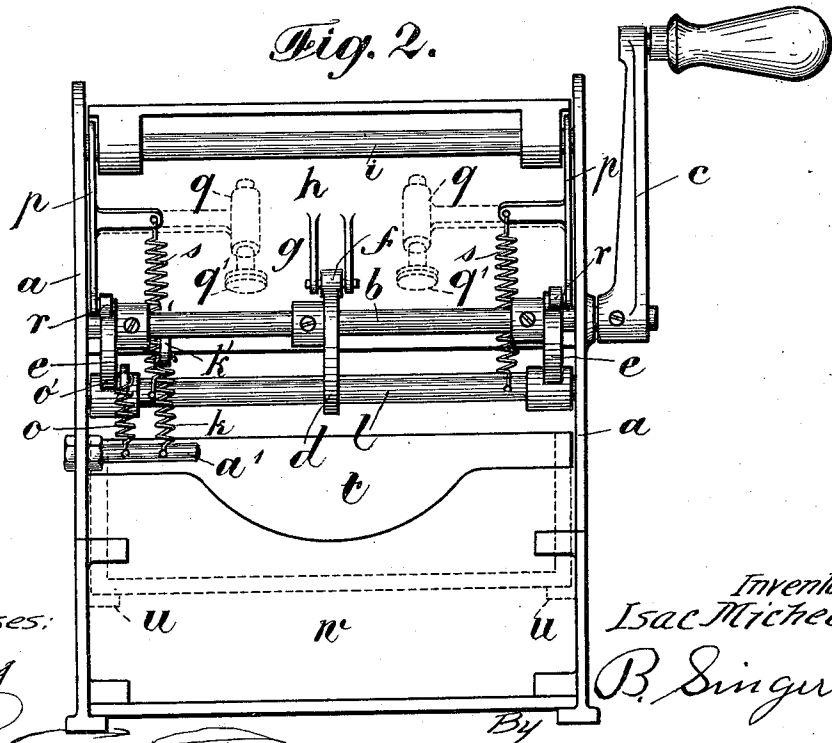
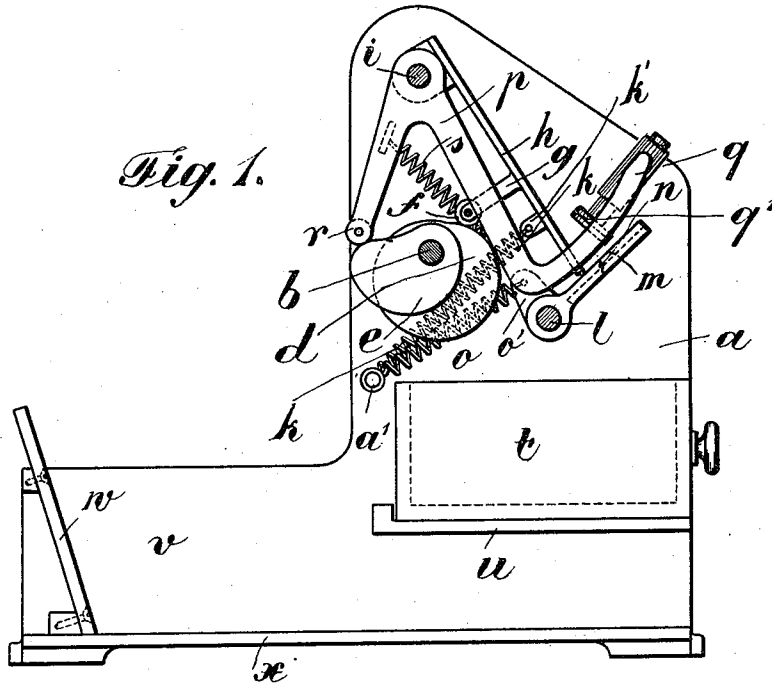


I. MICHEL.
MACHINE FOR OPENING ENVELOPS.
APPLICATION FILED MAR. 17, 1911.

1,013,201.

Patented Jan. 2, 1912.

2 SHEETS—SHEET 1.



Witnesses:

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Everett Lancaster

Inventor:
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By

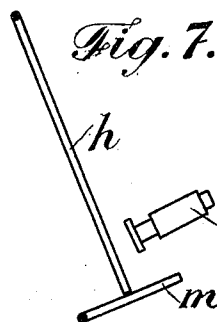
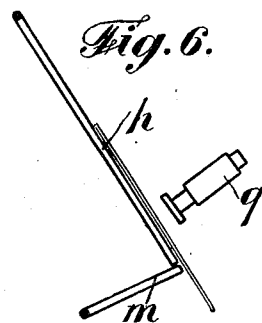
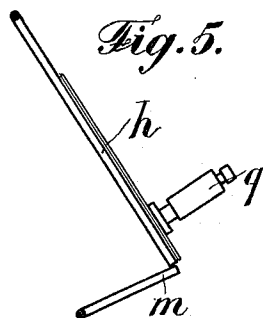
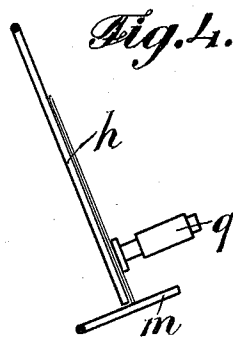
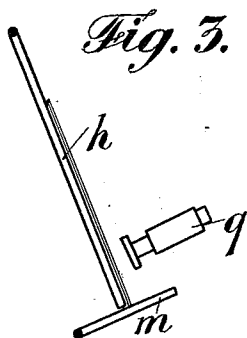
Attorney.

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2 SHEETS—SHEET 2.



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MACHINE FOR OPENING ENVELOPS.

1,013,201.

Specification of Letters Patent.

Patented Jan. 2, 1912.

