

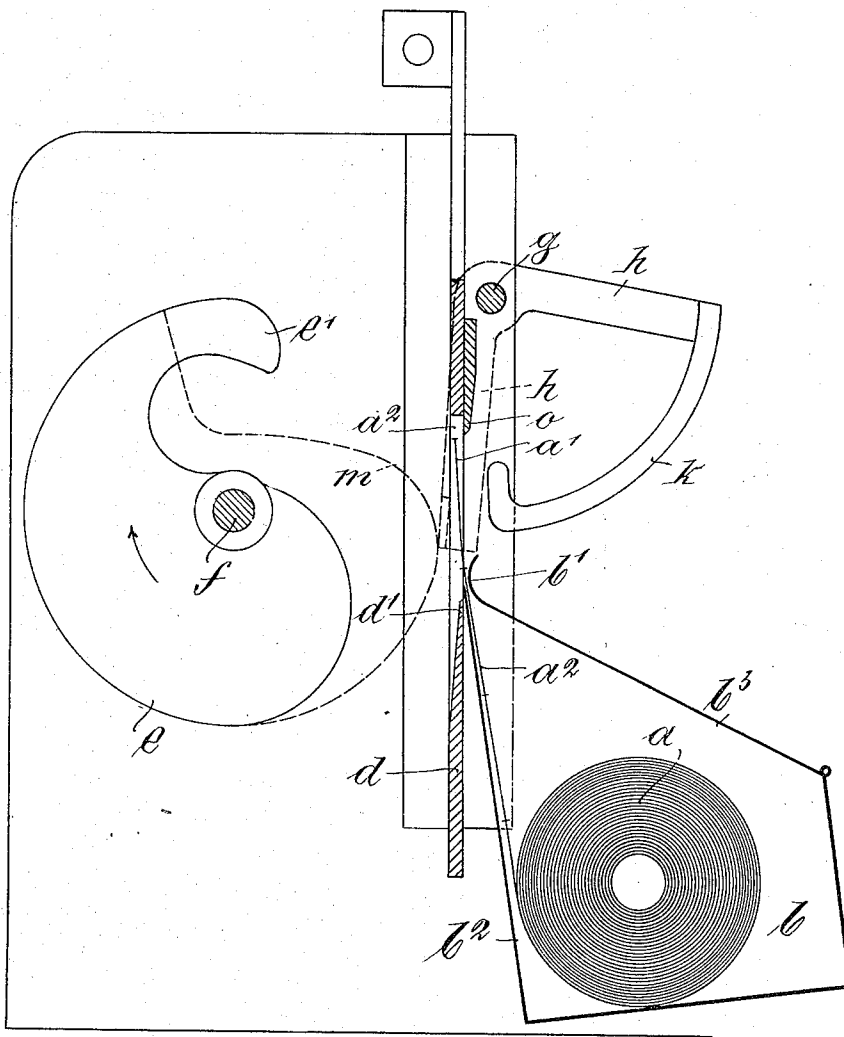
M. SIELAFF.
 DEVICE FOR DELIVERING SUBDIVIDED STRIPS.
 APPLICATION FILED FEB. 4, 1914.

1,195,517.

Patented Aug. 22, 1916.

4 SHEETS—SHEET 1.

Fig. 1.



