Jan. 25, 1938. H. P. ELLIOTT 2,106,675

REPEAT PRINTING ATTACHMENT FOR ADDRESSING MACHINES

Filed March 29, 1937 2 Sheets-Sheet 1

Fig. 1.

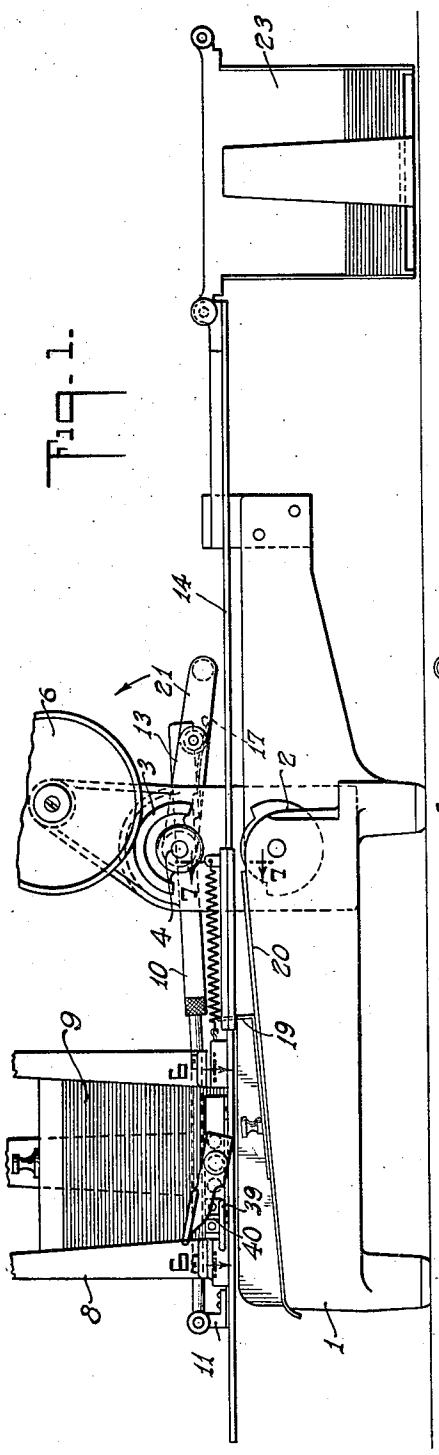
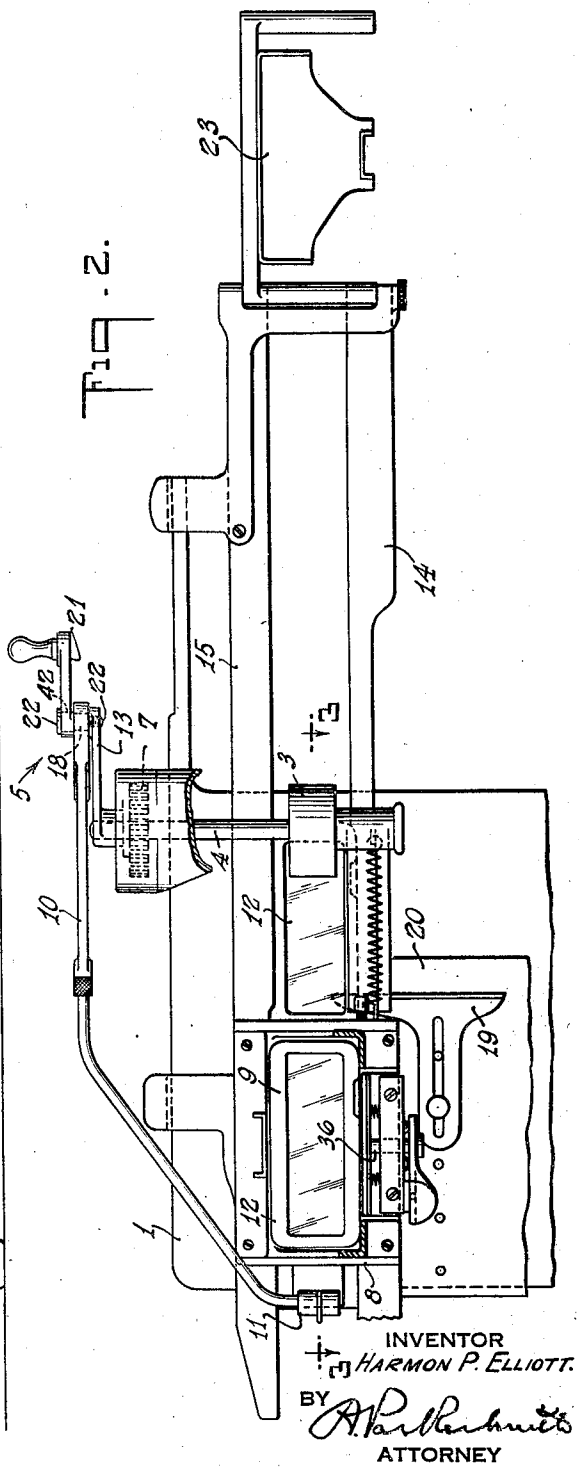


