May 8, 1962 B. P. SCHUMACHER ETAL 3,033,738

STAMP DISPENSER

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FIG. 1

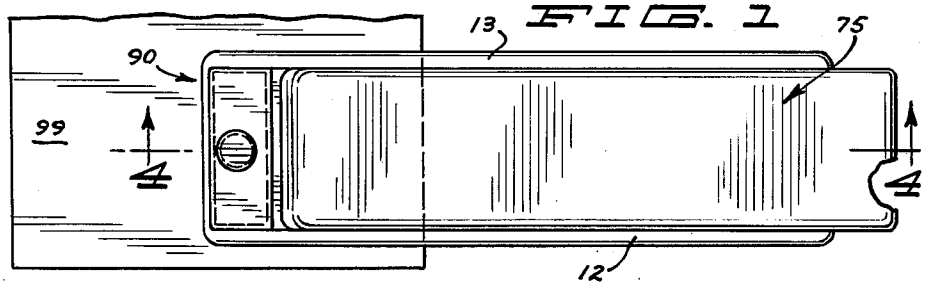


FIG. 2

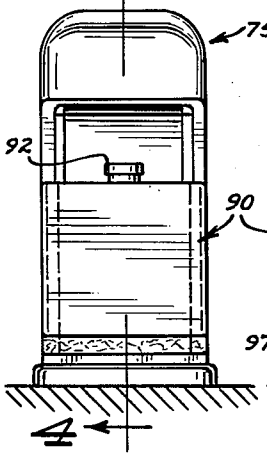
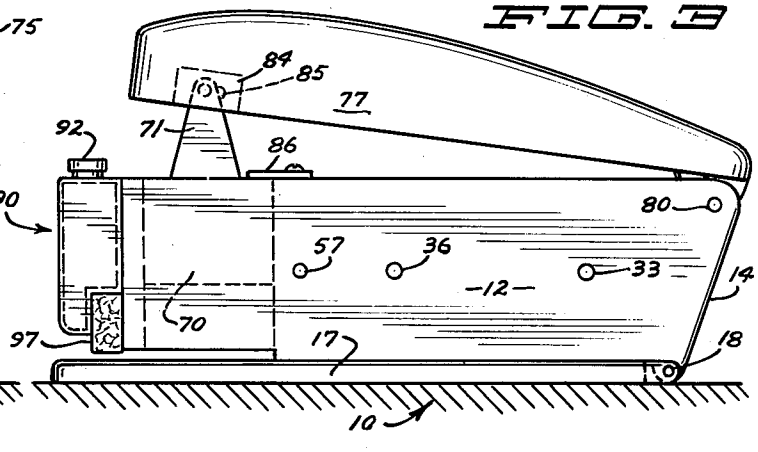