Witnesses:
 Harry Chew
 Kenneth D. Williams

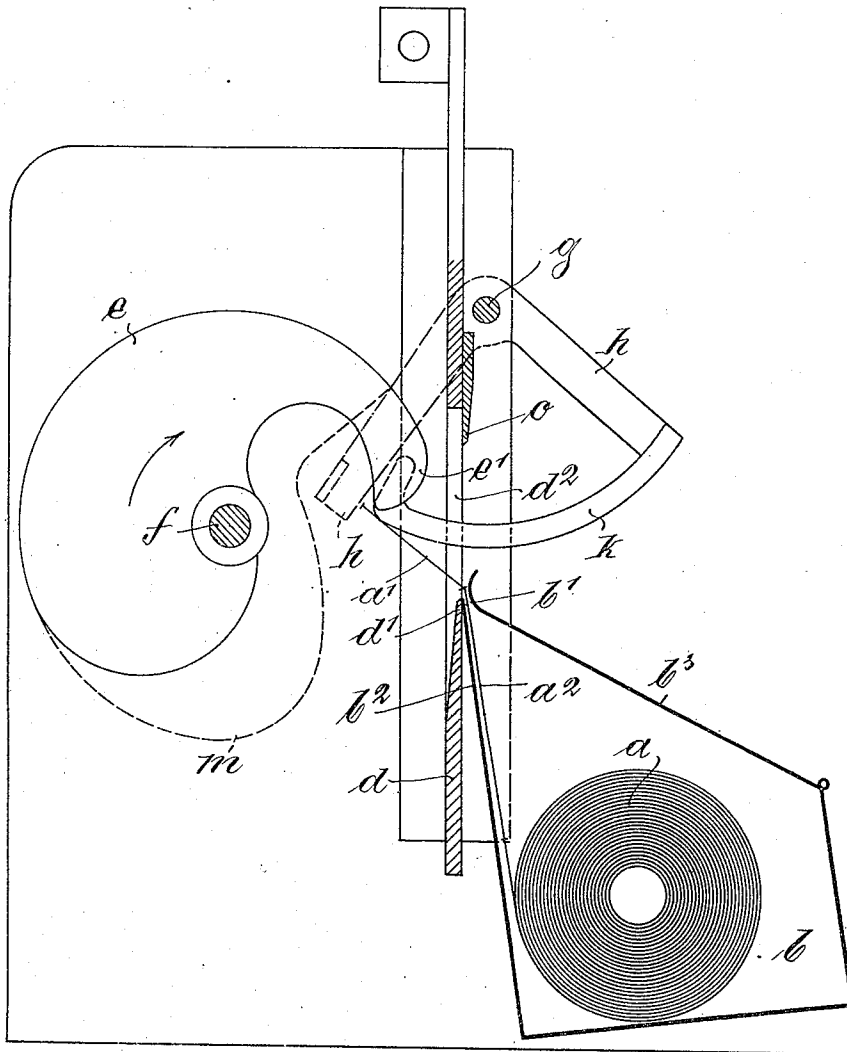
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Fig. 2.



