Aug. 13, 1946. R. VAN ROSEN 2,405,914

FASTENING MEANS

Filed July 11, 1944 3 Sheets-Sheet 1

Fig. 1

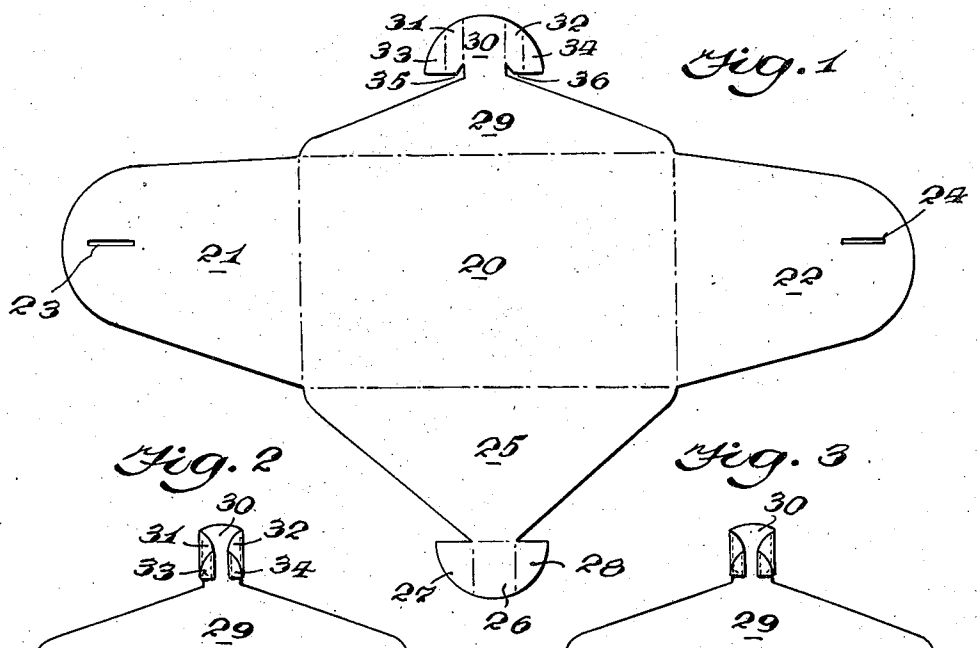


Fig. 2

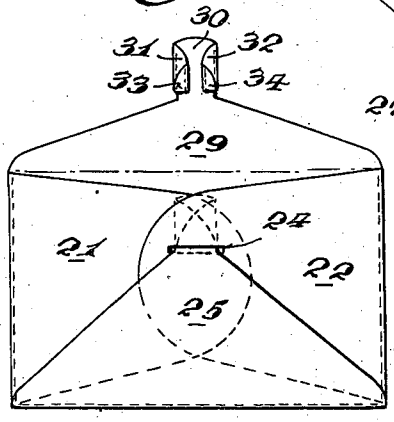


Fig. 3

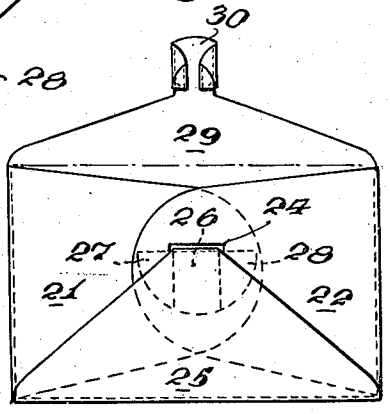


Fig. 4

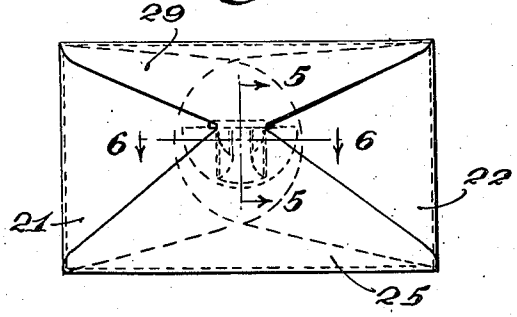


Fig. 5

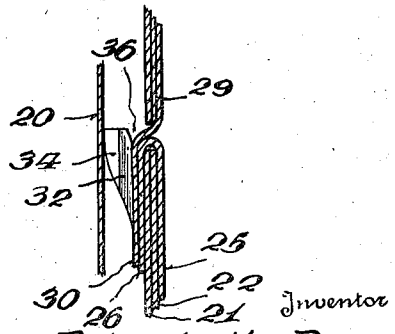
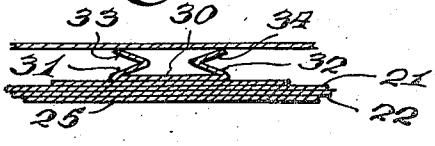