Fig. 2.

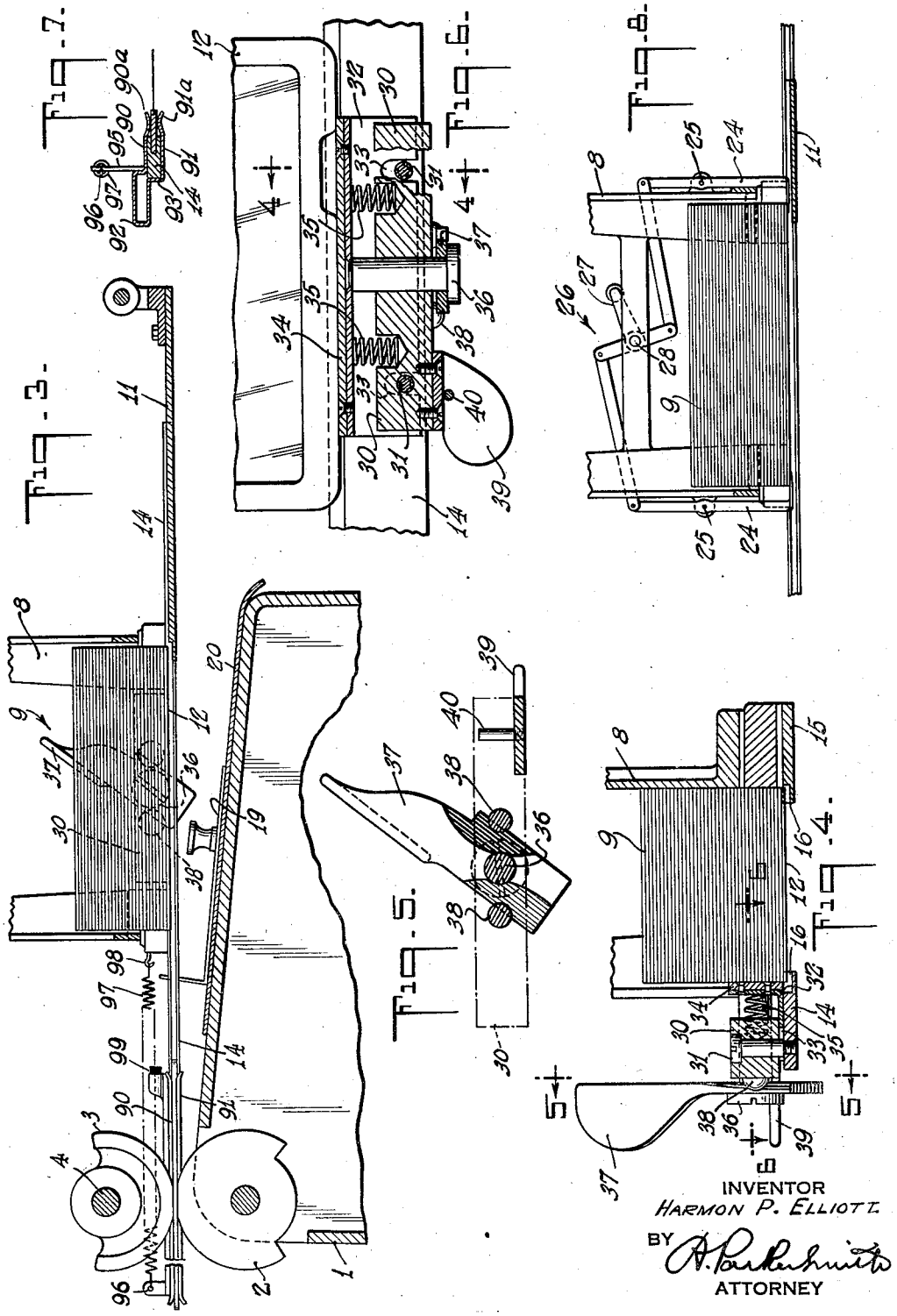


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REPEAT PRINTING ATTACHMENT FOR ADDRESSING MACHINES

Filed March 29, 1937 2 Sheets-Sheet 2



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2,106,675

UNITED STATES PATENT OFFICE

2,106,675

REPEAT PRINTING ATTACHMENT FOR ADDRESSING MACHINES

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Application March 29, 1937, Serial No. 133,494

5 Claims. (Cl. 101—48)

This invention relates generally to addressing machines of standard types in which a series of address-bearing strips (stencil cards or embossed metal plates) are arranged in a stack, successively withdrawn from the bottom thereof and pushed through a pressure zone in which each name and accompanying address are printed therefrom once on each of a succession of envelopes, postcards, letter sheets, wrappers or other articles.

In doing such addressing work occasion frequently arises for repeatedly printing the legend appearing on one or another of the stencils or plates and such operation requires that particular one being held in the printing zone during two or more cycles of operation of the apparatus.

That, in turn, requires a contemporaneous cessation of any feeding of succeeding stencils or plates from the magazine in which those awaiting use still remain stacked. Various schemes have heretofore been devised for enabling the operator of a machine which normally feeds a stencil through the pressure zone during each cycle of its operation to omit that feeding action during one or more cycles, and the present invention embodies in substance an improved and simple method of so disabling temporarily the stencil feeding apparatus shown in sundry patents previously granted to me.

Essentially the invention comprises manually operable means, such as a friction clamp or thin edged fingers, arranged to grasp and hold the next to the bottom one of the stencils or printing plates stacked in the magazine while and after the bottom one is being fed out of the magazine into the printing zone. Thereafter the reciprocating pusher which normally does such stencil feeding simply travels idly back and forth beneath the suspended stack of unused stencils until such clamp or fingers holding them suspended is or are released. When that is done the bottom stencil drops into the path of the pusher so that normal feeding and successive printing or skipping of each name and address is thereupon resumed.

As shown in the drawings the invention is applied to the rotary type of hand-operated addressing machines such as disclosed in my prior Patent No. 1,563,288 dated November 24, 1925,— and to that extent is an improvement thereon, through the invention is capable of use on other than rotary types of addressing machines.

