Aug. 20, 1963 R. H. PIPKIN 3,100,932

PAPER CLIP DISPENSER

Filed Nov. 14, 1961 2 Sheets-Sheet 1

Fig. 1

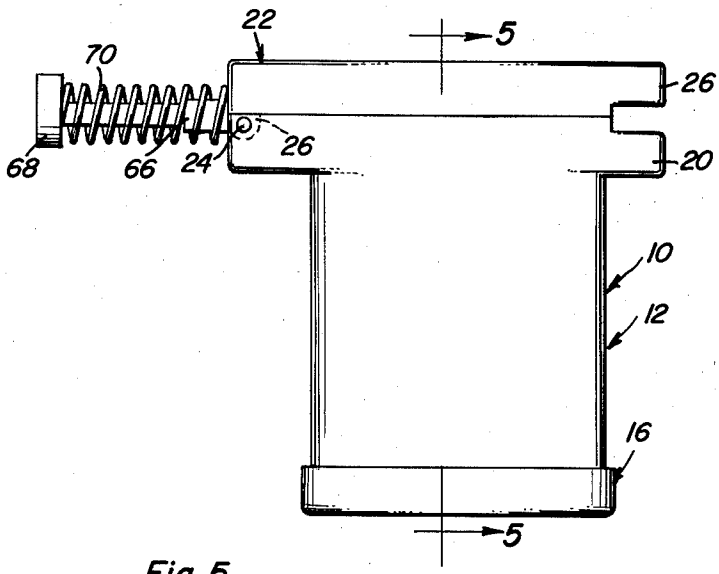


Fig. 2

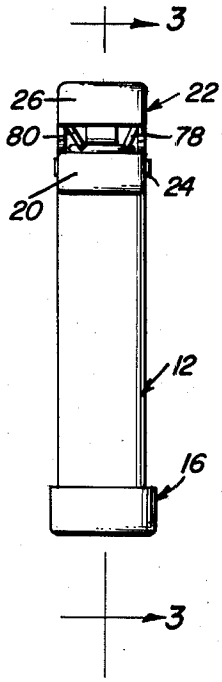


Fig. 5

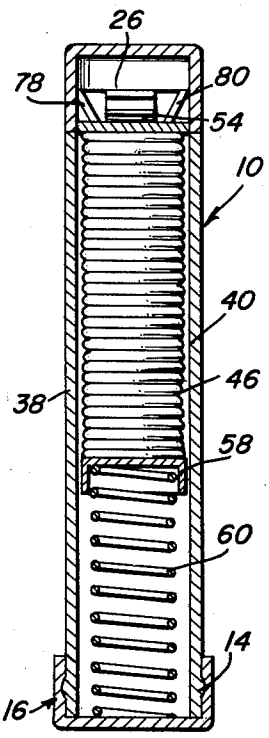
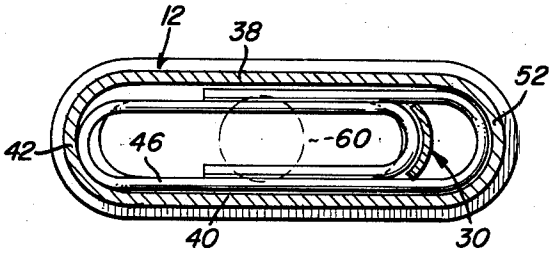


