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*(Under International Convention.)*

Date claimed for Patent under Patents and Designs Act, 1907, being date of first Foreign Application (in Germany), } 5th June, 1913

Date of Application (in the United Kingdom), 15th Dec., 1913

At the expiration of twelve months from the date of the first Foreign Application, the provision of Section 91 (3) (a) of the Patents and Designs Act, 1907, as to inspection of Specification, became operative

Accepted, 18th June, 1914

COMPLETE SPECIFICATION.

**Improvements in Machines for Delivering Postage Stamps and like Strips.**

I, MAX SIELAFF, of 23, Spener Strasse, Berlin, Germany, Manufacturer, do hereby declare the nature of this invention, and in what manner the same is to be performed, to be particularly described and ascertained in and by the following statement:—

5 This invention relates to machines for delivering postage stamps and like strips which are subdivided, by means of perforations, incisions, or by otherwise weakening the strip, into squares or rectangles of equal size, the strips being supplied from a suitable supply roll.

10 The object of the present invention is to provide means for ensuring that the strip will be fed forward so as to always deliver the proper length of strip, that is to say, according to the length and number of subdivisions to be delivered and to ensure that the strip will always be brought into proper severing position so that the strip will always be severed at the transverse perforations or otherwise weakened part. Hitherto this has given rise to considerable difficulty

15 owing to the fact that the strip is not always subdivided into exactly equal lengths and owing to the variation in length of the subdivisions due to varying climatic conditions.

According to the present invention I provide a movable feed plate or its equivalent over one edge of which the strip is bent through an angle of more

20 than 90 degrees, the strip being bent only at that weakened part of it where the severing is to be effected. The forward feed of the strip into severing position is effected solely by the forward movement of the movable plate which fits into and engages the bend in the strip.

Alternatively the feed plate or its equivalent is fixed and the strip is brought

25 into severing position by causing it to recede past the plate until it is arrested at the bend by said plate.

In as much as the bend will naturally take place at the weakened part of the strip the severing of the strip can be effected at the bend, thus ensuring that the strip will always be severed at the weakened part. The severing may be

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effected in any desired manner but preferably the movable feed plate is formed with a blunt knife edge which bears against the bend in the strip, said feed plate acting as a severing knife and co-operating with a second knife to cut off the end of the strip at the bend.

A particular feature of the present invention is that only one bend is made in the strip and since the strip is bent only at the weakened part the advantage is obtained that the subdivisions are not bent or otherwise damaged on leaving the machine. 5

In order that the invention may be more clearly understood reference is made to the accompanying drawings illustrating by way of example one embodiment of the invention, Figures 1, 2 & 3 being somewhat diagrammatic views showing the position of the parts at three different stages of the delivery operation, 10

Figure 1 showing the commencement of the delivery operation,

Figure 2 showing the end of the strip partly bent over and 15

Figure 3 showing the parts in the severing position.

The roll of perforated or otherwise subdivided paper  $a$  is contained within a box  $b$  and is delivered through an opening  $b^1$  at the upper end thereof between the back  $b^2$  and preferably hinged cover  $b^3$  of the box. Behind the back  $b^2$  of the box is mounted a slidable plate  $d$  having a central aperture  $d^2$  one edge of which is formed into a blunt knife at  $d^1$ . As seen in Figure 1 the end of the strip  $a^1$  projects through the opening  $b^1$  and at the commencement of the delivery operation lies within the aperture  $d^2$  in the plate  $d$  which latter is capable of being reciprocated in any suitable manner not shown. 20

Mounted at the rear of and opposite the aperture  $d^2$  is a cam  $e$  having a hook-shaped projection  $e^1$ . The cam  $e$  is mounted upon a shaft  $f$  from which the reciprocatory motion of the plate  $d$  is preferably derived. At the front of the plate  $d$  is arranged a bell crank  $h, k$  which is mounted upon a shaft  $g$ , the curved arm  $k$  of the bell crank terminating at its rear in an upturned part adapted to pass through the aperture  $d^2$ . The bell crank  $h$  is oscillated by means of a second cam  $m$  mounted on the shaft  $f$  and engaging one arm of the bell crank, which may be held in contact therewith by means of a spring. 25

Fitted so as to bear against the front face of the plate  $d$  is a stationary knife  $o$  with which the knife edge  $d^1$  of the plate  $d$  is adapted to co-operate during its reciprocatory movement. 30