The best form of apparatus at present known to me embodying my invention is illustrated in the accompanying two sheets of drawings in which—

Fig. 1 is a side elevation of the machine with certain parts broken away.

Fig. 2 is a plan view of the same.

Fig. 3 is a detail vertical, longitudinal section on line 3—3 of Fig. 2 showing the stencil magazine, stencil pusher and revoluble printing sectors on an enlarged scale.

Fig. 4 is a detail cross section on line 4—4 of Fig. 6 showing more clearly the means for clamping a stack of stencils in the magazine after the bottom one has been picked out.

Fig. 5 is a detail section on line 5—5 of Fig. 4, and

Fig. 6 is a detail horizontal section on line 6—6 of said Fig. 4.

Fig. 7 is a detail cross section on line 7—7 of Fig. 2 and

Fig. 8 is a detail side elevation of a modification.

Throughout the drawings like reference characters indicate like parts.

The particular form of addressing machine here illustrated and best shown in Figs. 1 and 2 comprises the usual base frame 1 on which are journaled two revoluble sectors, the lower one of which 2 serves as a platen or anvil against which the upper one 3, having an ink retaining surface, presses the intervening stencil on the envelope, postcard or other article being printed. The shaft 4 of the inking sector has a hand crank, indicated generally at 5, and 6 indicates an ink-carrying cylinder in contact with sector 3. The usual gearing causing the sectors to rotate in unison is indicated at 7 in Fig. 2, and 8 is the usual magazine in which a vertical stack of stencils 9 is placed with the lowermost one 12 (Fig. 2) in line with the grooves 16, 16, in the horizontally extending stencil guides 14, 15, provided for directing these stencils to the pressure zone between sectors 2 and 3 for the printing operation. 11 is the reciprocating pusher for shoving the bottom stencil out of the magazine along the guide grooves 16, 16, and 10 is a connecting rod pivoted at one end thereto and at the other end connected to the crank 5. The latter is composed of the main section 13 fast on the shaft 4 of sector 3 and an offset extension 21 fastened to the former by the screw 22 threaded firmly into main section 13, and having a cylindrical section 18 against which the hooked end of the connecting rod is held by the cooperating spring 17, as indicated in Fig. 1, while extension 21 is mounted on a square section 42 of said screw. 20 indicates a table below the stencil guides on which is the adjustable guide or gauge 19 for the articles to be printed,

