

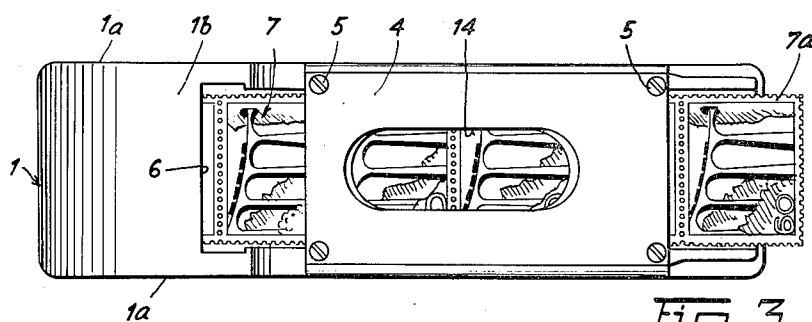
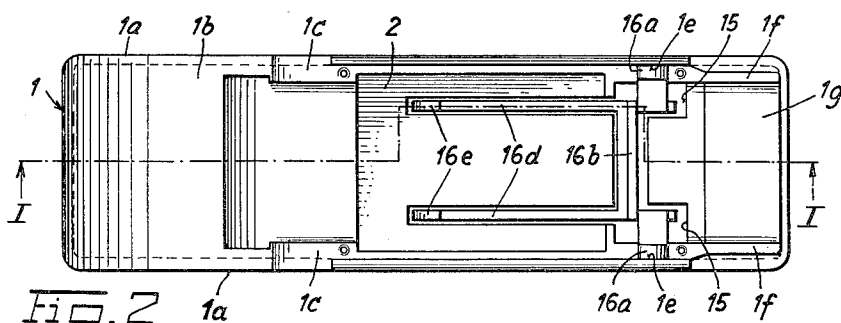
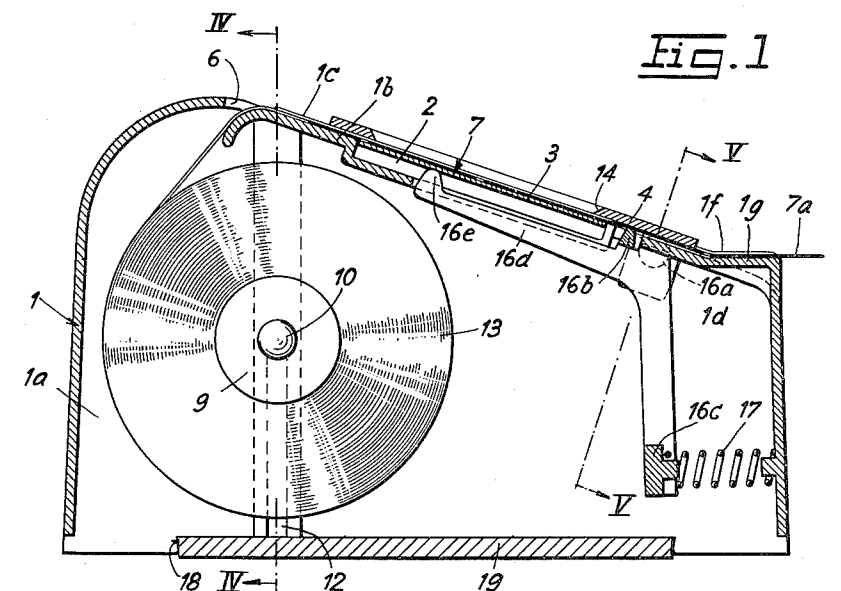
May 29, 1962