Fig. 6



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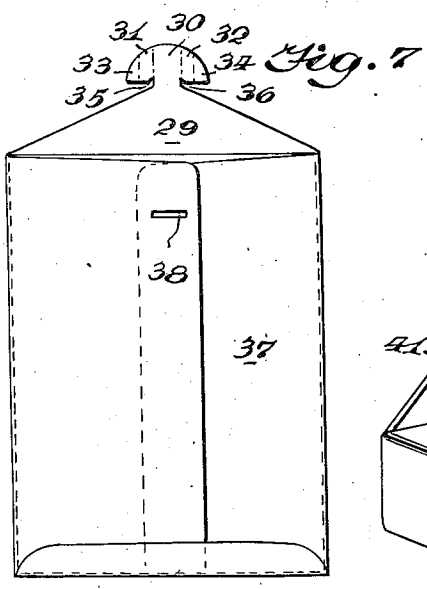


Fig. 7

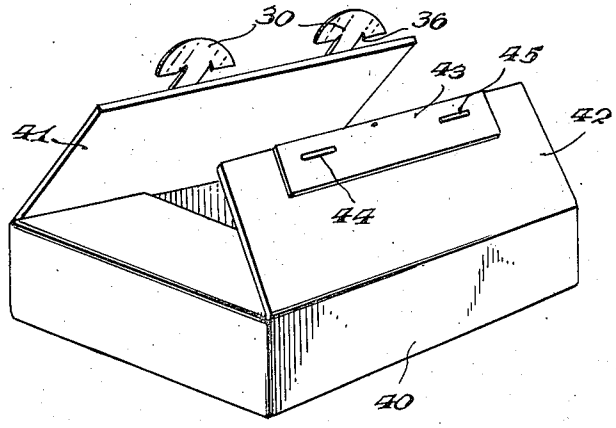


Fig. 8

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Fig. 10

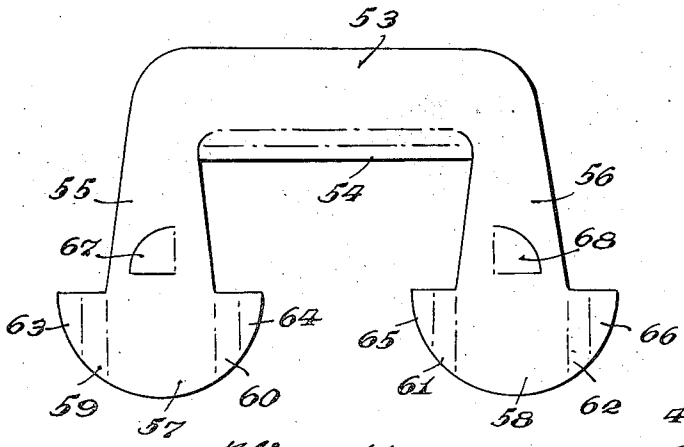


Fig. 9

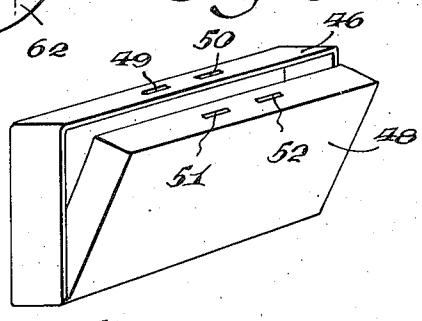


Fig. 11

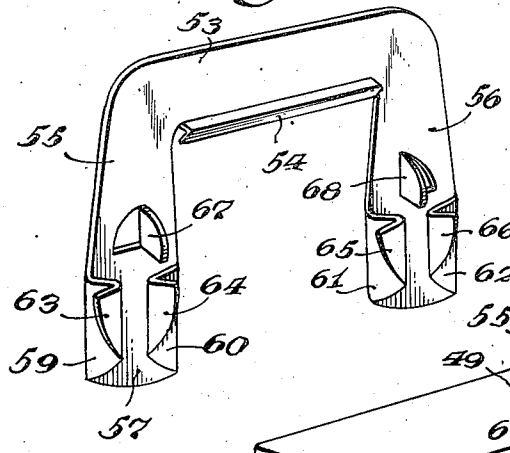
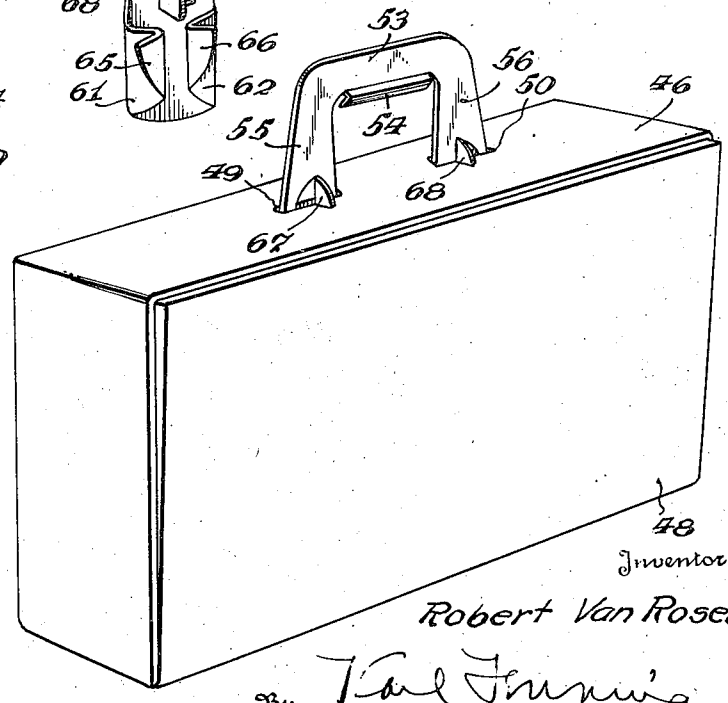


