

S. ELLIOTT.
ADDRESSING MACHINE.
APPLICATION FILED SEPT. 26, 1910.

1,029,112.

Patented June 11, 1912.

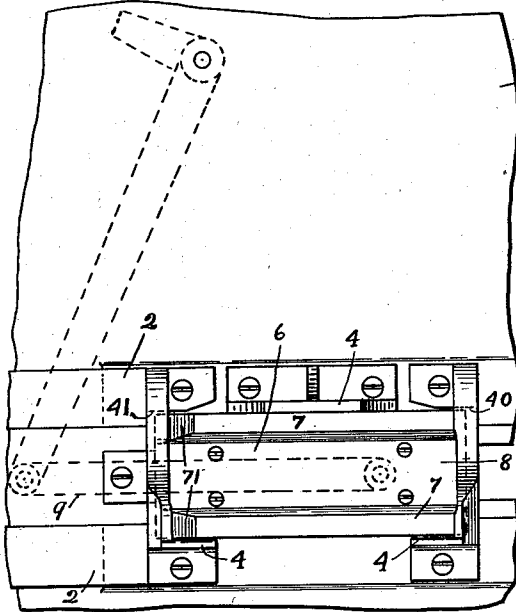


Fig. 1.

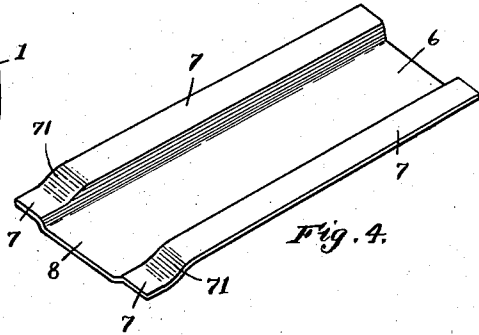


Fig. 4.

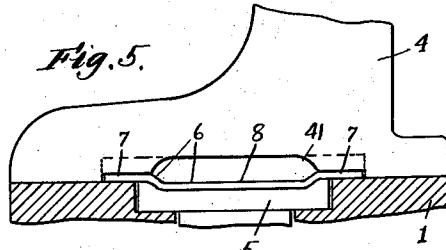


Fig. 5.

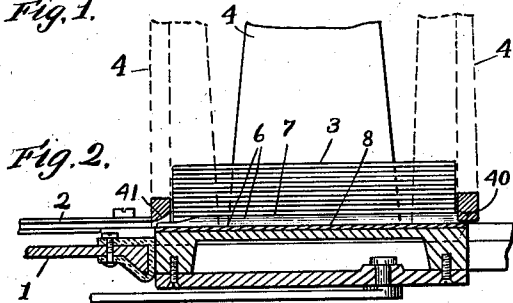


Fig. 2.

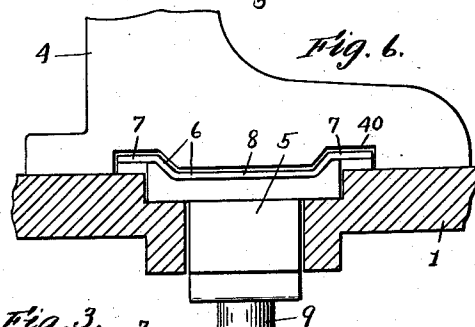


Fig. 6.

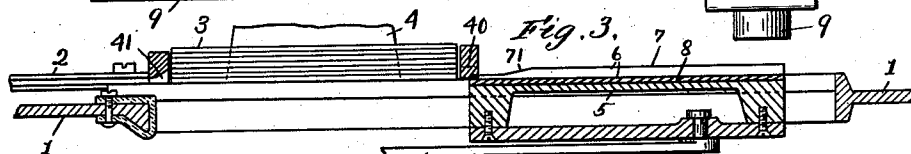


Fig. 3.

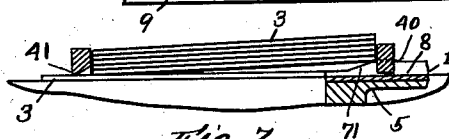


Fig. 7.