P. BARTSCHI  
APPARATUS FOR REMOVING, AS REQUIRED, TEAR-OFF  
PIECES, PARTICULARLY POSTAGE STAMPS

3,036,751

Filed Aug. 3, 1959

4 Sheets-Sheet 1



Inventor:  
Paul Bartschi  
By Michael S. Stricker  
Attorney

May 29, 1962

P. BARTSCHI

3,036,751

APPARATUS FOR REMOVING, AS REQUIRED, TEAR-OFF  
PIECES, PARTICULARLY POSTAGE STAMPS

Filed Aug. 3, 1959

4 Sheets-Sheet 2

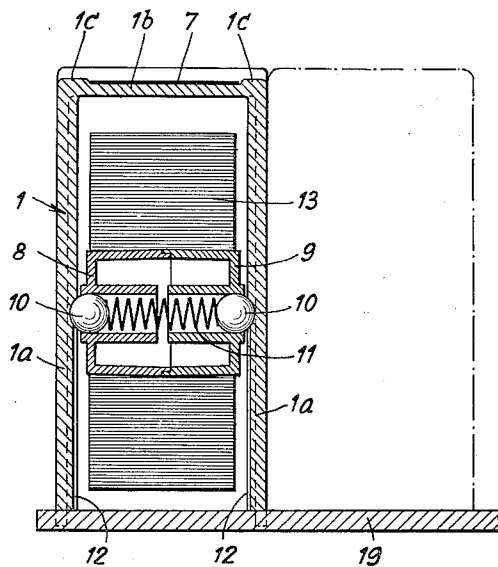


Fig. 4

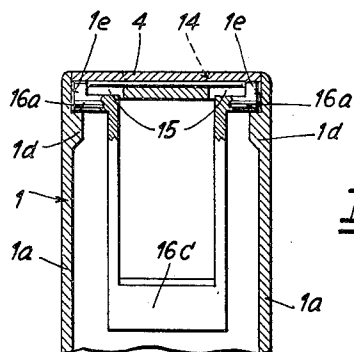


Fig. 5

Inventor  
Paul Bartschi

By Michael S. Striker  
Attorney

May 29, 1962

Filed Aug. 3, 1959

P. BARTSCHI  
APPARATUS FOR REMOVING, AS REQUIRED, TEAR-OFF  
PIECES, PARTICULARLY POSTAGE STAMPS

3,036,751

4 Sheets-Sheet 3

Fig. 6

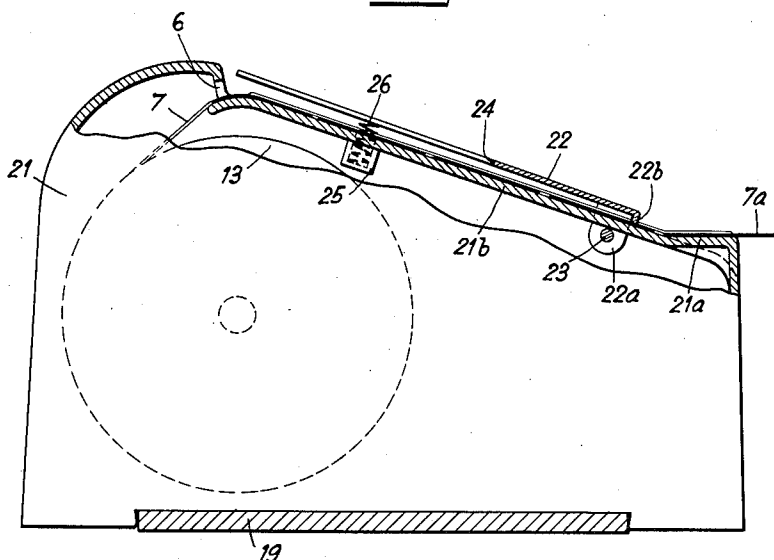
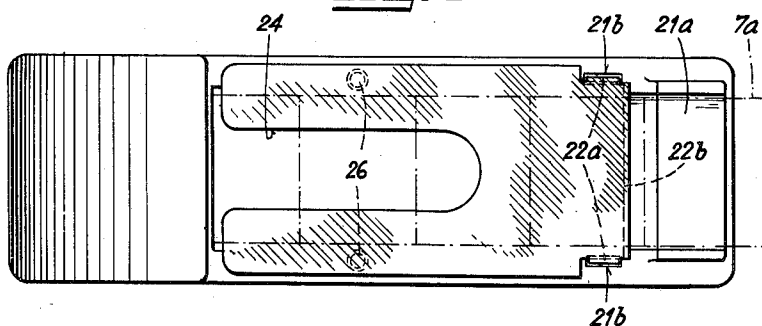