and 23 is the usual stencil collector at the other end of the stencil guides. Consequently when the hand crank is revolved in the direction of the arrow in Fig. 1 the usual consecutive printing of the names and addresses cut in the stencil cards will be effected.

The particular attachment embodying my present invention is shown more in detail in Figs. 4 to 6 and the particular embodiment thereof so shown comprises a block 30 fastened to the stencil guide 14 by screws 31, 31, which pass through slots 33, 33, in the angle plate 32 located and movable on the upper surface of the guide 14. The vertically extending flange of this angle plate carries any suitable slightly resilient material having a yielding friction-producing surface, such as indicated at 34. Normally this and the angle plate 32 are forced toward the side edges of the lowermost stencils in the stack 9 by springs 35, 35 compressed between the vertical flange on said plate and the fixed block 30, in which latter the outer ends of these springs are nested as shown in Fig. 6. A large headed pin 36 screwed into the flange of 32 extends loosely through block 30 and the cam lever 37 thus pivoted on it. 38, 38 indicate cam bosses on the outer surface of block 30 so placed that when cam lever 37 is swung upward as shown in Figs. 4 and 5 the screw pin 36 and the friction shoe 32 with its facing 34 will be pressed by springs 35, 35 against the edges of the adjacent stencils as previously described. When, however, cam lever 37 is pushed down into approximately horizontal position, as shown in Fig. 1, its cam surfaces mount the bosses 38, 38, compress springs 35, 35, and withdraw the fibre facing 34 of the friction shoe away from the magazine so that it no longer presses against the stencil edges. 39 is a fixed finger piece mounted on friction block 30 as best shown in Fig. 6 and located under the thumb flange on cam lever 37 so that the thumb and finger of the operator may grasp both in forcing the latter down into clamp released position against stop pin 40, carried by 39.

In operating the above described apparatus the cam lever 37 is normally down in the position shown in Fig. 1, but when it is desired to temporarily stop feeding stencils out of the magazine into the printing zone, the cam lever is raised, thus permitting the screw pin 36 to move toward the stencil stack together with the friction shoe and on the next revolution of the hand crank 5 the bottom stencil will be forced out of the magazine far enough along the guides to be grasped by the rotating sectors at the beginning of the succeeding cycle of operation, but on withdrawal (or backward movement) of the stencil pusher the rest of the stack will be held suspended, and if some means is provided for retrieving the stencil in the printing zone after each printing operation performed therewith, the legend cut therein can be reprinted as many times as desired. Various mechanisms can be employed for performing this stencil retrieving operation, but as now advised I prefer to use that shown in my before noted Patent No. 1,563,268, the drawing of which has been here reproduced and which may be described as follows:

Said stencil retriever is adapted to be associated detachably with one of the stencil tracks, as track 14, and to be slidable thereon in response to movements of the stencils within the tracks and also in response to a retractile means as a spring. Said stencil retriever includes the superposed and spaced apart upper and lower fingers 90 and 91 which are preferably integral with the end-connecting and separating portion 92. Said arms 90 and 91 are adapted to be disposed on opposite sides of the stencil track 14 and slide freely there along in engagement therewith.

Said end-connecting and separating portion 92 is provided with an upwardly reflexed shoulder portion 93 or is otherwise arranged to guide said retriever for movements along said track and prevent unintentional detachment therefrom; and said end-connecting and separating portion 92 may be shaped to provide resiliency to said arms 90 and 91. Said arms, however, are adapted to be sufficiently resilient to permit said member to be applied to the track, or detached therefrom when not in use.

