D. GESTETNER.

ADDRESSING MACHINE.

APPLICATION FILED SEPT. 28, 1908.

916,434.

Patented Mar. 30, 1909.

3 SHEETS—SHEET 1.

Fig:1

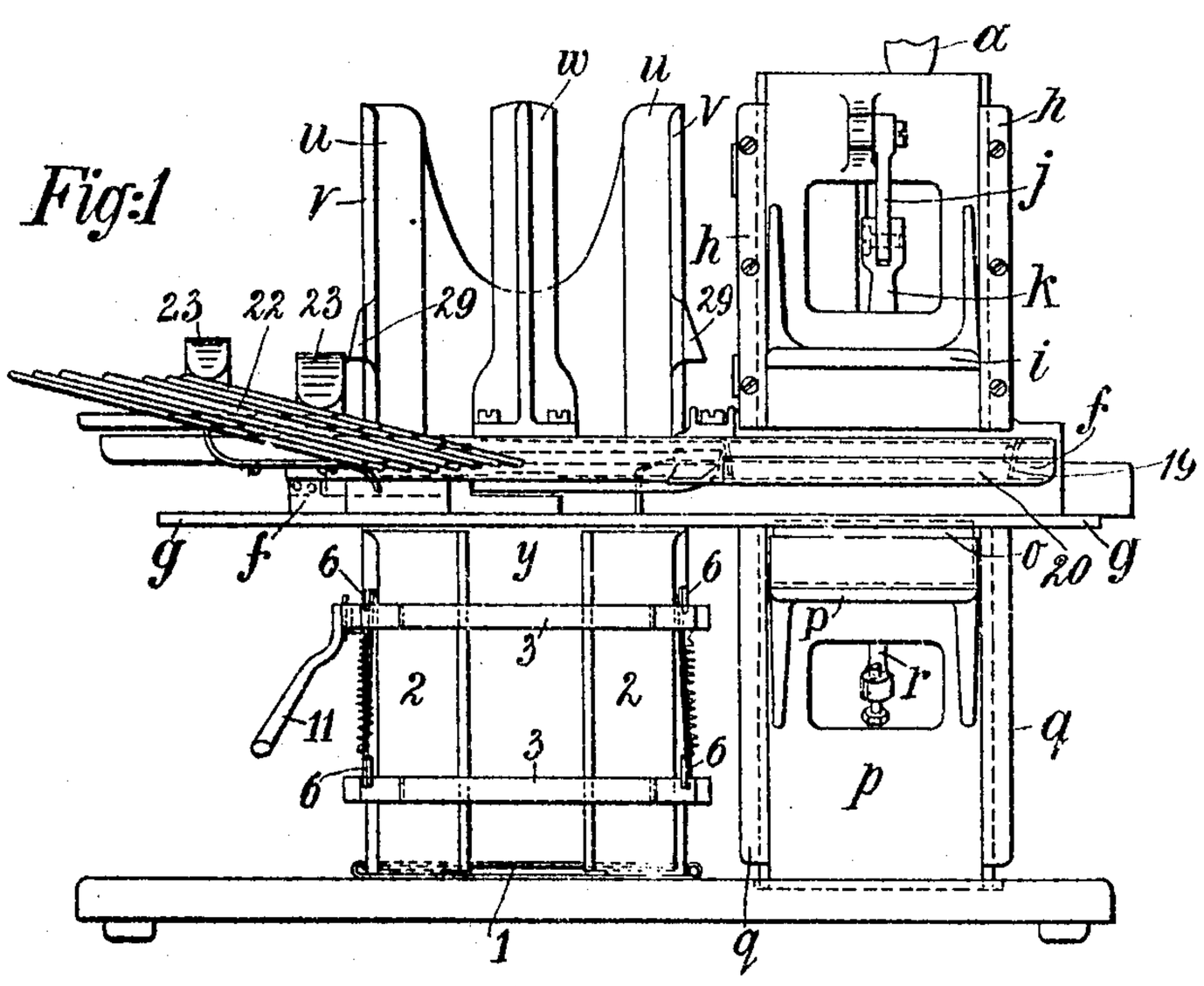
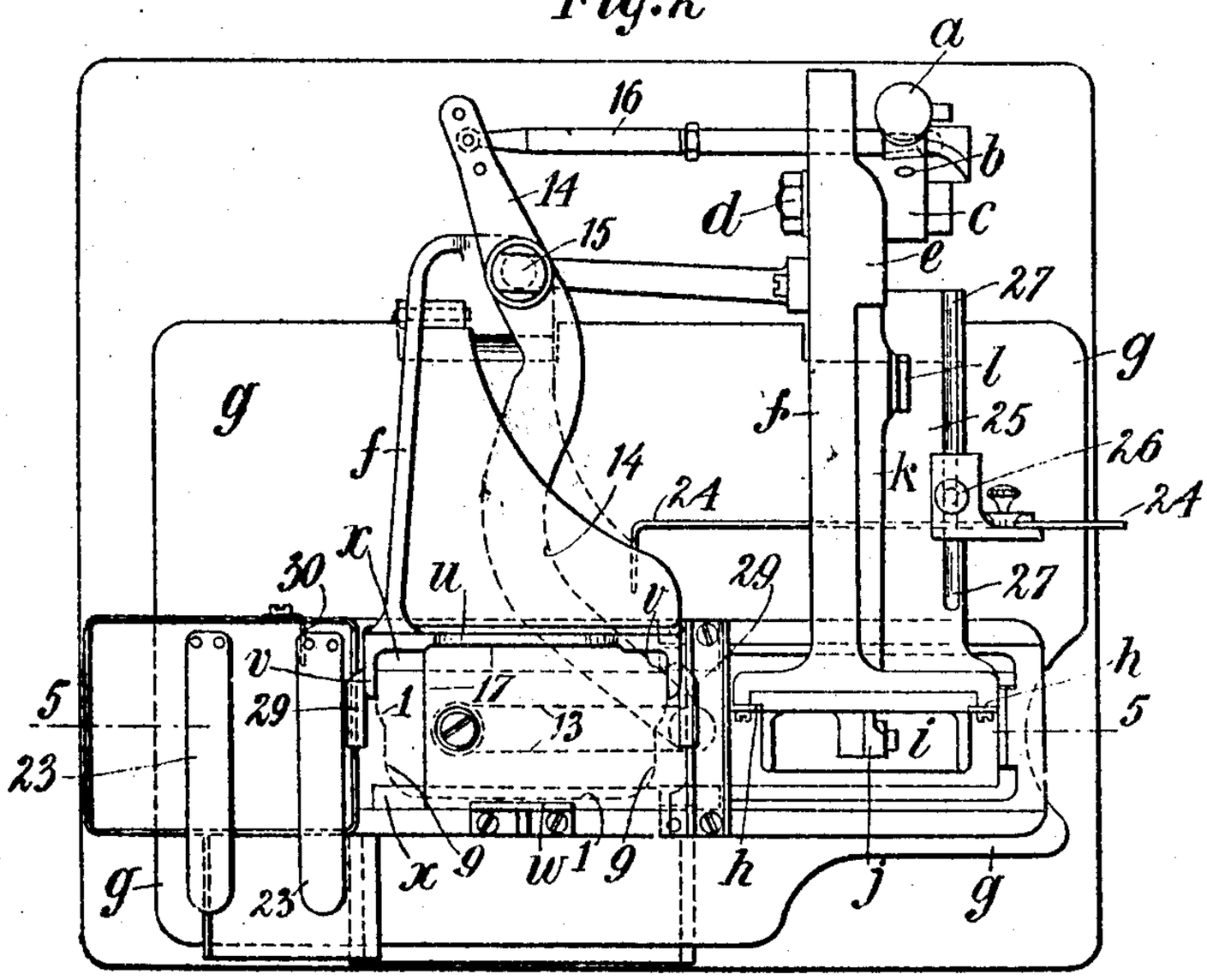