Witnesses:
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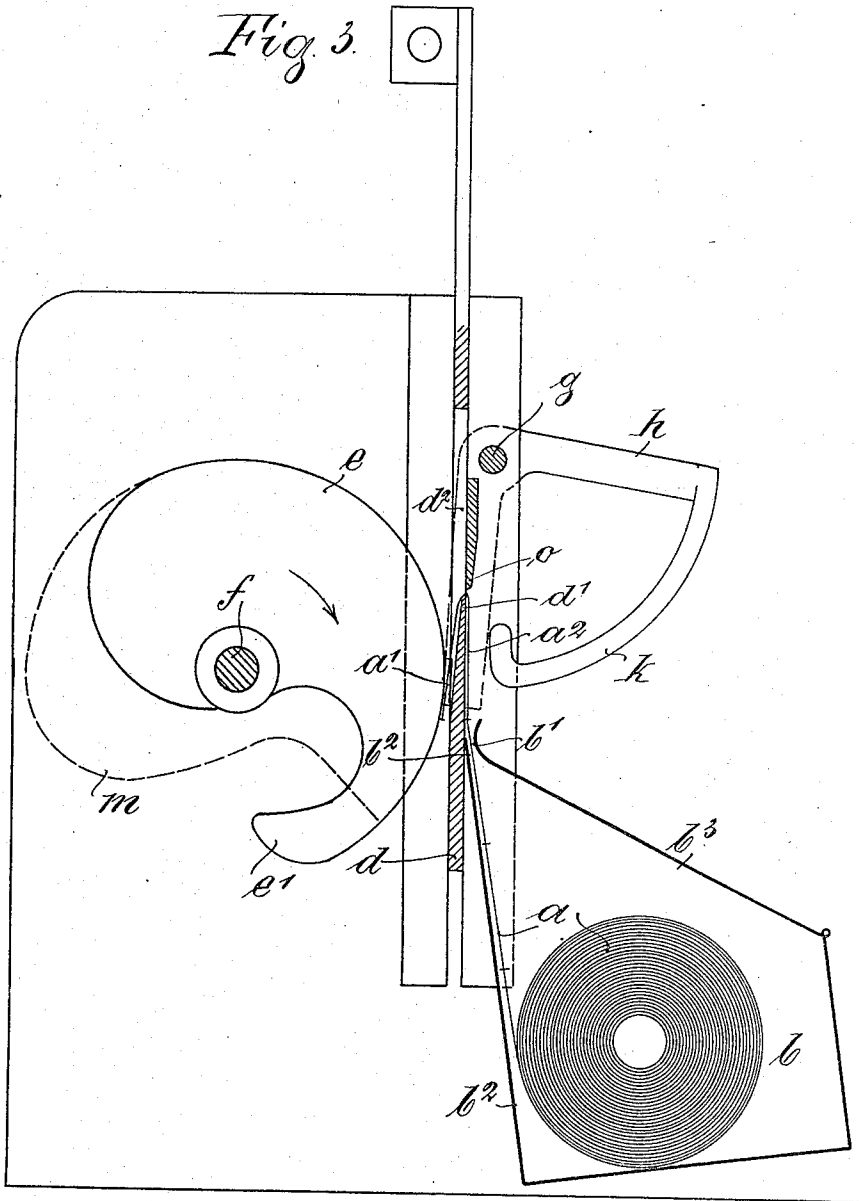
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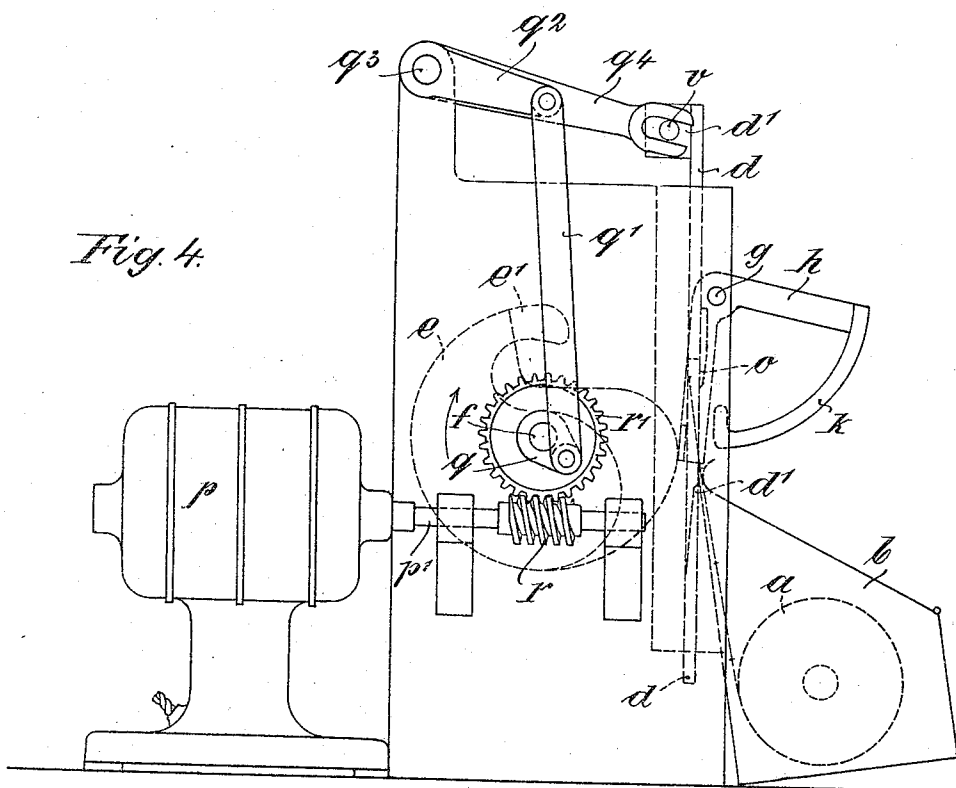
Witnesses:
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 4 SHEETS—SHEET 4.