Fig. 7



Inventor  
Paul Bartschi  
By  
Michael S. Striker  
Attorney

May 29, 1962

P. BARTSCHI  
 APPARATUS FOR REMOVING, AS REQUIRED, TEAR-OFF  
 PIECES, PARTICULARLY POSTAGE STAMPS

3,036,751

Filed Aug. 3, 1959

4 Sheets-Sheet 4

Fig. 8

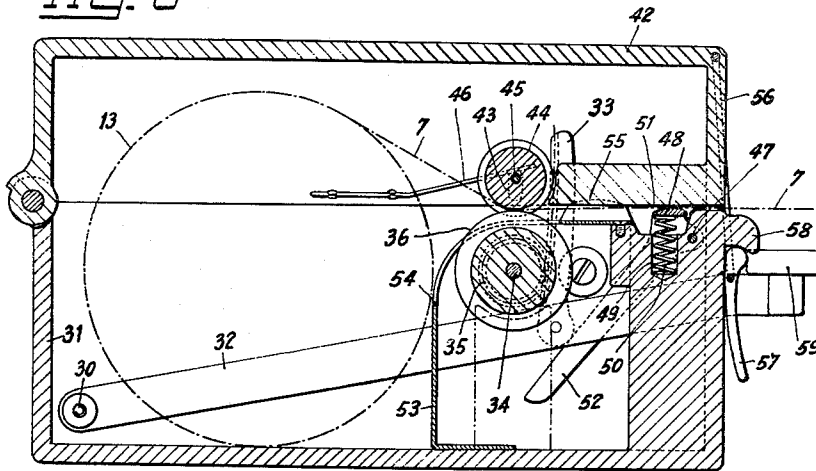


Fig. 9

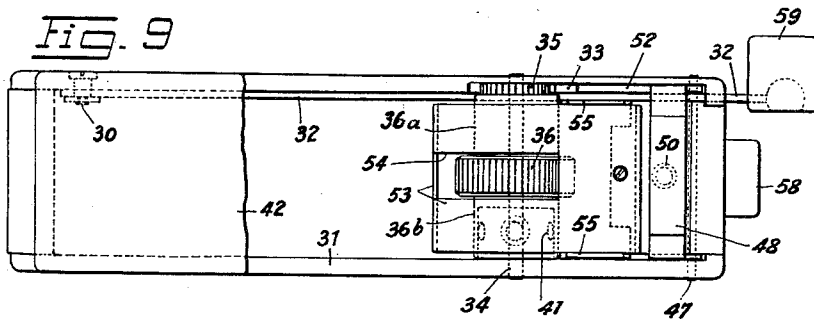


Fig. 10

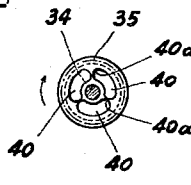
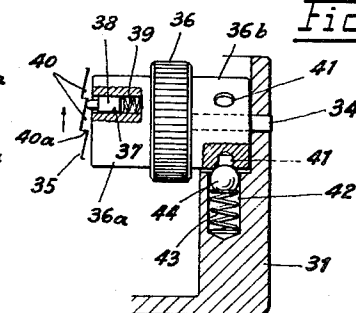


Fig. 11



Inventor  
 Paul Bartschi

By  
 Michael S. Striker  
 Attorney

1

**3,036,751**  
**APPARATUS FOR REMOVING, AS REQUIRED,**  
**TEAR-OFF PIECES, PARTICULARLY POSTAGE**  
**STAMPS**

Paul Bartschi, Zeitglockenlaube 4, Bern, Switzerland

Filed Aug. 3, 1959, Ser. No. 831,348

Claims priority, application Germany Aug. 6, 1958

5 Claims. (Cl. 225—43)

This invention relates to an apparatus for removing, as and when required, tear-off pieces, particularly postage stamps which are connected together in the form of a strip and which can be torn off along perforations, the said apparatus having a feed device and a securing device for the strip. Known apparatuses of this type are provided with a covering member lying over the strip which has, for the purpose of feeding the strip by means of a finger, a longitudinal opening extending in the direction of the strip, and, for the purpose of holding the strip fast when tearing off a piece, the known devices are in some cases provided with claws which engage in the perforation along which the piece is to be torn off, or are provided with a brake-spring and a tear-off edge in order to facilitate the separation of the piece from the strip.

It has, however, been found that in view of the slight thickness of the paper usually employed for postage stamps, the holding fast of the strip by means of claws engaging in the perforations leads to damage to the edges of the perforations and often produces a tear-off line which does not follow the perforations between the piece and the strip. This phenomenon occurs to an even greater extent when tear-off edges are provided, since the perforations do not always coincide with the tear-off edge. In the case of postage stamps however even damage to the edges, for example damage to the perforations, may in some circumstances result in a considerable reduction of the philatelic collection value. For this reason previously known dispensing devices for postage stamps have not been used in practice at official issuing stations, although such appliances would enable an acceleration and simplification of the dispensing of postage stamps to be achieved as compared with the separation of stamps from the sheet.