Fig:2



Witnesses
H. H. Kingsley
Ray Ernst.

Inventor
David Gestetner
by Knight Bros
attys

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3 SHEETS—SHEET 2.

Fig: 3

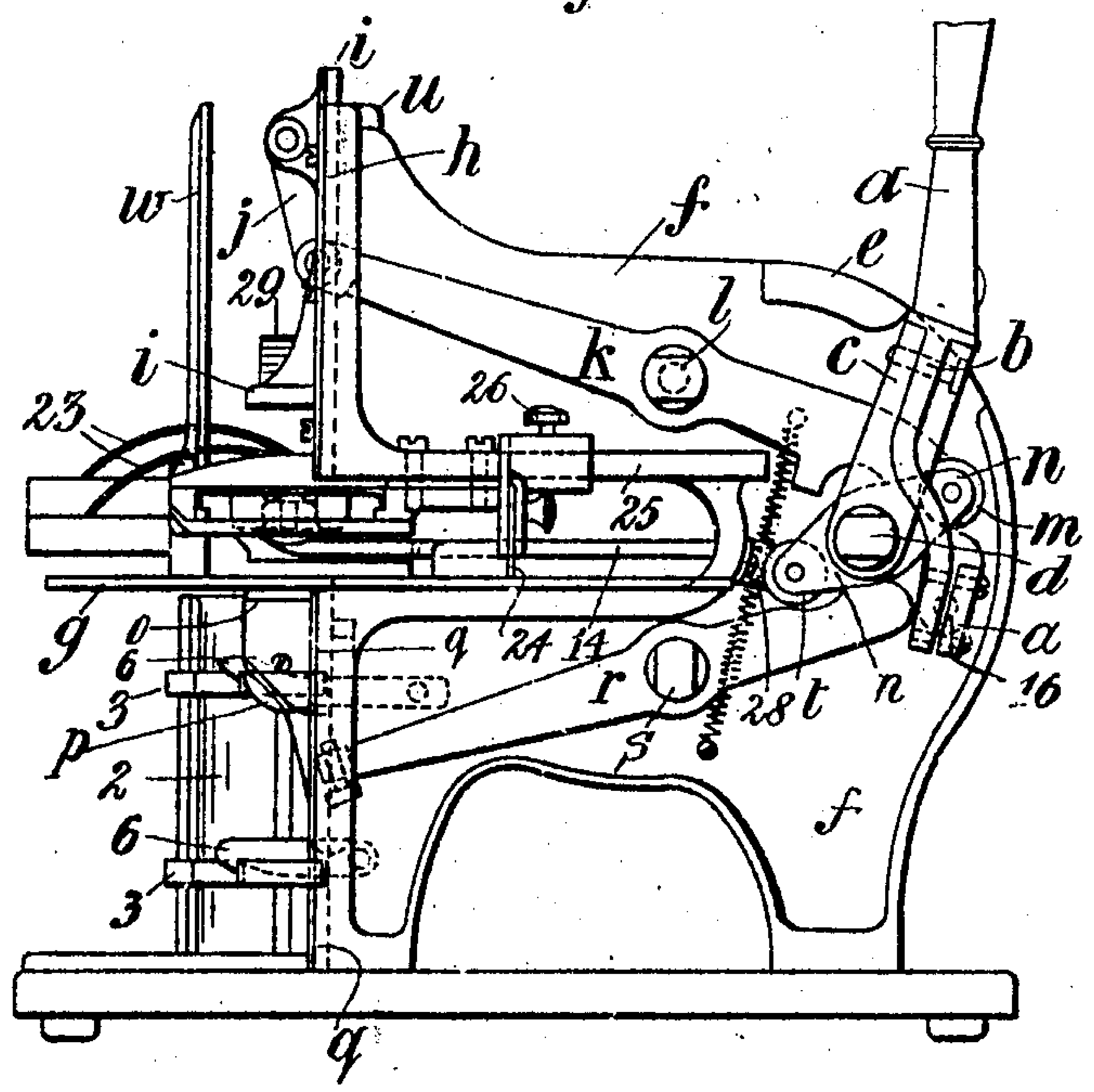
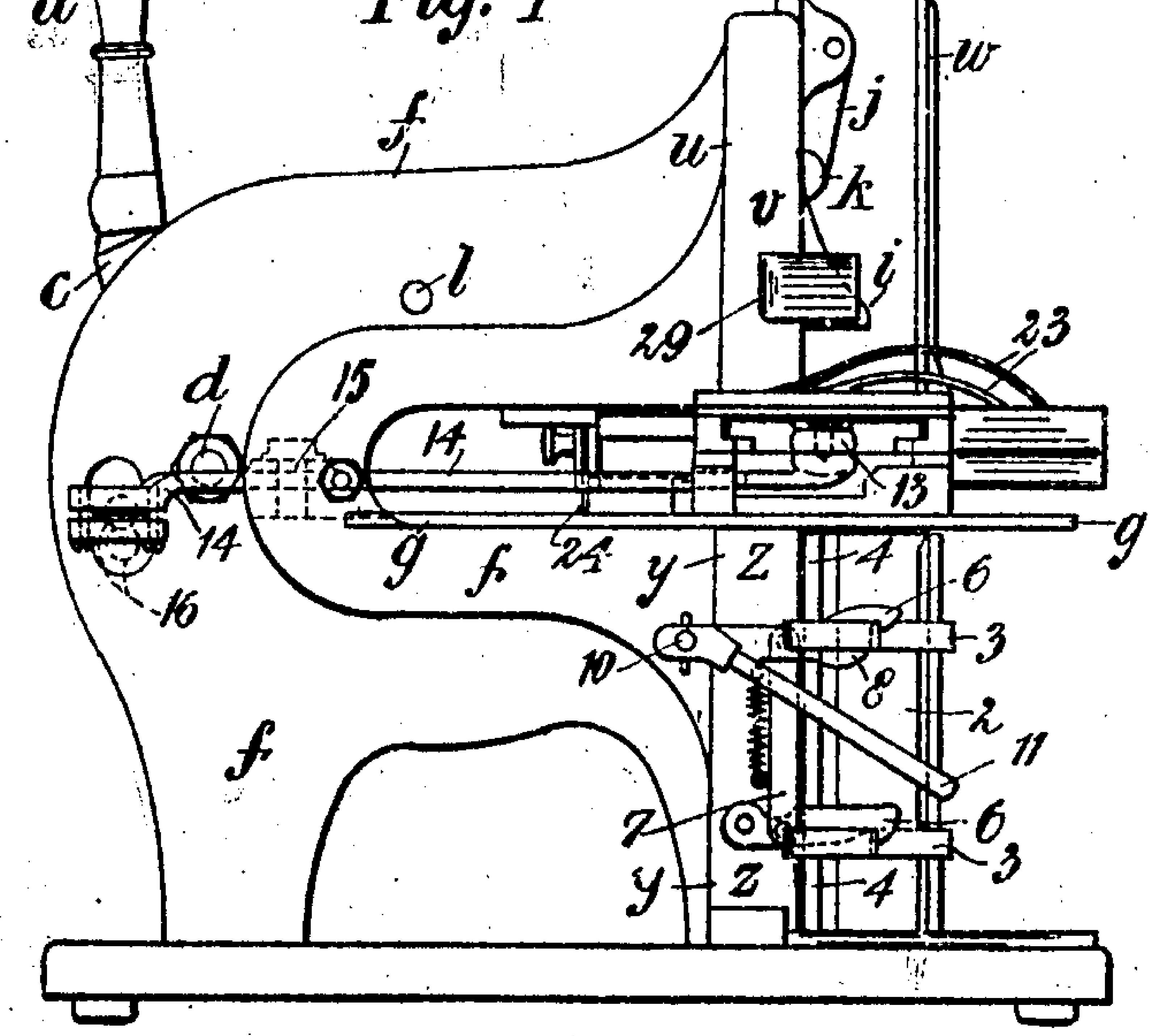