Fig. 6



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Fig. 3

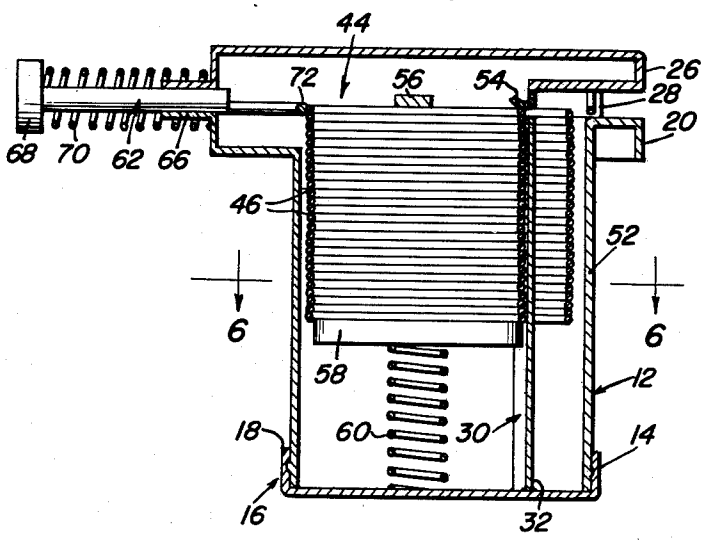


Fig. 4

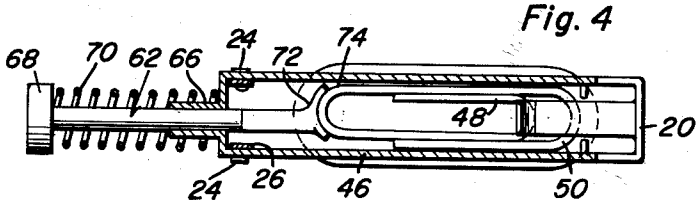


Fig. 8

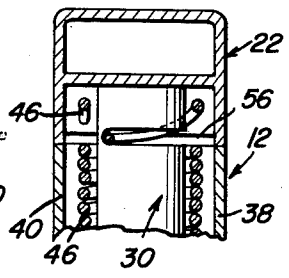


Fig. 7

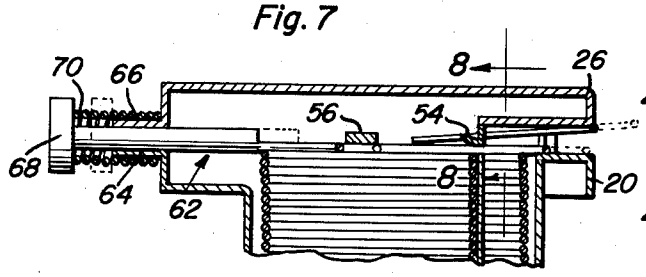
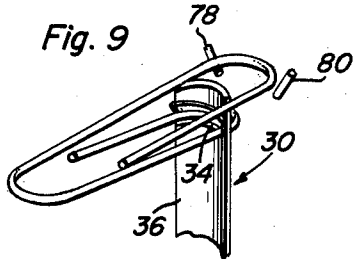


Fig. 9



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PAPER CLIP DISPENSER

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8 Claims. (Cl. 29—212)

This invention relates to a novel and a useful paper clip dispenser and more specifically to a dispenser primarily designed as a housing for a plurality of stacked paper clips and from which paper clips may be singly dispensed with the inner and outer loops thereof spread apart in preparation for being disposed on opposite sides of a plurality of panel-like members to be secured together.

The present invention is primarily concerned with handling paper clips of the conventional type which are formed of stiff wire disposed in generally oblong inner and outer loops with the outer loop being longer than the inner loop and having its forward end spaced from the forward end of the inner loop.

In providing a paper clip dispenser which may be utilized for storing a plurality of paper clips in stacked relation and dispensing paper clips singly with the inner and outer loops thereof spread apart, the undesirable clutter and messiness usually encountered in a receptacle for receiving a plurality of loose paper clips is avoided and the paper clips may be readily attached to flexible sheets of material which are to be secured together and are maintained from becoming entangled with other stationery supplies such as rubber bands, thumb tacks and the like.

The main object of this invention is to provide a paper clip dispenser which will provide a convenient means for storing a large quantity of paper clips in a compact state.

Another object of this invention is to provide a paper clip dispenser which may be utilized to dispense paper clips singly in order that large quantities of paper clips will not become scattered throughout various desk drawers.

Still another object of this invention, in accordance with the immediately preceding object, is to provide a paper clip dispenser capable of dispensing paper clips singly with the inner and outer loops thereof spread apart with the insertion of one or more sheets of material therebetween.

A further object of this invention is to provide a paper clip dispenser which will enable handicapped persons such as paraplegics and amputees to effeciently clip a plurality of sheets of material together with paper clips.

A final object to be specifically enumerated herein is to provide a paper clip dispenser in accordance with the preceding objects which will conform to the conventional forms of manufacture, be of simple construction and easy to use so as to provide a device that will be economically feasible, long-lasting and relatively trouble free in operation.