Referring now to Figure 1, it will be seen that when the shaft  $f$  is turned in clockwise direction the plate  $d$  will rise and the bell crank  $h$  will be oscillated so that the parts attain the position illustrated in Figure 2, the curved arm  $k$  of the bell crank passing through the aperture  $d^2$  and thus turning over the end  $a^1$  of the strip which projects above the opening  $b^1$  of the box. If desired, the cover  $b^3$  of the box may be in the form of a spring so as to clamp the strip in the opening  $b^1$  and thus ensure the bending of the strip at this point. 35

In the meantime the hook-shaped projection  $e^1$  has moved round to such an extent that it now engages the turned over end of the strip and by its continued movement completes the bending of the strip as illustrated in Figure 3, the circular part of the cam  $e$  pressing during the greater part of the rotation of the cam against the end  $a^1$  of the strip and thus keeping it bent through approximately 180 degrees. In this position the knife edge  $d^1$  of the plate  $d$  has engaged the bend and now co-operates with the fixed knife  $o$  thus separating the end  $a^1$  of the strip which falls downward and is delivered in any suitable manner. 40

On the further rotation of the shaft  $f$  the plate  $d$  recedes and leaves the strip in the position it has assumed with the second subdivision  $a^2$  projecting through the opening  $b^1$  by which it is firmly held. It will thus be seen that the plate  $d$  during its upward movement has fed forward the second subdivision  $a^2$  from the supply roll  $a$  and the operation may now be repeated. 45

As may be seen in Figure 2 the perforations or weakened part between the 50

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subdivisions  $a^1$  and  $a^2$  are not directly against the knife edge  $d^1$  during the bending operation, nor is this necessary as the strip possesses sufficient stiffness relatively to the weakened part or perforations as to ensure the bending of the strip at the weakened part or perforations.

5 In consequence thereof a sufficiently large reciprocatory movement may be imparted to the plate  $d$ , whose knife edge fits within the path of the strip, as to allow with security for any differences in the length of the subdivisions. The knife edge  $d^1$  after each delivery operation merely recedes a short distance behind the next perforations or weakened part so that after the strip is bent  
10 the knife edge  $d^1$  will engage the perforations or weakened part and carry it forward to the fixed knife  $o$ ; the knife edge  $d^1$  at the same time constituting a support for the strip at the severing point during the severing operation.

It will of course be understood that it is not, for example, absolutely essential to bend the strip through approximately 180 degrees, so as to form a loop as  
15 illustrated in Figure 3, but that it would suffice if the end of the strip were bent over a fixed support so that the bent end forms an angle of about 120—140° with the rest of the strip, that is to say, to such an extent as to enable the strip to be fed forward at the bend by a suitable feeding device.

It is, moreover, not essential that the knife edge  $d^1$  be moved so as to feed  
20 the strip forward as indicated on the drawings. In lieu thereof the knife edge may be fixed and the strip first of all fed forwardly by suitable means such as rollers, grippers or the like to such an extent as to bring the severing line beyond the fixed edge  $d^1$  whereupon the strip after being bent at the severing line may be returned to the fixed edge  $d^1$  by suitable means.

25 Having now particularly described and ascertained the nature of the said invention, and in what manner the same is to be performed, I declare that what I claim is:—

1. In a machine for delivering perforated or otherwise subdivided strips, the combination of a movable feed plate or its equivalent and means for bending  
30 the strip over one edge of said plate through an angle of more than 90 degrees, said strip being bent only at that weakened part of the strip where the severing is to be effected, whereby, on the forward movement of said plate, said strip is fed forward into severing position solely by said plate, substantially as described.

35 2. A modification of the machine covered by Claim 1 in which the feed plate or its equivalent is fixed and in which the strip is brought into severing position by causing it to move backwardly relatively to the plate until arrested at the bend thereby, substantially as described.

40 3. In a machine for delivering perforated or otherwise subdivided strips, the combination of a member movable substantially laterally against the strip for primarily bending the strip at that weakened part where the severing is to be effected and a second member adapted to engage over the primarily bent end of the strip and to bend it through nearly 180 degrees, substantially as described.

45 4. In combination with the mechanism covered by Claim 3, a reciprocating plate or like member over one edge of which said strip is bent and a fixed knife co-operating with said plate, substantially as described.