The object of the present invention is to provide means which overcome the above-described disadvantage and to permit the separation of postage stamps from apparatuses of the above-described type by avoiding the use of the perforations for either the feeding or the holding fast of the strip during separation of stamps, so that the stamp perforations will not be damaged when dispensed from the apparatus. This is achieved by arranging for the movable part of the securing device to be formed by a toothless clamp surface, which for the purpose of acting on one of the flat sides of the strip is disposed, opposite a part of the apparatus intended to serve as a support for the other flat side of the strip, on a spring-loaded lever at a shorter distance from the axis of rotation of the latter than the lever operating point, in order to apply to the strip in the condition of rest a holding clamping pressure directed towards the aforesaid part of the apparatus, this pressure being sufficient to hold the strip fast at any point against the tear-off pull, while the lever is combined with the feed device and on operation of the latter is moved against the load of the spring before the commencement of the feed of the strip, in order to free the latter.

2

The object of the invention will be explained in greater detail below with reference to the examples of the invention illustrated in the accompanying drawings, wherein

FIGURE 1 shows a longitudinal section of a first embodiment of the invention, taken on the line I—I in FIGURE 2;

FIGURES 2 and 3 are plan views with the cover plate removed, and not removed, respectively;

FIGURES 4 and 5 show cross-sections on the lines IV—IV and V—V respectively in FIGURE 1;

FIGURE 6 is an elevation in partial longitudinal section of a second embodiment of the invention;

FIGURE 7 is a plan view of the device shown in FIGURE 6;

FIGURE 8 shows a third embodiment in vertical longitudinal section;

FIGURE 9 is a plan view corresponding to FIGURE 8, with the lid partly omitted; and

FIGURES 10 and 11 each show a detail of the feed device in this form of the invention.

The stamp dispensing apparatus illustrated in FIGURES 1 to 5 has a single-part hood-shaped housing 1 having side walls 1a parallel to one another, which housing can be made of metal or synthetic plastic, for examples by an injection moulding method. In the upper part 1b of the housing which is inclined towards one side, a rectangular depression 2 is provided in which a fitting, plate-shaped sliding table 3 is mounted to be movable transversely of its table surface, and over which a cover plate 4 is fastened by means of four screws 5 on edge leads 1c, provided on both sides, at the top of the housing. Through an outlet aperture 6 at the uppermost part of the housing top 1b runs a strip 7 coming from a storage roll 13 which is situated in the housing and which passes between the sliding table 3 and the cover plate 4 over the top of the housing. This strip consists of connected postage stamps 7a or the like which can be torn off along perforations. Any other kind of tickets or slips may be accommodated.

The storage roll is situated on a drum which is composed of parts 8 and 9 and the axial bore of which contains two balls 10 between which there is a coil spring 11 which presses the balls resiliently against the slightly narrowed ends of the bore. Through guide grooves 12 provided on the inside of the two side walls 1a, the storage roll 13 is pushed in with the balls 10 yielding slightly into the bore, until the said balls enter spherical mounting depressions provided at the inner ends of the grooves. The two parts of the drum may be stuck together.

The cover plate 4 has an opening 14 of a finger width which is elongated in the direction of the strip. The longitudinal beads 1b and lateral raised edges 1f at the lowermost horizontal end 1g of the top of the housing serve to guide the strip of stamps 7. The housing top 1b is provided at a point adjoining the bottom end of the depression 2 under the cover plate 4 with an opening 15 into which project parts 1d of the two side walls, each forming a bearing bush 1e. A lever 16 is mounted by its two journals 16a in the bearing bushes and is held down by the cover plate 4.

The lever 16, which consists of a single piece, has double arms which are connected by a cross-piece 16b, constructed as a clamp surface, near the axis of the lever and by a second cross-piece 16c, against which presses a coil spring 17 supported on the housing 1.

3

Beneath the sliding table 3, the lever arms 16*d* extend in slits in the bottom of the depression 2, and bear by their raised free ends 16*e* on the underside of the sliding table.