Fig: 4



Witnesses

Ray Ernst.

Inventor

David Gestetner

by [illegible]

attys

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3 SHEETS—SHEET 3.

Fig:6

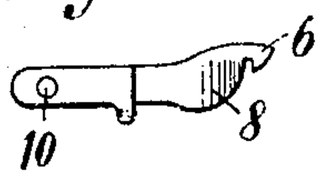


Fig:7

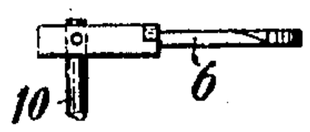


Fig:5

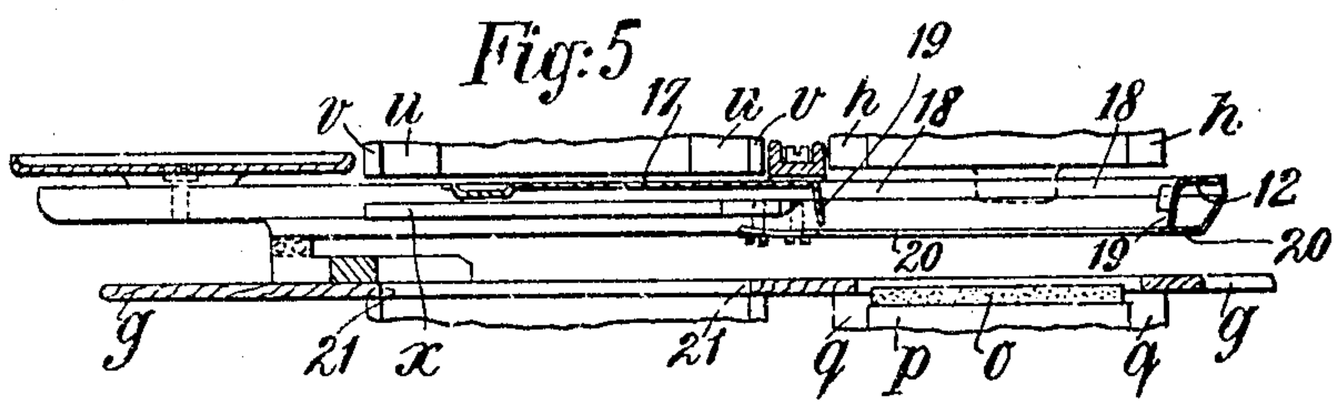


Fig:8

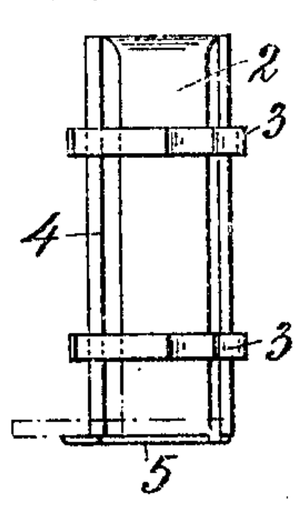


Fig:9

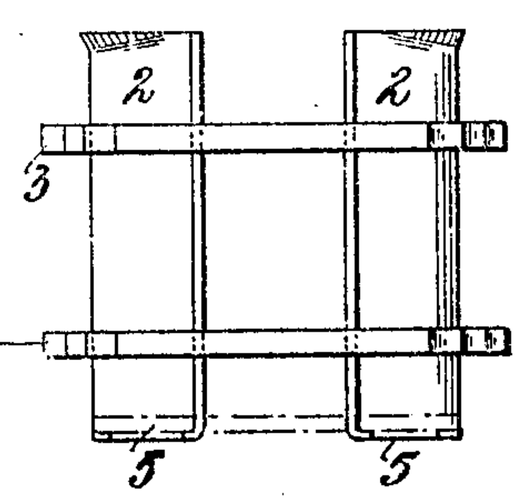
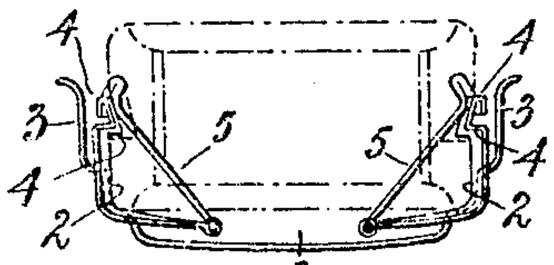


Fig:10



Witnesses
H H Knight
Ray Ernst.

Inventor
David Gestetner
by Munn & Co
attys

UNITED STATES PATENT OFFICE.

DAVID GESTETNER, OF TOTTENHAM HALE; ENGLAND.

ADDRESSING-MACHINE.

No. 916,434. Specification of Letters Patent. Patented March 30, 1909.

Application filed September 28, 1908. Serial No. 455,124.

To all whom it may concern:

Be it known that I, DAVID GESTETNER, subject of the King of Great Britain, residing at Tottenham Hale, in the county of Middlesex, England, have invented new and useful Improvements in Addressing-Machines, of which the following is a specification.

The invention has for its object an improved addressing machine in which stencil and ink pad carrying frames are used of the character shown and described in the specifications of Patents, No. 805,536, dated November 28, 1905, and No. 894,827, dated August 4, 1908, which frames I will hereafter refer to as stencil frames.

The machine is of that kind which is operated by a hand lever.