Witnesses:

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attg.

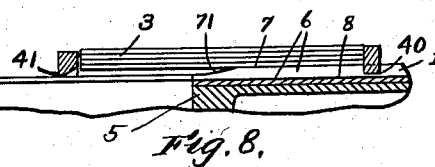


Fig. 8.

UNITED STATES PATENT OFFICE.

STERLING ELLIOTT, OF NEWTON, MASSACHUSETTS.

ADDRESSING-MACHINE.

1,029,112.

Specification of Letters Patent. Patented June 11, 1912.

Application filed September 26, 1910. Serial No. 583,730.

To all whom it may concern:

Be it known that I, STERLING ELLIOTT, residing at Newton, in the county of Middlesex and State of Massachusetts, have invented an Improvement in Addressing-Machines, of which the following is a specification.

This invention relates to address-printing machines, commonly known as addressing-machines, and particularly to the means by which the lowermost printing-plate, or stencil-plate of a pile is removed therefrom and moved along a guideway to the printing-mechanism; and the invention is intended as an improvement upon an addressing-machine, such for instance as shown in Letters Patent #935,196 dated Sept. 28, 1909.

Heretofore the lowermost stencil-plate of the pile has been removed by means of a pusher which engages the edge of the stencil-plate and pushes it along beneath the pile which rests upon it. Occasionally the lowermost stencil-plate interlocks with the stencil-plate above it, while being moved along, due to a transverse bend or other irregularity formed in one or both stencil-plates, and in such case one and sometimes both stencil-plates are injured or destroyed, and the rapid and successful operation of the machine interfered with. Furthermore, in case the stencil-plates are made of paper, or cardboard, or some equivalent material other than metal, the wear due to frictional engagement one with another is considerable, and results in the stencil-plates soon wearing out.

This invention has for its object to provide a receptacle for the pile of stencils, with a specially formed delivery opening, which is arranged in front of a guideway, such for instance as a pair of slotted guide-bars, suitably spaced apart, whereby an unobstructed passage is provided for the removal of the lowermost stencil-plate of the pile, even though said stencil-plate may be bent or otherwise deformed; and the invention also has for its object to improve the construction of the pusher, whereby it is adapted to raise the pile of stencil-plates above and free from the lowermost stencil-plate, when removing said lowermost stencil-plate from the pile, so that engagement of the lowermost stencil-plate with the stencil-plate above it for the most part, is prevented. My invention, however, is appli-

cable to stencil-plates of all kinds, even though made partly or wholly of metal.

Figure 1 is a plan view of a sufficient portion of an addressing-machine to illustrate the stencil-plate receptacle and pusher embodying this invention. Fig. 2 is a vertical, longitudinal section of the parts shown in Fig. 1. Fig. 3 is a vertical, longitudinal section of the parts shown in Fig. 1, the pusher being moved into its extreme rearward position preparatory to engaging the lowermost stencil-plate of the pile on its return movement. Fig. 4 is a perspective view of a pushing-plate embodying this invention. Figs. 5 and 6 are enlarged sectional details to be referred to. Figs. 7 and 8 are details illustrating the engagement of the lowermost stencil-plate of the pile by the improved pusher, and the raising of the pile as the pusher passes beneath it.

1 represents the table of an addressing-machine; 2, 2, a pair of slotted guide-bars thereon, arranged in parallelism and spaced apart to form a guideway for the stencil-plates 3, 3, or other form of printing-plates. Upright posts 4 are arranged on the table at one end of the guide-way, forming a receptacle or supporting means for a pile of stencil-plates. As here shown, three upright posts 4, are employed, one arranged at one end and another at the other end of the pile, and another at one side of the pile between its ends. One of the end-posts 4, see Fig. 6, has a recess 40 at its lower end, adjacent the table, to form an opening at one side of the supporting means, shaped to admit of the free passage of the pusher; and the opposite end-post 4, see Fig. 5, has a recess 41, at its lower end, adjacent the table, to form an opening at the other side of the supporting means, which is differently shaped, to provide for the passage of the pusher and also for the passage of the lowermost stencil-plate of the pile, even if said stencil-plate is bent or otherwise deformed. Said recess 41 has shallow portions at its ends, of a depth corresponding to the thickness of a stencil-plate, and said shallow portions are arranged opposite the slots in the guide-bars 2, 2, so that the stencil-plates will be guided in their passage from the receptacle to said guide-bars; and said recess has a deep portion between said shallow guiding-portions which is arranged opposite the space between the guide-bars 2, 2,