Application filed March 17, 1911. Serial No. 615,043.

To all whom it may concern:

Be it known that I, ISAC MICHEL, a subject of the German Emperor, residing at Frankfort-on-the-Main, Germany, have invented a new and useful Improvement in and Relating to Machines for Opening Envelops; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

The invention relates to a machine for opening envelopes or the like by severing a small strip from one edge of the same; to this end the invention consists in a machine provided with a movable letter table, a hinged knife plate abutting against the same, and spring pressed members for holding the letter in place during the severing period.

In the accompanying drawings which illustrate the invention:—Figure 1 is a side elevation of the machine, the left side wall being removed. Fig. 2 is a rear elevation, and Figs. 3 to 7 show the different positions of the letter table, knife plate and pressure device, during the severing of a strip from the letter envelop.

Referring to Figs. 1 and 2 the machine consists of two side walls *a* and a bottom plate *x*. In the side walls there is mounted a shaft *b* carrying a crank *c*, a cam disk *d*, and two cams *e*, the latter being both of the same shape. The cam disk *d* is engaged by a roller *f* rotatably mounted in a bracket *g* secured to a table *h* hinged on a shaft *i* mounted in the side walls *a*. A spring *k* attached at one end to a bolt *a*¹ secured to one of the side walls, and engaging with its other end in an eye *k*¹ on the table *h* tends to keep the roller *f* in engagement with the cam disk *d*. As shown in Fig. 1 the parts described are so positioned relative to one another that the table *h* occupies an inclined position.

Against the lower edge of the table *h* there abuts a plate *m* secured to a shaft *l* mounted in the side walls *a*. The said shaft carries a lever *o*¹ which is engaged by a spring *o*, the other end of which is fastened to the bolt *a*¹. The spring tends to keep the plate in contact with the lower edge of the table *h* in a position at a right angle to the surface of the same. The plate *n* is provided with a flat knife *n* secured

by screws or the like to the upper surface of the plate *m* so that it protrudes over the same for a distance equal to the thickness of its blade. Flush with the blade there is provided a flange at one side of the plate *m* against which flange the table abuts, so that a small space is left between the lower edge of the same and the surface of the plate *m* which space corresponds to the breadth of the strip to be severed from the envelop.

The shaft *i* carries two bell-crank levers *p* one arm of each of which is provided with a roller *r* each engaging one of the cams *e* of the shaft *b*, while the other arm of each lever is connected with a pressure device *q*. Springs *s* secured on projections of the levers *p* and to the shaft *l* tend to keep the rollers *r* in engagement with the cams *e*. The pressure devices *q* attached to the curved ends of the long arms of the levers *p*, being of any known construction are provided with plates *q*¹ adapted to engage with an envelop laid upon the table *h* when the levers *p* are oscillated by the rotation of the crank *c*.

A receptacle *t* is arranged underneath the table and carried by guide flanges *u* integral with the side walls *a*, the receptacle being adapted to receive the severed strips. The letters to be opened can be put into the space at the rear end *v* of the machine and left between the walls *a*, the bottom *x*, and an inclined plate *w*.

The operation of the machine is as follows: An envelop or the like to be opened is fed by hand or by suitable automatic feed mechanism (not shown) upon the inclined table *h* so that the edge of the envelop to be cut away rests against the surface of the plate *m*. The crank *c* is then operated by the handle thereon and the shaft *b* is rotated. The cam disk *d* fixed to said shaft also rotates and lifts the table *h* through the intermediary of the roller *f*, and against the action of the spring *k*, while at the same time the cams *e* of the shaft *b* have imparted a downward movement to the pressure devices *q* through the intermediary of the bell-crank levers *p*, so that the envelop is firmly pressed upon the table. Now, owing to the shape of the cams *e* and the cam disk *d*, both the table *h* and the pressure devices *q* are simultaneously lifted until the edge of the envelop strikes the blade of

the knife. In further lifting the table *h* a small strip of the letter is severed corresponding in its breadth to the thickness of the blade secured to the plate *m*. While the severed strip falls over the shaft *l* into the receptacle *t* the upward movement of the table continues, but the pressure devices are now lifted more rapidly than the table so that they clear the letter which, when reaching the upper edge of the plate *m*, will slide over the same and fall into a basket placed in front of the machine. In further operating the handle of the crank *c* the movable parts of the machine return to their initial position and the operation described above recommences.

What I claim is:

1. In a machine for opening envelops, the combination of a supporting table, a crank shaft, a cam disk mounted on the shaft and adapted to actuate said table, a hinged knife plate, and a spring for pressing said plate against said table.
2. In a machine for opening envelops, the combination of an envelop supporting table, a shaft carrying the table pivotally, a knife plate, means for holding the envelop upon said table, and bell-crank levers mounted on said shaft and carrying said holding means.
3. In a machine for opening envelops, the combination of an envelop supporting table,

a knife plate, a flange on the same, pressing means for holding the envelop on said table, levers carrying said pressing means, a crank shaft, a cam disk on the same adapted to actuate the supporting plate, and cams on said shaft adapted to actuate said levers.

4. In a machine for opening envelops, the combination with a pivotally mounted supporting table, a hinged knife plate engaging one portion of the table, means pressing the envelop against the table during the cutting or opening of the envelop, and means causing relative movement of the table with respect to the knife plate to open and then cause discharge of the opened envelop.

5. In a machine for opening envelops, the combination with a downwardly inclined pivotally mounted supporting table, an upwardly inclined knife plate engaging the lower portion of said table, means for pressing the envelop against the table during the cutting or opening of the envelop, and means for causing relative movement of the table with respect to the knife plate to open and then cause discharge of the envelop.

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

ISAC MICHEL.

Witnesses:

JEAN GRUND,
CARL GRUND.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."