The dispensing apparatus described is operated by applying pressure to the strip 7 and the sliding table 3 by one finger at the top end of the opening 14 in the cover plate 4, whereby the said sliding table is depressed against the action of the spring 17 and in consequence of the rocking of the lever the clamp surface 16*b* is moved slightly downwards. The strip 7 is freed between the clamp surface and the cover plate 4 and can now be pushed forward, by the sliding of the finger to the bottom end of the opening 14 on the horizontal top 1*g* of the housing, depending on the length of the opening 14, for example by a distance equal to that between two adjacent perforations. On the lifting of the finger from the strip 7, the sliding table is raised back into the starting position and the strip is pressed and held against the cover plate 4 by the clamp surface under the action of the spring 17. In consequence of the lever transmission, the clamping force amounts to a multiple of the spring force and is sufficient to prevent the sliding of the strip as the result of the pull on the tearing off of the projecting stamp 7*a*. The clamp surface and the support surface of the cover plate lying opposite it are preferably so constructed that the clamping action is distributed as uniformly as possible over at least approximately the entire width of the strip.

In order to be able to combine a number of identical dispensers to form a single unit, for example for different values of stamps, the side walls 1*a* of the apparatus housing 1 are provided at their bottom edge with a dovetail-shaped recess 18, by means of which the apparatus can be mounted after the style of a snap fastener action on a stationary rail 19.

In the form of the invention illustrated in FIGURES 6 and 7, the outlet opening 6 for the strip 7 is provided on a raised portion of the top of the housing, while the part 21*b* of the housing 21, which runs obliquely downwards from the said aperture, forms an immovable slide table, which is followed at the bottom end by a horizontal part 21*a* for the withdrawal of the stamp. A cover plate 22 extending over the sliding table 21*b* is mounted near its bottom end by means of two lugs 22*a* projecting into the housing 21 in such a manner as to be rockable on the housing about a horizontal axis 23. The bottom edge of the cover plate forms a clamp surface 22*b* which projects against the slide table and which crosses the strip 7. In the upper part of the cover plate there is provided an opening 24 of finger width extending in the direction of the strip, by means of which the strip can be moved forward by means of a finger. When this is done, the cover plate 22 which is resiliently supported on the housing 21 on two coil springs 26 in the two bores 25, is depressed in its upper part on to side edge beads 21*c* of the slide table, whereby the clamp surface 22*b* is caused to free the strip 7.

In the form of the invention illustrated in FIGURES 8 to 11, for the purpose of effecting the feeding of the strip of stamps 7 running off the storage roll 13 and for the release of the strip clamp which is first necessary, an operating lever 32, articulated at 30 to the bottom 31 of the housing of the apparatus, is provided, and is guided in a vertical slot in the bottom part of the housing and on which is articulated a toothed rack 33 which meshes with a pinion 35 mounted on the axle 34. A feed roller 36 mounted on the axle 34, and knurled on its periphery, has on each side a cylindrical attachment 36*a* and 36*b* respectively. In an axially parallel bore 37 in the attachment 36*a* there is guided a driver pin 38 which under the thrust of a coil spring 35 accommodated in the bore 37 projects at the end face from the attachment into, in each case, one of three grooves 40 on the pinion 35 (FIGURES 10 and 11). In development, as shown in

4

FIGURE 11, each of these grooves is constructed as a saw tooth, and at the point of transition from one groove to the next they form tooth faces 40*a*, which drive the pin 38 and hence the feed roller 36 only after a determined idling movement of the pinion 35 in each case. The attachment 36*b* has regularly disposed on its periphery three radial bores 41, of which in each case at the end of each feed step one will stand opposite a bore 42 in the lower part 31 of the housing, out of which bore, under the thrust of a coil spring 43, a ball catch 44 will emerge to enter partly the respective bore 41.

In the housing cover 42, a co-acting roller 44 intended to co-operate with the feed roller 36 is adjustably mounted in two slots 43 by its axis 45 under the pressure of spring arms 46, and when the cover is closed is pressed against the feed roller 36 or the strip 7.