and which permits unobstructed passage of a bent or otherwise deformed stencil-plate, or one which is bent or otherwise deformed while being removed.

5 The top walls of the shallow guiding-
portions of the recess 41 are beveled in a direc-
tion from the inside toward the outside of
the receptacle, as shown, and the bevel ex-
tends from end to end of said shallow por-
10 tions, thereby forming beveled top walls,
which assist in guiding deformed stencil-
plates into and through the recess. The
inner end of the recess is thus enlarged. As
the lowermost stencil-plate is moved along
15 the stencil-plate above it may be moved
along with it a short distance by reason of
the bevel extending upward a short dis-
tance, but said second stencil-plate will be
returned to normal position on the return
20 movement of the pusher. The pusher is
adapted to slide in a guideway provided
for it.

The pusher here shown for the purpose of
illustrating my invention, consists of a
25 frame 5, of any suitable construction having
a top part 6, here shown as a plate which is
arranged on the frame, yet it may be other-
wise constructed. The improved construc-
tion of the top part or portion of the pusher,
30 whereby it is capable of raising the pile of
stencil-plates, for the most part, free from
the lowermost stencil-plate, or an equivalent
form of pusher whereby this result is accom-
plished, forms one of the features of this
35 invention.

The plate 6, which, as here shown, forms
the top part of the pusher, is substantially
rectangular in shape, and has a short plate-
engaging portion at its front end and a long
40 pile-engaging portion back of said plate-
engaging portion. The plate-engaging por-
tion is of a thickness corresponding to the
full thickness of a stencil-plate, so as to
engage the end of the stencil-plate from top
45 to bottom, and this is important, particu-
larly in case the stencil-plate is composed of
paper and is consequently quite thin; and
said plate-engaging portion is made short
so that the pile-engaging portion will begin
50 to lift the pile of stencil-plates as soon as the
lowermost stencil-plate has been moved
along a short distance.

Referring to Figs. 1 to 8 the top part of
the pusher indicated at 6 is provided with
55 raised side portions 7, 7, and with a de-
pressed portion 8 between said side portions,
both extending from end to end of the
pusher. The side portions 7, 7, for a short
distance at the front end of the plate, are
60 raised a short distance, corresponding to the
thickness of a stencil-plate or thereabout,
so as to engage the edge of the lowermost
stencil-plate of the pile from top to bottom,
but the remaining parts of said side portions
65 are raised much higher and are also formed

with upwardly inclined portions 71, 71, ex-
tending from the lower to the higher parts
thereof. The high parts of said side por-
tions are raised high enough to lift the pile
of stencil-plates free from the lowermost
70 stencil-plate.

The pusher normally occupies a position
beneath the pile of stencil-plates, as repre-
sented in Fig. 2 and its side portions 7, 7, are
spaced apart sufficiently to engage the sides
75 of the frame of the lowermost stencil-plate.
The pusher is adapted to be reciprocated
longitudinally, and to accomplish this result
a link 9 is loosely connected to it, which
may be operated to slide it back and forth,
80 or other means may be employed for accom-
plishing this result, so far as my invention is
concerned. The pusher, thus constructed,
is adapted to be moved from the position
shown in Fig. 2, to the position shown in
85 Fig. 3, and to be then returned, and on the
return movement the end of the plate-en-
gaging portion engages the end of the lower-
most stencil-plate of the pile and moves it
along beneath the pile, for a short distance,
90 as shown in Fig. 7, and then the upwardly in-
clined portions 71, 71, engage the next sten-
cil-plate of the pile and operate to lift the
pile, as shown in Figs. 7 and 8, so that as
the lowermost stencil-plate is removed from
95 the pile, engagement of said lowermost sten-
cil-plate with the stencil-plate above it is
prevented, for the most part.