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UNITED STATES PATENT OFFICE.

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DEVICE FOR DELIVERING SUBDIVIDED STRIPS.

1,195,517.

Specification of Letters Patent. Patented Aug. 22, 1916.

Application filed February 4, 1914. Serial No. 816,517.

To all whom it may concern:

Be it known that I, MAX SIELAFF, subject of the King of Prussia, residing at Berlin, Germany, have invented certain new and
5 useful Improvements in Devices for Delivering Subdivided Strips, of which the following is a specification.

This invention relates to machines for delivering postage stamps and like strips
10 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.

The object of the present invention is to provide means for insuring that the strip will be fed forward so as to always deliver to proper length of strip that is to say, according to the length and number of subdivisions to be delivered and to insure that
20 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
25 this has given rise to considerable difficulty 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 a feed plate or like member is employed, over one edge of which the strip is bent at that weakened part of it where the next severing operation is to be effected, so that the feed
35 plate fits into and engages the bend in the strip. The forward feed of the strip into severing position is effected either by moving the feed plate forwardly or by causing the strip to recede past the feed plate until
40 it is arrested at the bend by the feed plate.

Inasmuch as the stiffness of the strip will naturally insure the bending of the strip at its weakened part, it is easy to provide for the severing of the strip at the proper weakened part by adjusting the position of the
45 bend and by effecting the severing at the bend.

The severing may be effected in any desired manner, but preferably the feed plate
50 is formed with a blunt knife edge which bears against the bend in the strip and cooperates with a knife to cut off the end of the strip at the bend.

In order that the invention may be more
55 clearly understood reference is made to the

accompanying drawings illustrating by way of example one embodiment of the invention, Figures 1, 2 and 3 being somewhat diagrammatic views showing the position of the parts at three different stages of the delivery operation, Fig. 1 showing the commencement of the delivery operation, Fig. 2 showing the end of the strip partly bent over and Fig. 3 showing the parts in the severing position. Fig. 4 represents in side elevation the means for reciprocating the
65 severing plate.

The roll of perforated or otherwise subdivided paper a is contained within a box b and is delivered through an opening b' 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 slidabale plate d having a central aperture d^2 one edge of which is formed into a blunt knife at d' . As seen in Fig. 1 the end of the strip a' projects through the opening b' 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 the following manner. The shaft p' of the electro-motor p carries a worm which drives the worm wheel r' , being keyed on to the shaft f . A crank q is also keyed on to the latter, which is connected by means of a link q' to a lever q^2 being keyed on to the shaft q^3 . The latter carries a lever q^4 , the free forked end of which engages a pivot v , fixed on a projection d' of the plate d being provided with the knife edge d' . On rotating the worm wheel r' the crank q moves the levers q^2 q^4 by means of the link q' up and down, so that the plate d with the cutter d' will be reciprocated.

Mounted at the rear of and opposite the aperture d^2 is a cam e having a hook-shaped projection e' . 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.

Fitted so as to bear against the front

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face of the plate d is a stationary knife o with which the knife edge d' of the plate d is adapted to cooperate during its reciprocatory movement.

5 Referring now to Fig. 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 Fig. 2, the
10 curved arm k of the bell crank passing through the aperture d^2 and thus turning over the end a' of the strip which projects above the opening b' of the box. If desired, the cover b^3 of the box may be in the
15 form of a spring, so as to clamp the strip in the opening b' and thus insure the bending of the strip at this point.

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

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

As may be seen in Fig. 2 the perforations or weakened part between the subdivisions
45 a' and a^2 are not directly against the knife edge d' during the bending operation, nor is this necessary as the strip possesses sufficient stiffness relatively to the weakened part or perforations as to insure the bending of the strip at the weakened part or
50 perforations.