The strip clamp has on the lower part 31 of the housing, a clamp surface 48 which is mounted rockably on the axis 47 and is parallel to the latter, and under the pressure of a coil spring 50, situated in a bore 49 in the lower part of the housing, presses the strip 7 at least approximately over its entire width against a support surface 51 provided on the cover 42 and has a side arm 52, which in consequence of the spring pressure bears against the articulated end 33*a* of the toothed rack 33 and urges the operating lever 32 to remain in the starting position shown in FIGURE 8. A guide and protective plate 53 fastened on the lower part 31 of the housing has an aperture 54 for the passage of the feed roller 36 and, at the top part, edges 55 bent upwards on both sides for the purpose of guiding the strip.

The cover 42 articulated to the lower part 31 of the housing can be closed against the action of the springs 46 and 50 by means of a clamp fastener, the bow 56 of which is articulated on the cover and the clamp lever 57 of which, provided on the bow, is brought into engagement with a snout 58 on the lower part of the housing for the purpose of closing the latter.

On the depression of the operating lever 32 by the key 59, the arm 52 is turned in a counterclockwise direction as seen in FIGURE 8, and thereby the clamp surface 48 is moved away from the support surface 51 against the action of the spring, whereby the strip clamp is opened. During this operation, the toothed rack 33 turns the pinion 35, in consequence of the shape of the grooves 40, with an idling movement at first until the tooth face 40*a* engages against the drive pin 38 and turns the feed roller 36 one-third of a revolution, while the lever 32 reaches the bottom end position and the ball catch 44 and engages once again in a bore 41. This one-third rotation feeds the strip forward by one stamp. On the release of the key 59, the spring 50 effects the return of the clamp surface 48 into the clamping position and the return of the lever 32 into the starting position, since the toothed rack 33 turns back the pinion 35, while the drive pin 38 is pushed back by the tooth backs of the grooves 40.

When the cover 42 is open, the spring 50 is already under a slight initial stress and is made so powerful that the strip 7 is held fast even when the tearing-off pull is jerky. Because of the lever transmission, a key pressure of far smaller force than the force of the spring 50, which in any case is slightly reduced on the lowering of the operating lever because the operating point 33*a* is moved against the end of the lever arm 52, is sufficient to release the clamp.

The support surface 51 on the cover 42 co-operating with the clamp surface 48 is formed by a fixed part of the cover, but may be provided on a plate or the like resiliently supported on the cover, in order to provide a certain adjustability to ensure uniform clamping over the entire operative length of the clamp surface.

What I claim is:

1. Apparatus for dispensing postage stamps and the like comprising, in combination, housing means for sup-

5

porting a roll of tearable strip material such as postage stamps adapted to be torn along perforations extending spaced from each other in transverse direction to the strip; guide means on said housing for guiding a free end portion of said strip, said guide means having a guide face adapted to engage one face of said strip; clamping means adapted to engage a face of said strip opposite said one face and being pivotally mounted on said housing for movement between a clamping position in which said clamping means clamps said strip against said guide face and a releasing position in which said strip may be fed between said guide face and said clamping means; spring means operatively connected to said clamping means and tending to keep the same in its clamping position; and lever means operatively connected to said clamping means for moving the same against the pressure of said spring means to said releasing position so that said strip may be fed between said guide face and said clamping means.

2. Apparatus for dispensing postage stamps and the like comprising, in combination, housing means for supporting a roll of tearable strip material such as postage stamps adapted to be torn along perforations extending spaced from each other in transverse direction to the strip; guide means on said housing for guiding a free end portion of said strip, said guide means having a guide face adapted to engage one face of said strip; clamping means adapted to engage a face of said strip opposite said one face and being pivotally mounted on said housing for movement between a clamping position in which said clamping means clamps said strip against said guide face and a releasing position in which said strip may be fed between said guide face and said clamping means; spring means operatively connected to said clamping means and tending to keep the same in its clamping position; lever means mounted on said housing means for pivotal movement about an axis and being operatively connected to said clamping means for moving the latter against the pressure of said spring means during pivotal movement of said lever means to said releasing position; and feeding means operatively connected to said lever means for feeding said strip during pivotal movement of said lever means after said lever means has moved said clamping means to said releasing position.