These together with other objects and advantages which will become subsequently apparent reside in the details of construction and operation as more fully hereinafter described and claimed, reference being had to the accompanying drawings forming a part hereof, wherein like numerals refer to like parts throughout, and in which:

FIGURE 1 is a side elevational view of the paper clip dispenser;

FIGURE 2 is an end elevational view of the paper clip dispenser as seen from the right side of FIGURE 1;

FIGURE 3 is a vertical sectional view taken substantially upon the plane indicated by the section line 3—3 of FIGURE 2;

FIGURE 4 is a horizontal sectional view of the paper clip dispenser taken substantially upon the plane passing through the discharge opening of the dispenser;

FIGURE 5 is an enlarged vertical sectional view taken substantially upon the plane indicated by the section line 5—5 of FIGURE 1;

FIGURE 6 is an enlarged horizontal sectional view taken substantially upon the plane indicated by section line 6—6 of FIGURE 3;

FIGURE 7 is a fragmentary vertical sectional view similar to that of FIGURE 3 but showing the plunger ejector being utilized to eject a paper clip from the discharge opening of the dispenser;

FIGURE 8 is an enlarged fragmentary transverse sectional view taken substantially upon the plane indicated by section line 8—8 of FIGURE 7; and

FIGURE 9 is a fragmentary perspective view of the guide and wedge means of the paper clip dispenser with the remainder of the paper clip dispenser being broken away and showing the manner in which the inner and outer loops of the paper clip clip being dispensed by the dispenser are spread apart.

Referring now more specifically to the drawings the numeral **10** generally designates the paper clip dispenser of the instant invention. The paper clip dispenser **10** includes a generally oval housing referred to in general by the reference numeral **12** whose lower end is provided with a retaining rib **14** which projects outwardly and is spaced from the lower terminal end thereof. A bottom wall assembly generally referred to by the reference numeral **16** is secured to the lower end of the housing **12** and includes upstanding peripheral walls **18** which are pressed over the rib **14** in order to retain the bottom wall **16** on the lower end of the housing **12**.

The forward portion of the upper end of the housing **12** includes a forwardly projecting lower lip **20** and it will be noted that a closure cover generally referred to by the reference numeral **22** is pivotally secured to the upper end of the housing **12** by means of pivot fasteners **24** secured through opposite sides of the housing **12** and apertured ears **26** carried by the closure cover **22**.

The forward end of the closure cover defines an upper lip **26** and it will be noted from FIGURES 3 and 5 of the drawings that a throat area or discharge opening **28** is formed between the lower and upper lips **20** and **26**.

An upright standard generally referred to by the reference numeral **30** has its lower end secured to the bottom wall **16** in any convenient manner such as by welding **32** and its upper end is provided with a horizontally disposed slot **34** which opens through one side edge **36** of the standard **30**. It will be noted that the slot **34** is in horizontal alignment with the discharge opening **28**.

The opposite side walls **38** and **40** of the housing **12** comprise first and second upstanding generally parallel abutment surfaces for preventing sideways shifting of one or more clips of a stack of clips disposed in the housing **12** and the rear arcuate wall **42** defines a third upstanding abutment surface adapted to prevent rearward shifting of one or more of the clips of the stack of clips disposed in the housing.

The standard **30** generally parallels the rear wall **42** and is arcuate in horizontal cross-section and opens toward the rear wall **30**.

It will be noted that a stack **44** of a plurality of paper clips **46** is disposed between the walls **38**, **40** and **42** and the standard **30**. The inner loop **48** of each paper clip **46** is received between the standard **30** and the rear wall **42** and the outer forward loop **50** has its forward end disposed forwardly of the standard **30** and abuts against or is disposed closely adjacent the forward wall **52** of the housing **12**. It will be noted that the rear and forward walls **42** and **52** of the housing **12** will be of horizontal cross-sectional shape corresponding to the plan outline of

the opposite ends of the paper clips 46 disposed in the housing 12.