In consequence thereof a sufficiently large reciprocatory movement may be imparted to the plate d , whose knife edge fits within the bend of the strip, as to allow with security
55 for any differences in the length of the subdivisions. The knife edge d' after each delivery operation merely recedes a short distance behind the next perforations or weakened part so that after the strip is bent the
60 knife edge d' will engage the perforations or weakened part and carry it forward to the fixed knife o , the knife edge d' at the same time constituting a support for the strip at the severing point during the severing operation.
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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 illustrated in Fig. 3, but that it would suffice if the end
70 of the strip were bent over a fixed support so that the bent ends form 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
75 suitable feeding device. It is, moreover, not essential that the knife edge d' be moved so as to feed the strip forward as indicated on the drawings.

I claim:

1. A machine for delivering strips divided by weakening into subdivisions comprising a supply roll for the strip, a member provided with one working edge, mechanism for bending the end of the strip over the working
85 edge of said member at that weakened part where the next severing operation is to be effected and means for withdrawing the strip from said supply roll and for bringing the bend in the strip into severing position.
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2. A machine for delivering strips divided by weakening into subdivisions comprising a supply roll for the strip, a reciprocatory edged member, mechanism for bending the end of the strip over the edge of said member
95 at that weakened part where the next severing operation is to be effected and mechanism for reciprocating said member to withdraw the strip from said supply roll and to bring the bend in the strip into severing position.
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3. A machine for delivering strips divided by weakening into subdivisions, comprising a supply roll for the strip, a non-rotatable member having a single working edge mechanism whereby the end of the strip is placed
105 over the working edge of the non-rotatable member at that weakened part where the next severing operation is to be effected and means for withdrawing the strip from the supply roll and for bringing the weakened portion
110 of the strip into severing position.

4. A machine for delivering strips divided by weakening into subdivisions comprising a supply roll for the strip, a reciprocatory edged member, mechanism for bending the
115 end of the strip over the edge of said member at that weakened part where the next severing operation is to be effected and mechanism for reciprocating said member to withdraw the strip from said supply roll and to bring
120 the bend in the strip into severing position and a fixed knife adapted to cooperate with said member to sever the strip at the bend.

5. A device for delivering strips divided by weakening into subdivisions comprising
125 a supply roll for the strip, a member movable laterally against the end of the strip, a second member adapted to engage the end of the strip during the final operation of the first-mentioned member and to bend the end of
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the strip through nearly 180 degrees and a member adapted to fit into and engage the bend in the strip.

5 6. A device for delivering strips divided by weakening into subdivisions comprising a supply roll for the strip, a receptacle having a guide aperture for the delivery of the end of the strip, a member movable laterally against the end of the strip, a device adapted 10 to engage over said end and to bend it through nearly 180 degrees, a thin-edged member whose thin edge is adjacent said aperture, and means for reciprocating said thin-edged member.

15 7. A device for delivering strips divided by weakening into subdivisions comprising a supply roll for the strip, a receptacle having a guide aperture for the delivery of the end of the strip, a member movable laterally against the end of the strip, a device adapted 20 to engage over said end and to bend it through nearly 180 degrees, a thin-edged member whose thin edge is adjacent said aperture, means for reciprocating said thin-

edged member and a fixed knife cooperating 25 with the thin-edge of the last mentioned member.

8. A device for delivering strips divided by weakening into subdivisions comprising a supply roll for the strip, spring means for 30 guiding the end of the strip, a reciprocatory apertured plate, one edge of whose aperture is knife-edged, said aperture being adapted to receive the end of the strip, a laterally 35 movable member adapted to bear against the front side of the end of the strip, a hooked rotatable member at the rear side of the end of the strip, whose hook is adapted to engage over the end of the strip and bend it and whose other part bears against the bent end, 40 and a fixed knife cooperating with said plate.

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

MAX SIELAFF.

Witnesses:

WOLDEMAR HAUPT,
HENRY HASPER.

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