FIG. 3



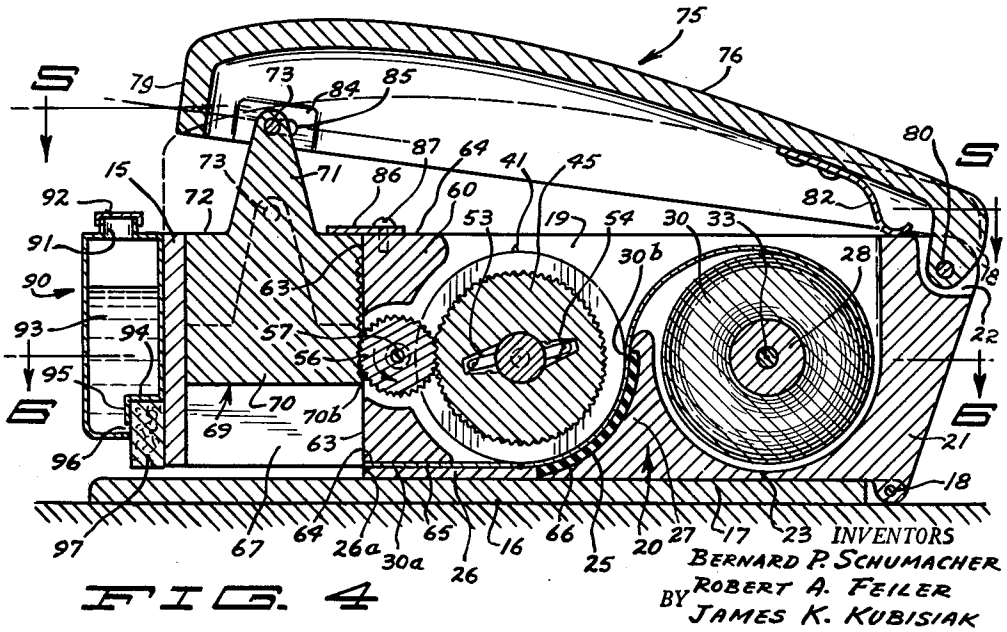


FIG. 4

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STAMP DISPENSER

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FIG. 5

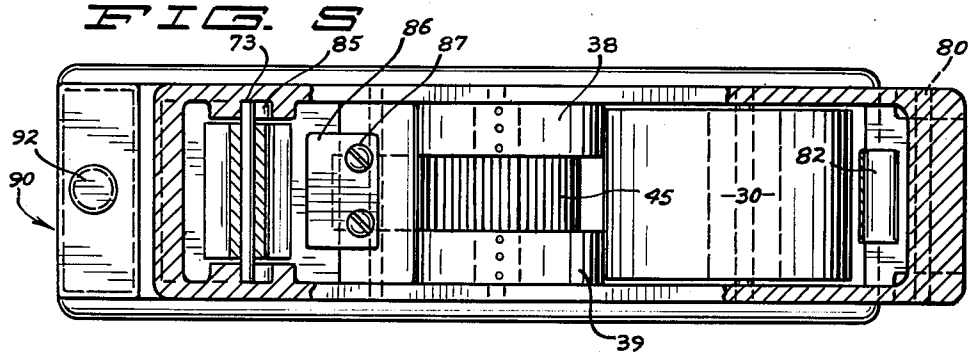
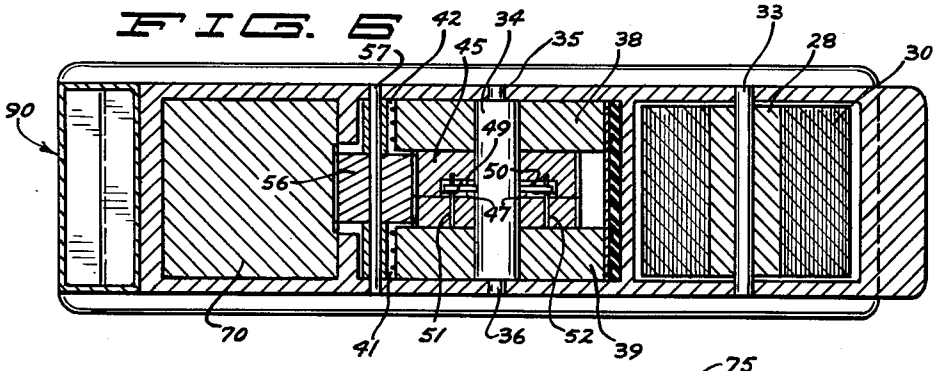


FIG. 6



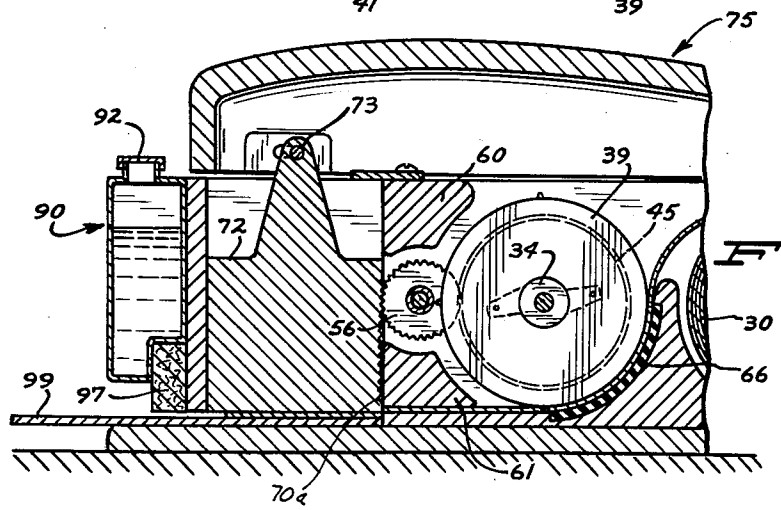


FIG. 7

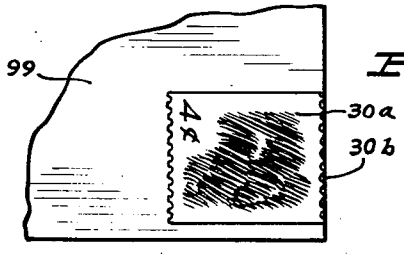


FIG. 8

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United States Patent Office

3,033,738

Patented May 8, 1962

3,033,738
STAMP DISPENSER

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Filed Feb. 18, 1960, Ser. No. 9,539
2 Claims. (Cl. 156—530)

This invention relates to a simplified structure of a stamp dispenser and affixer for use in connection with postage stamps and the like.