It will be seen from FIGURES 3, 7 and 9 of the drawings that the standard 30 includes a rearwardly directed and upwardly curving lip 54 which engages the forward end of the uppermost loop 48. Further, from FIGURES 3, 5 and 7 of the drawings it will be noted that the closure cover 22 includes a transverse brace member 56 comprising an abutment for the uppermost end of the stack 44 whose lower end is being constantly resiliently urged upwardly by means of a follower 58 disposed above the bottom 16. A compression spring 60 is disposed between the bottom 16 and the follower 58 and thus normally urges the stack 44 upwardly.

A plunger generally referred to by the reference numeral 62 is mounted for longitudinal reciprocal movement by means of the sleeve halves 64 and 66 carried by the housing 12 and the closure cover 22 and includes the diametrically enlarged outer head portion 68. A compression spring 70 is disposed between the head portion 68 and the rear ends of the housing 12 and the closure cover 22. In this manner, the plunger 62 is normally urged to the outermost position illustrated in FIGURES 1, 3 and 4. However, it will be noted from FIGURE 4 that the inner end of the plunger 62 includes an arcuate transverse head portion 72 which defines a forwardly opening recess 74 for seatingly receiving the rear end of the uppermost paper clip 46.

With attention now invited to FIGURES 3, 4, 7 and 9, it will be noted that a pair of downwardly divergent arms 78 and 80 are carried by the portion of the closure cover 22 defining the throat or discharge opening 28. The lower ends of the arms 78 and 80 are disposed in special relationship sufficient to engage the curved forward end of the loop 50 of the uppermost paper clip 46 whereby the forward end of the loop 50 will be urged upwardly upon forward movement of the uppermost paper clip 46 as can be viewed in FIGURES 7 and 9 of the drawings. However, it will be noted that the lip 54 will retain the inner loop 48 from being laterally deflected and, accordingly, the loops 48 and 50 of the uppermost paper clip 46 are spread apart upon initial movement of the uppermost paper clip forwardly by means of inward movement of the head portion 68 of the plunger 62. Thus, the forward end of the uppermost paper clip 46 may be ejected through the outlet opening 28 with the loops 48 and 50 thereof spread apart for the reception of one or more sheets of flexible material therebetween.

As the rear end of the outer loop 50 is secured to the rear end of the inner loop 48, the slot 34 opens through the side edge 36 of the standard 30. This will enable the rear end of each paper clip 46 to pass through the slot 34.

While the dispenser 10 has been illustrated and described as including provisions for receiving and dispensing only one stack of paper clips, it is to be understood that the dispenser could be constructed to receive two or more stacks of paper clips.

The foregoing is considered as illustrative only of the principles of the invention. Further, since numerous modifications and changes will readily occur to those skilled in the art, it is not desired to limit the invention to the exact construction and operation shown and described, and accordingly all suitable modifications and equivalents may be resorted to, falling within the scope of the invention as claimed.

What is claimed as new is as follows:

1. A paper clip dispenser for elongated paper clips having a rear inner and a forward outer loop, said loop opening rearwardly, said dispenser comprising a housing for receiving a stack of said clips, said housing including abutment means adapted for engagement with one of the endmost clips of said stack, means adapted to normally resiliently urge said stack toward said abutment means, a discharge opening in said housing aligned with said abutment means, ejecting means carried by said housing and

mounted for movement through a path adapted to engage said one clip and longitudinally slide the latter forwardly and laterally of said stack outwardly of said opening, wedge means carried by said housing adapted for engagement with sides of the forward end of the outer loop and to deflect the latter laterally of the medial plane of said clip upon initial movement of said clip outwardly of said opening, standard means disposed in said housing adapted to have said clips stacked thereabout with said standard received in said forward loops just forwardly of said rear loops and to retain all of said clips except said one clip in stacked relation against rotation about their longitudinal axes, said standard having a cross sectional shape adapted to conform to the plan shape of the forward end of said rear loop.