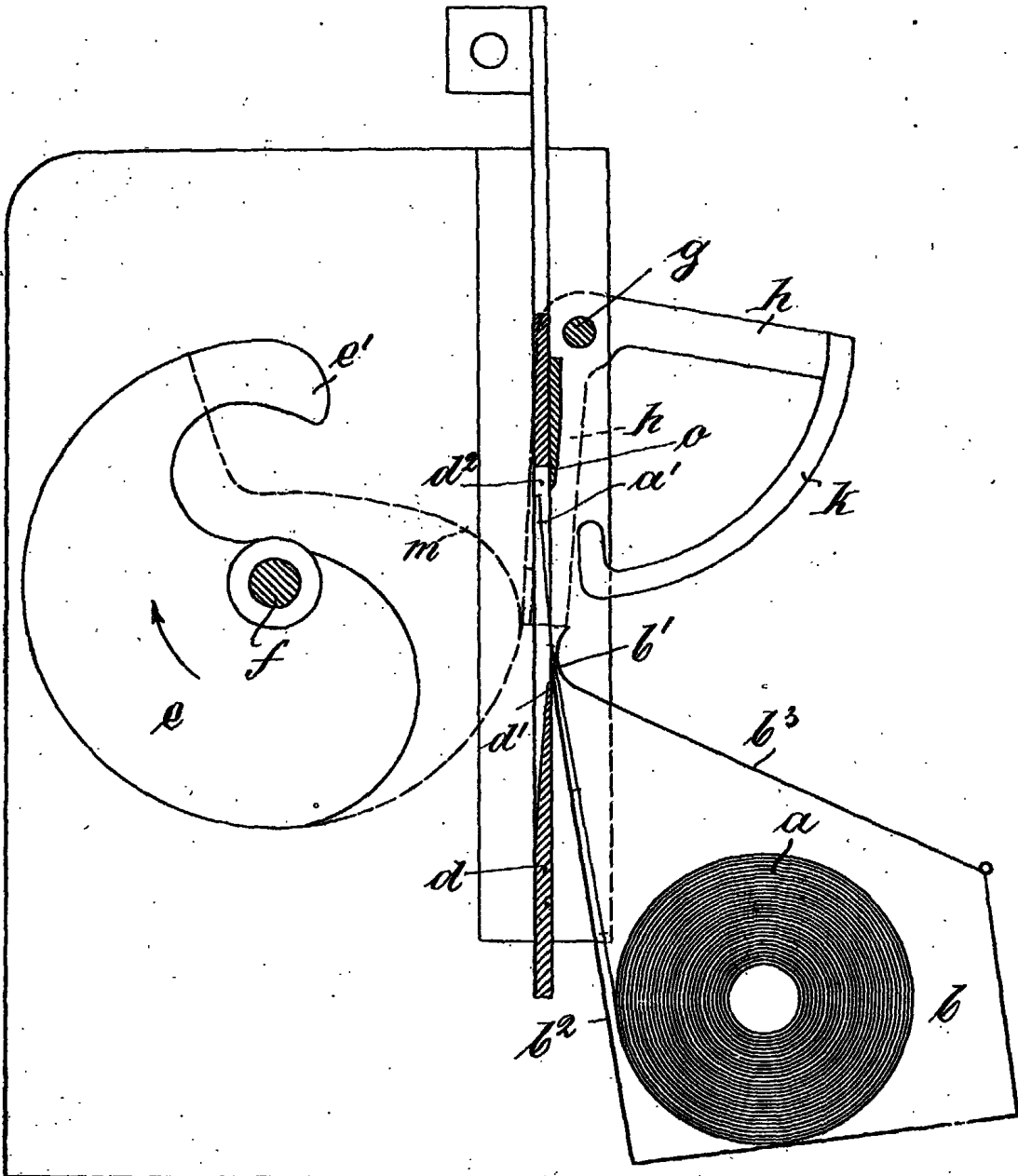
5. In a machine for delivering perforated or otherwise subdivided strips, severing and delivery mechanism combined together and operating substantially as herein before described with reference to the accompanying drawings.

50 Dated this 15th day of December, 1913.

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Fig. 1.



[This Drawing is a reproduction of the Original on a reduced scale.]



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