Fig. 12



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Patented Aug. 13, 1946

2,405,914

UNITED STATES PATENT OFFICE

2,405,914

FASTENING MEANS

Robert Van Rosen, New York, N. Y.

Application July 11, 1944, Serial No. 544,387

2 Claims. (Cl. 229—52)

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The invention relates to fastening means and is particularly intended to fasten together two devices or two parts of a single device by means of a tongue on one device passing through a slot.

The invention is particularly adapted to devices made of paper, cardboard and the like. It may be particularly desirable that at least the tongue on one member be made of some material which is somewhat elastic or resilient so that it may be bent or folded for passage through the slot and then may be biased to expand toward its original shape after passing through the slot.

The invention may be adapted to many circumstances. In order to explain the invention, it will be described as applied to such devices as envelopes, boxes, crates and the like.

In the accompanying drawings—

Figure 1 is a plan view of a blank from which an envelope may be made. Figs. 2 and 3 are plan views of blanks similar to that illustrated in Fig. 1, which have been partially folded for formation of the envelope. Fig. 4 is a plan view of the envelope in completed closed, fastened form. Fig. 5 is a section view on the line 5—5 of Fig. 4. Fig. 6 is a section view on the line 6—6 of Fig. 4. Fig. 7 is a plan view of another form of envelope incorporating the invention. Fig. 8 is a perspective view of a box incorporating the invention. Fig. 9 is a perspective view of a telescoping box to which the invention may be applied. Fig. 10 is a plan view of a blank form for a fastening handle which may be applied to the box of Fig. 9. Fig. 11 is a perspective view of a handle completed from Fig. 10. Fig. 12 is a perspective view of the box of Fig. 9 closed, and with the handle of Fig. 11 applied and fastened to it.

As illustrated in Figs. 1–6, the blank comprises a face member 20 for the completed envelope. The sizes, shapes and proportions of the different members form no part of the invention unless so specified. At each end of this are flap members 21 and 22, each more than half the length of the face plate 20 and each provided with a slot 23 and 24. A bottom member 25 is articulated to the bottom of the face member 20 and is provided with a tongue 26 having side wings 27 and 28. The width of the tongue 26 will be preferably approximately the width or longest dimension of the slot 23, 24. The envelope is provided with a closing flap 29 on the top or opposite side of the face member 20. The closing flap 29 has a tongue 30 to which are

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articulated wings 31 and 32, to each of which are articulated auxiliary wings 33 and 34. In order to form the envelope, the flaps 21 and 22 are folded inward across the face plate 20 so that one overlies the other in such position that the slots 23, 24 are in registry forming in effect a single slot. The flap 25 is turned up, the wings 27 and 28 are turned inwardly, and the tongue 26 carrying the wings is passed through the slots 23, 24. Then the wings 27, 28 are folded outward again, as indicated in dotted lines, Fig. 3, and the tongue 26 carrying the flaps 27, is turned downwardly. This holds together, at least temporarily, the members of the envelope so as to form the envelope. In this condition letters or other matter may be placed in the envelope in the usual way. The wings 31 and 32 may then be folded inwardly over the tongue 30 and the wings 33 and 34 are folded in the reverse direction over the wings 31 and 32, as shown in Figs. 2 and 3. The tongue 30 is approximately the same width as the slots 23 and 24. By compressing the wings 31, 32, 33 and 34, the tongue 30 carrying these wings may be passed through the slots 23 and 24, and the wings may then expand slightly, as shown more clearly in Figs. 5 and 6. In these figures the parts and positions may be exaggerated to more clearly show the principle of the invention. The wings may lie more relatively flat and there may be room for a letter or other insert between them and the face member. In this position the envelope is locked or fastened closed inasmuch as the expanded wings 31, 32, 33 and 34 are too much expanded to pass through the slots 23, 24, and there is no means for holding them against the tongue 30 so that it may be withdrawn from the slots.

