splined on said shaft, a shipper for moving said gear along said shaft, a further standard extending upward from the base, bearing on the upper end of said standard, a shaft extending through said bearing, a gear on said shaft, a crank on said shaft, spaced guides on said standard, a cross head slidable vertically between said guides, a pitman connecting said cross head and crank, and a reciprocating plunger carrying perforating devices fixed to said cross head.

2. In a stamp perforating machine, a base, a pair of standards extending upward from said base, a platform carried by said stand-

ards, guides extending longitudinally of said platform, bearings supported in spaced relation above said platform, a shaft revoluble in said bearings, a gear splined on said shaft, a shipper for moving said gear along said shaft, a further standard extending upward from the base, bearing on the upper end of said standard, a shaft extending through said bearing, a gear on said shaft, a crank on said shaft, spaced guides on said standard, a cross head slidable vertically between said guides, a pitman connecting said cross head and crank, a reciprocating plunger carrying perforating devices fixed to said cross head, means to lock said shipper in position, and a feeding device operable through the reciprocation of the cross head.

In testimony whereof I hereunto affix my signature in presence of two witnesses.

NATHAN JOSEPH MARSH.

Witnesses:
H. M. BURKE,
WM. DENT.