It is an object of this invention to provide such a dispenser in a compact arrangement within a housing and having relatively few interengaging and movable parts.

It is another object of this invention to provide means for engaging the perforations between the stamps for positively advancing said stamps certain regular intervals of distance.

It is also an object of this invention to provide a stamp dispenser having a moistening means, and means for affixing a stamp on a desired object in a desired position.

It is still another object of this invention to dispense stamps and be adapted to affix the same to various types of cartons and parcels, as well as to envelopes.

These and other objects and advantages of the invention will be fully set forth in the following description made in connection with the accompanying drawings in which like reference characters refer to similar parts throughout the several views and in which:

FIG. 1 is a plan view of applicants' device;

FIG. 2 is a view in end elevation with some portions shown in dotted line;

FIG. 3 is a view in side elevation with some portions shown in dotted line;

FIG. 4 is a view on an enlarged scale in central vertical section taken on lines 4—4 of FIGS. 1 and 2, as indicated by the arrows, and showing the operating mechanism of applicants' device;

FIG. 5 is a view in horizontal section taken on line 5—5 of FIG. 4, as indicated by the arrows;

FIG. 6 is a view similar to FIG. 5 taken on line 6—6 of FIG. 4, as indicated by the arrows;

FIG. 7 is a fragmentary view of a portion of applicants' device in vertical section on an enlarged scale showing an operating portion thereof in a different position from what is shown in FIG. 4; and

FIG. 8 is a fragmentary view of an object showing a stamp placed thereon in connection with the operation of applicants' device.

Referring to the drawings, applicants' device is here shown comprising a housing **10** indicated as being substantially rectangular in plan and having upstanding side walls **12** and **13**, an upwardly inclined rear end wall **14**, and a vertical front end wall **15**. A flat plate-like bottom **16** having short upstanding side walls **17** is hinged at its rear end portion by pins or rivets **18** to the adjacent portions of the side walls **12** and **13**. Formed within said housing **10** is a chamber **19**.

Referring to FIG. 4, carried at the bottom and rear end portion of said housing and secured between the side walls thereof is an irregularly formed member **20** having an upstanding rear or back portion **21** having a curved recessed portion **22** at the rear upward outer corner thereof and having a partial circular recessed portion **23** adapted to accommodate a cylindrical member therein transversely of said housing and having a lower forward recessed concavely curved portion **25** with an upstanding common wall portion **27** therebetween having arcuate sides in vertical section forming side portions respectively of said recessed portions **23** and **25**. Extending forwardly of said curved portion **25** is a flat bottom extending portion **26**.

A spindle **28** adapted to have a roll of stamps **30**, such as postage stamps, is carried on a shaft **33** journaled between said side walls **12** and **13** centrally of said recessed portion **23** whereby said roll of stamps is nicely accommodated in said recessed portion.

A shaft **34** having end portions **35** and **36** of reduced dimension is journaled between said sides **12** and **13** at a point that would represent the axis of a circle described by a continuation of the curvature of said recessed portion **25**.

Secured to said shaft **34** adjacent either end thereof and in spaced relation to one another are rollers **38** and **39**. In the embodiment of the invention here disclosed the circumference of each of said rollers will be equivalent to the linear measurement of four postage stamps. Projecting outwardly of the peripheries of said rollers are transversely disposed sets of prongs **41** and **42** circumferentially spaced about said rollers adapted to engage the perforations **30***b* between stamps **30***a* of said roll of stamps **30**.

In connection with said rollers **38** and **39**, means for rotating said shaft **34** are indicated, which in the present embodiment of the applicants' invention are shown as comprising a toothed gear **45** journaled centrally on said shaft **34** between said rollers **38** and **39**. Chambers **47** are formed within said gear **45** oppositely of said shaft **34** to house dogs **49** and **50** radially disposed in said chambers in diametrically opposed positions. Said dogs are pivoted on pins **51** and **52** disposed transversely into said gear **34** and extending through said chamber **47**. Said dogs are held in operating position by springs **53** and **54** as indicated in FIG. 4, in a slightly tangential relation with respect to the circumference of said shaft **34** whereby when said gear **45** is rotated in a clockwise direction, said dogs **49** and **50** frictionally engage the surface of said shaft to rotate said shaft. When said gear **45** is rotated in a counter-clockwise direction, said dogs slip freely about said shaft and do not rotate the same.

Adapted to mesh with said gear **45** is a smaller toothed gear **56** mounted on a shaft **57** journaled between said sides **12** and **13**.