3. Apparatus for dispensing postage stamps and the like comprising, in combination, housing means for supporting a roll of tearable strip material such as postage stamps adapted to be torn along perforations extending spaced from each other in transverse direction to the strip; guide means on said housing for guiding a free end portion of said strip, said guide means having a guide face adapted to engage one face of said strip; clamping means adapted to engage a face of said strip opposite said one face and being pivotally mounted on said housing for movement between a clamping position in which said clamping means clamps said strip against said guide face and a releasing position in which said strip may be fed between said guide face and said clamping means; spring means operatively connected to said clamping means and tending to keep the same in its clamping position; lever means mounted on said housing means for pivotal movement about an axis and being operatively connected to said clamping means for moving the latter against the pressure of said spring means during pivotal movement of said lever means to said releasing position; and feeding means operatively connected to said lever means for feeding said strip during pivotal movement of said lever means after said lever means has moved said clamping means to said releasing position, said feeding means comprising at least one feed roll adapted to engage said strip and being mounted on said housing means turnably about an axis substantially parallel to said guide face, operating means operatively connected to said feed roll and said lever means for turning said feed roll during pivotal movement of said lever means and including a lost-motion connection so that said feed roll

6

will be turned for feeding said strip only after said clamping means has been moved by said lever means to said releasing position.

4. Apparatus for dispensing postage stamps and the like comprising, in combination, housing means for supporting a roll of tearable strip material such as postage stamps adapted to be torn along perforations extending spaced from each other in transverse direction to the strip; guide means on said housing for guiding a free end portion of said strip, said guide means having a guide face adapted to engage one face of said strip; clamping means adapted to engage a face of said strip opposite said one face and being pivotally mounted on said housing for movement between a clamping position in which said clamping means clamps said strip against said guide face and a releasing position in which said strip may be fed between said guide face and said clamping means; spring means operatively connected to said clamping means and tending to keep the same in its clamping position; lever means mounted on said housing means for pivotal movement about an axis and being operatively connected to said clamping means for moving the latter against the pressure of said spring means during pivotal movement of said lever means to said releasing position; and feeding means operatively connected to said lever means for feeding said strip during pivotal movement of said lever means after said lever means has moved said clamping means to said releasing position, said feeding means including at least one feed roll adapted to engage said strip, a shaft mounted in said housing means turnably about an axis substantially parallel to said guide face and supporting said feed roll turnably about said axis, a gear fixed to said shaft, rack means meshing with said gear and carried by said lever means for movement therewith, and one-way clutch and lost-motion means connecting said feed roll with said shaft so that upon pivoting said lever means in one direction said feed roll is turned for feeding said strip after said clamping means has been moved by said lever means to said releasing position and so that upon pivoting said lever means in a direction opposite to said one direction said gear is turned without turning said feed roll.

5. Apparatus for dispensing postage stamps and the like comprising, in combination, a housing having a bottom part for supporting a roll of tearable strip material such as postage stamps or the like, a top part hingedly connected to said bottom part and movable between an open position in which said top part is turned to provide access to the interior of the bottom part and a closed position, and locking means for locking said top part in closed position to said bottom part; guide means on said top part of said housing for guiding a free end portion of said strip, said guide means having a guide face adapted to engage one face of said strip; clamping means adapted to engage a face of said strip opposite said one face and being pivotally mounted on said bottom part of said housing for movement between a clamping position in which said clamping means clamps said strip against said guide face and a releasing position in which said strip may be fed between said guide face and said clamping means; spring means operatively connected to said clamping means and tending to keep the same in its clamping position; lever means mounted on said bottom part of said housing for pivotal movement about an axis and being operatively connected to said clamping means for moving the latter against the pressure of said spring means during pivotal movement of said lever means to said releasing position; feeding means operatively connected to said lever for feeding said strip during pivotal movement of said lever means after said lever means has moved said clamping means to said releasing position, said feeding means comprising a feed roll adapted to engage said strip on said opposite face thereof and being mounted on said bottom part of said housing turnably

7

about an axis substantially parallel to said guide face, operating means operatively connected to said feed roll and said lever means for turning said feed roll during pivotal movement of said lever means and including a lost-motion connection so that said feed roll will be turned for feeding said strip only after said clamping means has been moved by said lever means to said releasing position, and a spring pressed counter-pressure roll turnably mounted on said top part of said housing and located in the closed position of said top part of

5

10

8

said housing opposite said feed roll for engaging said one face of said strip.

#### References Cited in the file of this patent

##### UNITED STATES PATENTS

1,212,068	Jones et al. -----	Jan. 9, 1917
2,337,655	Gordy -----	Dec. 28, 1943
2,654,598	Krueger -----	Oct. 6, 1953
2,681,185	Metzler et al. -----	June 15, 1954