2. A paper clip dispenser for elongated paper clips having a rear inner and a forward outer loop, said loop opening rearwardly, said dispenser comprising a housing for receiving a stack of said clips, said housing including abutment means adapted for engagement with one of the endmost clips of said stack, means adapted to normally resiliently urge said stack toward said abutment means, a discharge opening in said housing opening along a plane aligned with said abutment means, ejecting means carried by said housing and mounted for movement through a path adapted to engage said one clip and longitudinally slide the latter forwardly and laterally of said stack outwardly of said opening, wedge means carried by said housing adapted for engagement with sides of the forward end of the outer loop and to deflect the latter laterally of the medial plane of said clip upon initial movement of said clip outwardly of said opening, standard means disposed in said housing adapted to have said clips stacked thereabout with said standard received in said forward loops just forwardly of said rear loops, and guide means adapted to slidably guide the inner loop and to prevent lateral deflection thereof away from the normal medial plane of said clip, said guide means including a generally horizontally disposed slot formed in the upper end of said standard and opening through one side thereof, said wedge means including a pair of oppositely inclined inwardly projecting arms disposed on opposite sides of and adjacent said opening and in a plane extending transversely of the first-mentioned plane, the adjacent ends of said arms being adapted to be engaged and cradled by the forward ends of the large or outer loop being ejected upon its initial forward movement to laterally deflect said outer loop away from the medial plane of the clip being ejected which the inner loop thereof is guided by means of said guide means for linear movement.

3. A paper clip dispenser for elongated paper clips having a rear inner and a forward outer loop, said loop opening rearwardly, said dispenser comprising a housing for receiving a stack of said clips, said housing including abutment means adapted for engagement with one of the endmost clips of said stack, means adapted to normally resiliently urge said stack toward said abutment means, a discharge opening in said housing opening along a plane aligned with said abutment means, ejecting means carried by said housing and mounted for movement in through a path adapted to engage said one clip and longitudinally slide the latter forwardly and laterally of said stack outwardly of said opening, wedge means carried by said housing adapted for engagement with sides of the forward end of the outer loop and to deflect the latter laterally of the medial plane of said clip upon initial movement of said clip outwardly of said opening, and guide means adapted to slidably guide the inner loop and to prevent lateral deflection thereof away from the normal medial plane of said clip, said housing including first and second upstanding generally parallel abutment surfaces adapted to prevent side-ways shifting of one or more slips of said stack disposed in said housing and a third upstanding abutment surface adapted to prevent rearward shifting of one or more clips of said stack disposed in said

housing, and an upright standard disposed so as to comprise an abutment surface for the forward end of the inner loops of said stack of clips in said housing and adapted to be received within the outer loops of said stack of clips, said guide means including a generally horizontally disposed slot formed in the upper end of said standard and opening through one side thereof, said wedge means including a pair of oppositely inclined inwardly projecting arms whose adjacent ends are adapted to be engaged by the forward ends of the large or outer loop being ejected upon its initial forward movement to laterally deflect said outer loop away from the medial plane of the clip being ejected which the inner loop thereof is guided by means of said guide means for linear movement.

4. The combination of claim 3 wherein said ejecting means comprises a plunger mounted for rectilinear movement toward and away from said opening.

5. The combination of claim 4 including means normally resiliently urging said plunger away from said opening.

6. The combination of claim 5 wherein the end of said plunger adjacent said opening includes means defining a recess adapted to seatingly receive the rear end of the clip being ejected.

7. A paper clip dispenser for elongated paper clips having a rear inner and a forward outer loop, said loop opening rearwardly, said dispenser comprising a housing for receiving a stack of said clips, said housing including abutment means adapted for engagement with one of the endmost clips of said stack, means adapted to normally resiliently urge said stack toward said abutment means, a

discharge opening in said housing opening along a plane aligned with said abutment means, ejecting means carried by said housing and mounted for movement in through a path adapted to engage said one clip and longitudinally slide the latter forwardly and laterally of said stack outwardly of said opening, standard means disposed in said housing adapted to have said clips stacked thereabout with said standard received in said forward loops just forwardly of said rear loops and to retain all of said clips except said one clip in stacked relation against rotation about their longitudinal axes, said standard having a cross-sectional shape adapted to conform to the plan shape of the forward end of said rear loops, said standard means having a slot formed therein disposed in said plane and adapted to receive therethrough the inner loop of the clip being dispensed, said slot opening laterally outwardly of one side of said standard.

8. The combination of claim 7 wherein said standard includes wedge means adapted for engagement with the inner loop of the clip being dispensed and to slidingly guide said inner loop into said slot and prevent lateral deflection of said inner loop away from the medial plane of said clip.

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