Positioned above and below said gear **56** and forming an end enclosure for said chamber **19** are vertically spaced irregularly shaped members **60** and **61**. Said members **60** and **61** extend transversely between said walls **12** and **13** and will be suitably secured thereto. Said members have right-angled outer sides with their adjacent vertical sides forming an end enclosure **63**, and the remote sides being horizontally disposed to form top and bottom portions **64** and **65** respectively. Said members have inner concavely curved portions which form a housing partially about said gear **56** and in combination with said curved portion **25** form a partial enclosure about said gear **45**. Said members **60** and **61** are spaced apart just sufficiently vertically to permit said gear **56** to extend its toothed portion outwardly of a vertical extension of the adjacent sides **63** of said members **60** and **61**. Said member **61** will have its bottom side **65** spaced above said extended portion **26** just sufficiently to form a slot **64** for the passage of stamps therebetween.

Seated in the curvature **25** and extending transversely thereof to barely engage the adjacent surfaces of said rollers **38** and **39** is a cushion **66** formed of a sponge-like resilient material adapted to hold the stamps **30***a* in pressing engagement with said rollers. Said prongs **41** will be of a length barely sufficient to extend into the perforated portion between each of said stamps **30***a* and will be moved along the surface of said cushion **65** barely in contact therewith if at all in advancing forwardly said stamps.

Spaced forwardly of the side walls **63** of said members **60** and **61** is said end wall **15** of said housing **10**, and formed therebetween is a chamber **67** forming a vertical guide for a plunger **69**. Said plunger is here shown having a base portion **70** substantially parallelepiped in form having an offset upwardly extending portion **71** somewhat triangular in longitudinal vertical section having shoulders **72** formed at either side thereof and a pin **73** disposed transversely through an upper portion thereof and extending outwardly at either end thereof. In the side of said bottom portion **70** adjacent said gear **56** are transversely extending horizontally disposed teeth forming a rack **70***a* for engagement with said gear **56** to rotate the same as said bottom portion is reciprocated vertically. Said rack will be of a length and said gear **56** will be of a size whereby a full downward stroke of said bottom portion **70** and said rack **70***a* will rotate said gear **56** sufficiently to move said stamps **30***a* the length of one stamp or a one-fourth rotation of said gear **45** which will move one stamp into position to be affixed to a surface, such as of an envelope, as will hereinafter be explained.

The lower inner corner **70***b* of said base portion **70** and the upper outer corner **26***a* of the extended portion **26** are formed as cutting edges and are spaced to barely clear one another when said plunger descends and cooperate to break or cut a stamp free along the perforated or tear lines between said stamps.

Mounted on said housing **10** is a pivoted cover **75** having a curved top portion **76**, depending sides **77**, an inwardly curved depending rear end portion **78**, and a straight depending front end portion **79**. Said front end portion and said sides are adapted to rest upon end **15** and sides **12** and **13**. Said depending rear end has a pin **80** extending therethrough and journaled into the adjacent portions of sides **12** and **13**. A spring **82** is secured to the underside of said top **75** adjacent its rear end portion, as indicated in FIG. 4, and having a downward compoundly curved portion bearing against the top of portion **21** for normally urging said cover into a raised open position.

Plates **84** are mounted at either inner side of said cover **75** in alignment with said pin **73** and having aligned horizontally extending slots **85** therein respectively into which are extended the free ends of said pin **73**. Hence said plunger **69** is normally held in its upper or raised position with a stop member **86** being formed as a small plate secured by screw **87** to the upper portion of member **60** and extending forwardly to engage the adjacent shoulder **72** of said plunger to limit its upward movement.

Secured to the outer side of said end wall **15**, as by a suitable adhesive, is a receptacle **90** here shown to be substantially parallelepiped in form having an upstanding neck-like opening **91** having a stopper **92** seated thereon. Said receptacle will be filled with water **93**.

In the specific embodiment of said receptacle here shown, a right-angled recess is formed by side portions **94** and **95** at the lower inner corner thereof extending the full width of said receptacle with an aperture **96** formed adjacent the bottom of said recessed portion.

Secured within said recessed portion is a porous wetting member **97**, such as a sponge, adapted to have water leak slowly therethrough to present a moistened lower surface. Said member **97** will be secured tightly against said aperture **97** and will extend below said receptacle to a point just below the bottom of said end wall **15** whereby a member **99** here indicating an envelope may be inserted along the bottom **17** having its upper surface slidingly engage the bottom of said sponge **97** and be moved inwardly to a position below said plunger **69**.