It is obvious that the pusher may be other-
wise constructed and still fall within the
100 scope of my invention, yet having a short
plate-engaging portion corresponding in
thickness to the thickness of the stencil-plate
and having two long pile-raising side por-
tions, back of said plate-engaging end-portion,
105 to engage the frame of the next to the
lowermost stencil-plate of the pile, whereby
the pile is raised free from the lowermost
stencil-plate while said lowermost stencil-
plate is being removed.

I claim:—

1. In an addressing-machine, a pair of
slotted guide-bars arranged with a space be-
tween them, combined with a receptacle for
a pile of stencil-plates, having a recess at the
115 bottom for the delivery of the lowermost
stencil-plate of the pile, said recess having
shallow guiding-ports at its ends in line
with the slots in the guide-bars, and having
a deep portion between said guiding-ports,
120 opposite the space between said guide-
bars, to permit unobstructed passage of a
bent or otherwise deformed stencil-plate,
and means for pushing the lowermost sten-
cil-plate of the pile through said recess and
125 into engagement with the guide-bars, sub-
stantially as described.

2. In an addressing-machine, a pair of
slotted guiding-bars arranged with a space
between them, combined with a receptacle
130

for a pile of stencil-plates having a recess at the bottom for the delivery of the lowermost stencil-plate of the pile, said recess having shallow guiding-portions at its ends in line with the slots in the guide-bars, the top walls of said guiding-portions being beveled in a direction from the inside toward the outside of the receptacle, and said recess having a deep portion between said beveled guiding- portions opposite the space between said guide-bars to permit unobstructed passage of a bent or otherwise deformed stencil- plate, and means for pushing the lowermost stencil-plate of the pile through said recess and into engagement with the guide-bars, substantially as described.

3. In an addressing-machine, the combination with means for holding a plurality of stencil-plates in a pile, of a movable pusher adapted to remove the lowermost plate from the pile, having a short plate-engaging portion at its front end, of a thickness corresponding to the thickness of a stencil-plate and having two long pile-raising side portions of a greater thickness, arranged back of said plate-engaging portion, and in parallel to engage the under side of the frame of the next to the lowermost stencil-plate of the pile, substantially as described.

4. In an addressing-machine, the combination with means for holding a plurality of stencil-plates in a pile, of a movable pusher having side portions at its top, which are extended throughout its length and raised at one end a short distance, corresponding to the thickness of a stencil-plate, and raised for the remaining portion a greater distance to lift the pile of stencil-plates, and having upwardly inclined portions extending from the lower to the higher parts of said portions, substantially as described.

5. In an addressing-machine, the combination with means for holding a plurality of

stencil-plates in a pile, of a movable pusher having side portions at its top which are extended throughout its length and raised to occupy two different elevations, and having a depressed portion throughout its length between said side portions, substantially as described.

6. In an addressing-machine, the combination with means for holding a plurality of stencil-plates in a pile, of a reciprocating pusher, consisting of a frame and a top-plate secured thereto, said top-plate having its side portions raised at the forward end a short distance, to engage the end of a stencil-plate, and raised for the remaining portion a greater distance to lift the pile of stencil-plates, and having upwardly inclined portions extending from the lower to the higher parts of said side portions, substantially as described.

7. In an addressing-machine, the combination with means for holding a plurality of stencil-plates in a pile, of a reciprocating pusher, consisting of a frame and a top-plate secured thereto, having its side portions raised at one end a short distance, to engage the end of a stencil-plate, and raised for the remaining portion a greater distance to lift the pile of stencil-plates, and having upwardly inclined portions extending from the lower to the higher parts of said raised side-ports, and having a depressed portion between said side portions, substantially as described.

In testimony whereof, I have signed my name to this specification, in the presence of two subscribing witnesses.

STERLING ELLIOTT.

Witnesses:

B. J. NOYES,
H. B. DAVIS.