I will describe my invention by the aid of the accompanying drawings in which—

Figure 1 is a front elevation, Fig. 2 a plan and Figs. 3 and 4 two opposite side views of my improved addressing machine. Fig. 5, is a sectional view of parts drawn on the line 5—5, of Fig. 2. Fig. 6 is a side elevation and Fig. 7 is an underside view of one of the latches used to lock the carrier to the fixed part of the receiver, and Fig. 8 is an end elevation, Fig. 9 a front elevation and Fig. 10 a plan of the carrier separately.

a is a manually operated lever which, according to the present invention, is, at a point *b* intermediate of its ends, hinged to the outer end of a short lever *c* mounted on a fixed stud or axle *d*. The axis of the hinge joint *b* is at right angles with the axis of the stud or axle *d* so that, when required, the hand lever *a* and the short lever *c* can be moved together as a single lever to effect the printing operation, while the hand lever *a* can, when required, be moved on its hinge joint in a direction at right angles to the above motion to remove a stencil frame from the printing position and to feed another thereto. By these means the stencils may be used in succession to effect a single printing or any one or more can be used more than once or can be passed without printing from the magazine to the receiver hereinafter described.

The head of the machine has a block or guide *e* thereon which prevents the hand lever *a* being moved on its joint *b* except when at the rear end of such guide *e*.

The framing *f* of the machine is formed with a gap within which the table *g* is fixed. One part of the framing is below and the other above said table, the two parts being connected together at the back of the table. To this latter connecting part the stud or axle *d* is fixed.

The head of the machine is provided with vertical guides *h* within which the frame carrying the platen *i* is capable of sliding; said frame is connected by a link *j* to one end of a spring-influenced lever *k* pivoted at *l* to the machine head, which lever, to effect the printing, is operated at its other end by a roller *m* on one arm of a double arm or crank lever *n* fixed to the short lever *c*. Below the table *g* is a pressure pad *o* which is mounted in a frame *p* capable of sliding in vertical guides *q* fixed to the frame *f*, and said pressure pad *o* is capable of moving through an opening in the table which is of such dimensions as to permit of the free movement of the pressure pad *o* and frame *p* therethrough. The pressure pad frame *p* is raised to effect the printing by one end of a lever *r* which is pivoted at *s* to the machine frame and is operated at its other end by a roller *t* on the opposite arm of the double crank lever *n* to that which operates the platen. The downward motion of the pressure pad frame *p* is obtained by the weight of said frame.

The upper part of the framing or head of the machine has fixed thereto a magazine consisting of a vertical back plate *u* having narrow vertical end webs *v* at right angles thereto, a central upright *w* forming the front of the magazine and longitudinal horizontal webs *x* at the front and back forming the base thereof. The stencil frames to be used are placed within the said magazine, they fit freely within the aforesaid vertical parts thereof and rest upon the longitudinal webs or base *x*. Below the said magazine is a receiver into which the stencil frames are caused to fall when a fresh stencil frame is required to be fed to the printing position. This receiver consists of a fixed part and a removable part. The fixed part consists of a vertical back plate, *y*, vertical end webs *z* attached to said back plate *y*, and a base plate 1. The removable part of the receiver also serves as a carrier when charged with the stencil frames to enable the said frames to be readily charged into the magazine and it is of the following construction.

Two vertical angle plates 2, each forming part of one end and of the front of the re-

ceiver, are connected together by horizontal spring bars 3 extending across the front and partly along the ends of the receiver. The ends of these horizontal spring bars 3 stand clear of the end portions of the angle plates 2 and are curved outward therefrom. The vertical angle plates 2 are each formed along the vertical edge of the end portion with ribs 4 shaped to fit loosely within notches or gaps formed as usual in the ends of the stencil frames, the said ribs and notches or gaps on one end being of different size or shape to those on the other end in order to prevent the possibility of the stencil frames being improperly placed within the magazine and carrier. A base plate, wire or bar 5 is fixed across the bottom of each angle plate 2 to support the stencil frames in the carrier when the latter is away from the fixed parts of the receiver, and the base plate 1 is fixed at such a height as to permit the base 5 of the carrier to pass under it. The ribs 4 of these angle plates are, by the horizontal spring bars 3, pressed toward each other so as to grip the stencil frames when the carrier is not in connection with the fixed parts of the receiver. The upper edges of these angle plates 2 are splayed outward to facilitate the descent of the stencil frames into the receiver. Pivoted spring-influenced latches 6, mounted on each end of the fixed part of the receiver and connected together by pivoted links 7, act on the end portions of the horizontal spring bars 3 to lock the carrier to the fixed part of the receiver.