In operation, the shaft **33** will be removed by being pushed endwise through the housing **10** for removal of the spindle **28** on which will be placed a roll of stamps **30** formed of a strip of stamps **30***a* having perforations **30***b* therebetween. Said roll of stamps and spindle **28** will be replaced in the housing **10**. A free end of said roll of stamps will be positioned between the rollers **38** and **39**

and the resilient cushion member **66**. Said stamps will be so positioned as to have the prongs **41** and **42** engage the first line of perforation which will be between the first and second stamp. The cover member **75** will normally be held in a raised position by action of the spring **82** whereby the plunger **69** is normally held in a raised operating position.

The cover **75** will be urged downwardly against the presure of spring **82** by the hand of the operator which will move the plunger **69** downwardly, and the rack **70***a* will engage and rotate gear **56** which in turn will rotate in a clockwise direction the gear **45** and it in turn will rotate shaft **37** and rollers **38** and **39** to advance the stamps forwardly. The prongs **41** and **42** are spaced to engage the strip of stamps advanced from the roll of stamps **30** at the lines of perforation between the stamps. A full downward movement of the plunger **69** will cause by the means indicated a stamp to advance its own length. The rollers **38** and **39** are not moved when the plunger **69** returns to its raised starting position, as is explained in the above description.

An envelope to have a stamp affixed thereon will be moved forwardly along the top surface of the base **17** to engage the bottom of the wetting member **97** which will moisten sufficiently the area on the top surface of the envelope onto which will be affixed a postage stamp. The inserted portion of said envelope will be in direct alignment with the line of travel of said plunger **69**. When the stamps have been advanced to the point of the front wall **63** then from this time on each downward movement of the cover **75** will advance on stamp as onto said envelope, with said plunger at the ends of its stroke having its corner **70***b* cooperate with the corner **26***a* to cause a separation of the stamp advanced onto the envelope from the one immediately therebehind along the line of perforation therebetween. The final downward movement of the plunger will provide sufficient pressure to affix the stamp onto the envelope.

The wetting member **97** will be of sufficient porosity to have water **93** leak therethrough in just sufficient amount to wet the surface, as of an envelope, for having a stamp securely affixed thereto.

Applicants' device is also adapted for use in affixing stamps to bulky objects by merely having the base portion **16** pivoted rearwardly away from the housing **10** to open up the area beneath the plunger **69** whereby stamps may be affixed onto cartons or irregularly shaped parcels easily and conveniently. Applicants' device is of such size that it can easily be handled by one hand of an operator.

Thus it is seen that we have provided a stamp dispensing and affixing device having but very few movable parts and adapted for rather easy construction and for simple and efficient operation.

It will of course be understood that various changes may be made in the form, details, arrangement and proportions of the parts, without departing from the scope of applicants' invention, which, generally stated, consists in a device capable of carrying out the objects above set forth, in the parts and combinations of parts disclosed and defined in the appended claims.

What is claimed is:

1. A postage stamp dispenser and affixer having in combination, a housing, a pair of partially cylindrical recessed portions adjacent the bottom of said housing longitudinally spaced therein and extending transversely thereof, an upstanding transverse common wall between said recessed portions having the sides thereof form portions of the adjacent walls of said recessed portions, a spindle journaled in the rearward of said recessed portions, a rolled strip of stamps carried on said spindle, a stamp feeding member comprising transversely spaced rollers journaled in the other of said recessed portions, a resilient member of sheet material facing the side of said upstanding wall adjacent said stamp feeding member and

having pressing engagement with the adjacent peripheral portions of each of said rollers with the strip of said stamps extending and being frictionally engaged therebetween, a gear secured between said rollers, a second gear journaled in said housing having engagement with said first gear, a rack engaging said second gear, said rack comprising a plunger for vertical reciprocal movement in said housing, a handle formed of a longitudinally extending cover portion of said housing and being pivoted to said housing at its rear end, a spring carried by said cover portion engaging said housing to normally urge said cover portion to an upraised position and said plunger being pivoted to the free front end portion of said cover portion.

2. The structure set forth in claim 1, spaced circumferential projections on said rollers for engaging the perforations between adjacent of said stamps, and a shaft journaled in said housing carrying said rollers and said gear, a chamber in said gear at either side of said shaft,

a pair of dogs respectively pivotally disposed in said chambers to be in diametrically opposed positions relative to said shaft, said dogs being respectively inclined somewhat to have a tangential relation to said shaft whereby when said shaft rotates in one direction said dogs are urged into frictional engagement with said shaft and when rotated in the other direction said shaft rotates freely between said dogs and springs disposed in said chambers for urging said dogs into engagement with said shaft when said shaft is rotated in said first mentioned direction.

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