The free ends of said fingers 90 and 91 are adapted to extend inwardly beyond the inner face of the stencil track 14 and are reflexed toward each other as at 90^a and 91^a. Said reflexed end portions 90^a and 91^a are adapted frictionally to engage yieldingly with the frames of the stencils as they are moved along the track. Said stencil retriever is also formed or provided with an upwardly extending arm 95 which has a hole 96 therein in which one end of a retractile spring 97 is detachably held. The other end of the spring is anchored at 98, and 99 is a rubber bumper for reducing the shock and noise when the retriever is pulled back by said spring.

During the normal operation of consecutive printing the edge portions of successive stencils are pushed one after the other through the retriever, the pressure of spring prongs or fingers 91 and 92 being slight enough to permit this without destructive wear on the stencil frames or the putting of too much work on the pusher 11.

A possible modified embodiment of the stencil-stack-suspending mechanism is illustrated in Fig. 8 in which instead of the friction shoe previously described a pair of fingers 24, 24, with very narrow curved ends are pivoted at 25, 25, at the front and back of the magazine. These fingers may be oscillated in unison by the linkage generally indicated at 26, mounted on the shaft 28 which may be rotated back and forth by the crank handle 27. When it is desired to suspend the stack during repeat printing these fingers are moved into the position shown in full lines with their razorlike edges inserted under the next to the bottom stencil, thereby holding the stack suspended while and after the bottom stencil has been pushed into the printing zone. On swinging these fingers in the other direction into the position shown in broken lines the stack drops into normal position by gravity and the normal successive printings one from each stencil will be carried on as usual.

Various other changes might be made in the details of construction herein shown and described so long as some manually operable means is provided for temporarily suspending the stack and some other means is provided for retrieving a stencil which has theretofore been pushed out into the printing zone.

It is possible, of course, to completely disable the pusher 11, by disconnecting the rod 10 from the crank while flexing spring 17, but this is not necessary.

Having described my invention, I claim:

1. In an addressing machine comprising a printing zone, a magazine for holding a vertical stack of thin, rectangular address-bearing elements, guides which extend from the bottom of said magazine to said printing zone through

which said address-bearing elements may be successively fed, and a reciprocating member for pushing the element in normal position at the bottom of such stack at any one time along said guides into the printing zone, manually controllable means located wholly outside of the path of said reciprocating member for holding all of said stack of address-bearing elements except the bottom one temporarily suspended while said bottom one is being slid out from under said remaining portion of the stack; whereby the feeding of successive printing elements to said printing zone may be suspended though all of the machine parts continue in normal operation.

2. An apparatus such as defined in claim 1 in which said manually controllable means comprises a horizontally movable friction shoe located opposite one edge of each of several of the printing elements adjacent the bottom of said stack thereof, yielding pressure means normally acting to force said shoe against said elements, and manually operable mechanism for moving and holding said shoe out of contact therewith; whereby, when said shoe is bearing on said element and the lowermost one has been forced into the printing zone, the remainder of the stack is held suspended above the path of said reciprocating member and remains at rest while the latter moves idly beneath them.

3. An apparatus such as defined in claim 1 in which said printing elements are paper stencils and said manually controllable means comprises a friction shoe spring-pressed against the edges of those stencils immediately above the bottom one in said stack, together with a manually operable cam adapted to temporarily hold said shoe away from contact with said stencil edges.

4. An apparatus such as defined in claim 1 in which said manually controllable means comprises a pair of oppositely disposed, thin-edged fingers adapted to be inserted under, or withdrawn from engagement with, the address-bearing element next to the bottom of such stack; whereby the remainder of said stack of printing elements may be temporarily suspended above the path of said reciprocating member after the bottom one has been pushed out of the magazine, while when said fingers are withdrawn from engagement with the stack the same is allowed to drop by gravity after each lowermost printing element has been pushed from under it.

5. In a rotary address printing machine substantially such as described comprising a pair of oppositely revoluble sectors, one of which has an ink-retaining surface, a magazine for holding a vertical stack of stencils, guides extending from the lower end of said magazine along which the lowermost stencil in line therewith can be slid between said sectors, a stencil pusher reciprocable along said guides beneath said magazine, and mechanism for returning to initial printing position any stencil which has been fed between said sectors for a printing operation, means for preventing the feeding from said magazine of any more stencils during any desired number of machine cycles so that repeated printings may be performed with the one in the printing zone which comprises a manually operable device located wholly outside of the path of said pusher adapted to temporarily hold all stencils in the magazine except the bottom one suspended above said pusher path after such bottom one which is being used for repeat printings has been pushed into the printing zone.

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