Inclines 8 on the upper latches, and rounded or inclined angles 9 on the base 1 of the fixed part of the receiver, act to open out the end portions of the carrier when the latter is being connected with the former and thereby allow the stencil frames to fall freely into the receiver.

Two of the latches 6 are fixed on a spindle 10 and a lever handle 11 is fixed to one end of the spindle 10, or to one of the latches 6, to facilitate manipulation of the latter.

A horizontal slide 12 is mounted in guides in the machine head and it receives reciprocating motion so as to convey the lowermost stencil frame from the magazine to the printing position and from the latter to the receiver. Such slide 12 is connected by a pivoted link 13 to one end of a horizontal lever 14 mounted on a stud axle 15 on the rear part of the machine framing, and such lever 14 is connected at its other end by a link 16, having a ball joint at each end, to the lower end of the hand lever *a*. The slide 12 is provided at one end with a table 17 which is at such a level above the magazine base *x* as to be able to pass below and support the remainder of the stencil frames in the magazine when the lowermost of such frames has been fed forward to the printing position; the other end of said slide is provided with an opening 18 having a pusher 19 at each end. The lowermost stencil frame in the magazine namely that resting on the base *x*, when the slide 12 is at one end of its course, lies within the opening 18 and between the pushers 19; then, when motion is given to the slide, said lowermost frame is pushed forward off said base *x* by one of the pushers 19 to the printing position, where it falls through said opening 18 on to fixed supports 20 at a little lower level than that of the base of the magazine. In the reverse motion of the slide, after printing has taken place, said stencil frame is, by the other pusher 19, pushed off the fixed supports 20 and is thereby caused to fall through an opening 21 in the table into the receiver. During this motion of the slide its table 17 is caused to move away from the magazine and thereby allow the pile of stencil frames to fall on to the base *x* of the magazine.

The envelops or sheets 22 to be printed are arranged stepwise and at a suitable angle under a pair of springs 23 which apply sufficient pressure to retain them in a pile but which allows an envelop or sheet to be readily and separately removed.

The machine is provided, as usual, with a suitable adjustable fence 24 which is carried by a horizontal bar 25 of the machine head and is fixed thereto by a screw 26 entering a groove 27 in said bar, and the parts are so fitted that the fence 24 is held perfectly square with the bar 25 when the screw 26 is screwed home. A stop 28 serves to limit the backward motion of the levers *a* and *c*. Fixed inclines 29 on the webs *v* of the back plate *u* of the magazine act to open out the sides 2 of the carrier when the latter is being used to charge the magazine. A spring stop 30 acts to buffer the lever 14 at that end of its stroke. One of the stencil frames is shown by broken lines in Figs. 8,—9,—10.

What I claim is:—

1. In an addressing machine, the combination with a magazine containing stencil frames, mutually approaching and receding platen and pressure pad and a slide for conveying the lowest of such frames from the bottom of the magazine to the printing position, of a manually operated lever hinged intermediate of its ends to a short lever which is mounted on a fixed stud the axis of which is at right angles with that of the hinge joint, connections between the lower end of the manually operated lever and the slide to move a stencil frame from the magazine to the printing position and away therefrom to a receiver, a double crank lever on the axis of the short lever, and levers operated by such double crank lever and acting upon the platen and pressure pad whereby when the manually operated

lever is moved forward in a plane at right angles with the aforesaid motions it moves the short lever and double crank lever with it and gives motion to the platen and pressure pad to effect the printing and in its backward motion the platen and pressure pad are automatically separated from each other.

2. In an addressing machine the combination with a magazine containing stencil frames, mutually approaching and receding platen and pressure pad and a manually operated lever, of a slide having a table at one end so that when in one position it will support the stencil frames in the magazine, an opening at the other end capable of permitting the descent of a stencil frame from the magazine on to the magazine base and a pusher at each end of such opening one of which moves a stencil frame from the magazine to the printing position on to fixed supports while the other moves it off said fixed supports away from the printing position and thereby causes it to fall into the receiver, and connections between the slide and the manually operated lever.

In witness whereof I have hereunto set my hand in presence of two witnesses.

D. GESTETNER.

Witnesses:
WM. GIRLING,
F. L. RAND.