As illustrated more clearly in Fig. 1, at the sides of the tongue 30 where the wings 31 and 32 join, they are provided with notches 35 and 36 so that any attempt to pull upward the closed flap 29 in order to open it and gain access to the inside of the envelope will cause the portions of the flaps 21 and 22 adjacent the slots 23 and 24 to catch in the notches 35, 36 and any further tension on the flap 29 will tend to tear the material and destroy the envelope.

The invention may be applied to any ordinary type of envelope which has some of its members held together by staples or glue or in any usual manner as illustrated, for example, in Fig. 7 where there is illustrated an envelope 37 provided with a closing flap 29 having a tongue and wings 31, 32, 33, 34, like the tongue and wings

illustrated in Fig. 1. There is provided a slot **38** in the rear face of the body of the envelope **37** and the tongue **30** with the folded wings may be passed through the slot **38** and locked closed in the manner described in connection with Figs. 1–6.

When it is desired to apply the invention to the closure of a box or crate or packing case, or the like, it may be done in a manner illustrated in Fig. 8 where the box **40** has a cover consisting of two members **41** and **42** which may substantially abut when closed. In one of these members **42** or on a separate structure **43** applied thereto may be provided slots **44** and **45** in any suitable number, two being illustrated. Opposite the slots **44** and **45** there may be provided on the abutting member **41** tongues corresponding in number to the slots. Each of these tongues will be formed like the tongues illustrated in Fig. 1, so that when their wings are folded they may be inserted through the slots **44** and **45**, and so fasten or lock together and close the abutting members **41** and **42**.

The invention may also be employed to fasten together two or more separate elements so that they will comprise a single device. In this phase the invention may be applied to any type of box, such as the one illustrated in Fig. 9, in which there are two members **46** and **47** which are hinged together at their lower sides and adapted to telescope one within the other. Each of these members at the side opposite the hinged side may be provided with slots **49**, **50**, **51** and **52** in such position that they will register in pairs when the box is closed. The blank of Fig. 10 may be employed to form a closing and fastening handle for the box. The handle consists of a U-shaped member, the bottom **53** of which acts as a gripping member and has articulated to it a folded member **54** to provide a smooth, comfortable hand-hold. Extending from the gripping member **53** are two legs **55** and **56**. At the lower end of each leg is a tongue **57**, **58** which is substantially the same width as the length of the slots **49**, **50**, **51** and **52**. To each of the tongues **57** and **58** are articulated wings **59**, **60**, **61** and **62** and to the wings **59**, **60**, **61** and **62** are articulated supplementary wings **63**, **64**, **65** and **66**. These may be folded as illustrated in Fig. 11 in substantially the same way that the wings on the tongue **30** in Fig. 1 are folded. In

this position, with the wings compressed, the tongues **57** and **58** may be inserted through the registering slots **49**, **50**, **51** and **52** as illustrated in Fig. 12 where the handle is shown in position. The expanding wings inside the box and beyond the slots will retain, lock and fasten the handle in position and hold the box fastened closed.

In order to prevent the handle member from sinking against the box or passing too far through the slots, there may be provided on each of the legs **55** and **56** cut-out and bent members **67** and **68** which when protruding from the face of the legs **55** and **56** will have their lower edges resting against the outer surface of the box member **46** and so limit the internal movement of the handle. If desired for shipping, packing or economizing space, these members **67** and **68** may be omitted or they may be pressed back into the legs **55** and **56** so as to allow the gripping member **53**, **54** to sink against the box surface. This, however, will not interfere with or release the locking effected by the wings on the ends of the legs **55**, **56**.

It will be noted that the various figures of the drawings are made on different scales for purpose of illustration. The invention is not confined to the use of any specific material nor to any specific size, shape or form of the various elements involved. It may be applied in numerous positions and to various structures and devices.

I claim as my invention:

1. A receptacle comprising two telescoping members hinged at one side, registering slots through the walls opposite the hinged sides, a handle having arms extending through the slots, folding wings articulated at the sides of the arms within the receptacle, auxiliary wings foldable on the first-mentioned wings and means to limit the amount the arms extend through the slots.

2. A receptacle comprising two telescoping members hinged at one side, registering slots through the walls opposite the hinge, a handle having arms extending through the slots, foldable wings articulated at the sides of the arms within the receptacle, auxiliary wings foldable on the first-mentioned wings, and outwardly turned cut-out portions of the arms overlying the slotted walls.

ROBERT VAN ROSEN.