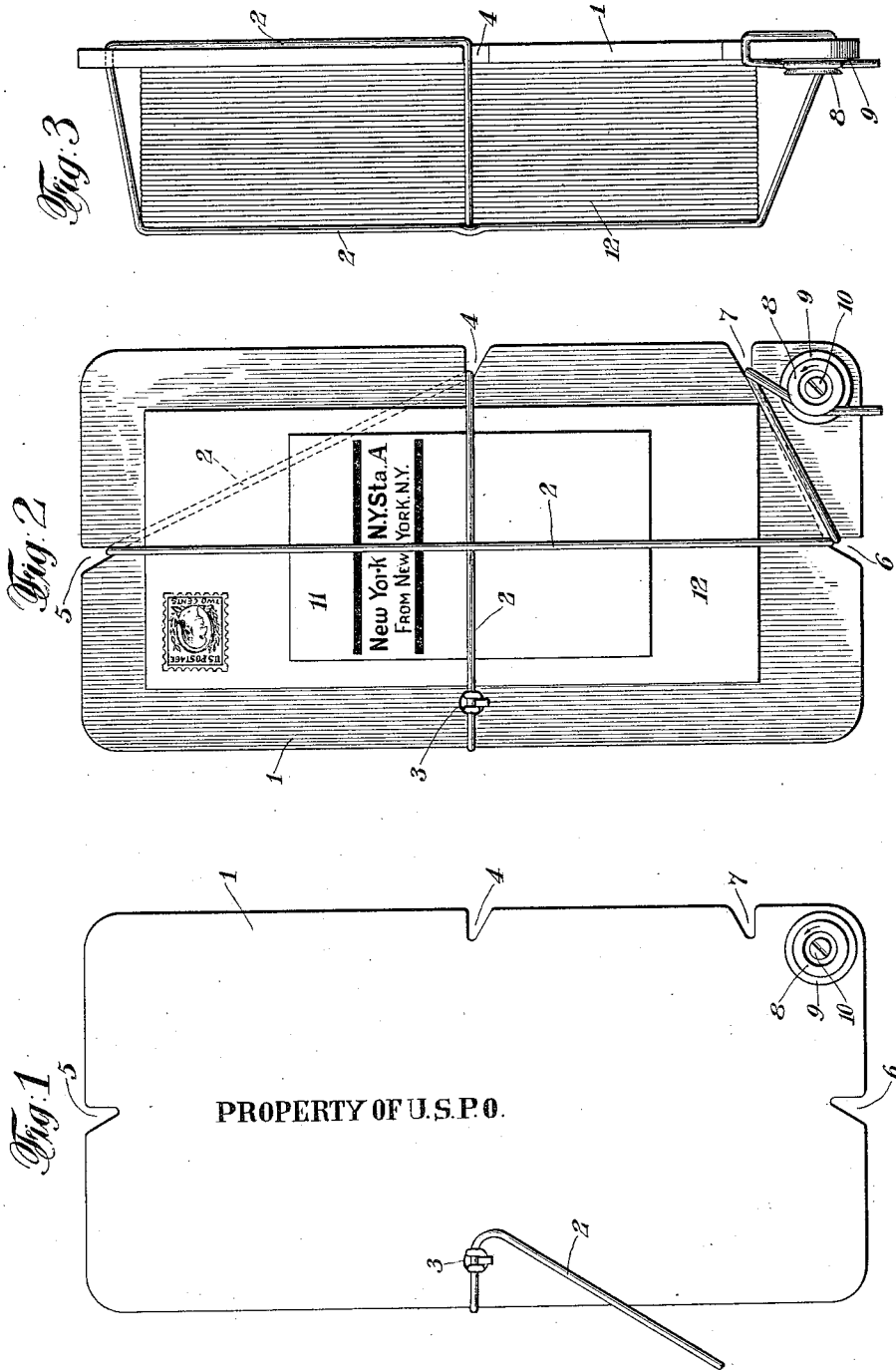


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LETTER PACKAGING DEVICE.
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1,052,906.

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LETTER-PACKAGING DEVICE.

1,052,906.

Specification of Letters Patent.

Patented Feb. 11, 1913.

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To all whom it may concern:

Be it known that I, OPHELIA S. ELLIS, a citizen of the United States, residing in the borough of Brooklyn, in the county of Kings and State of New York, have invented certain new and useful Improvements in Letter-Packaging Devices, of which the following is a specification, reference being had therein to the accompanying drawings, forming part thereof.

My invention relates to devices for packaging letters, and aims especially to facilitate the work of assembling and packaging letters, to bind and hold them in packages without injury to the letters, and to protect them in transportation.

My invention also aims to provide a packaging device which may be readily opened when the letters arrive at their destination, without destruction of any part of the packaging device, so that the device may be repeatedly used.

My invention aims to provide an effective substitute for the present Government post office packaging method, wherein a considerable length of twine is repeatedly wound about each package and, when the package reaches its destination, is unwound and thrown away.

Other objects of my invention will hereinafter appear.

My invention includes a backing board or backing plate upon which the letters may be piled during the distributing operation, the backing board being of suitable size and shape to lie on the shelf or bottom of a pigeon-hole of the distributing case and adapted to receive the letters on the upper side thereof, and being combined with a tie string secured to the board, and the board being provided with string-guiding means, such as a plurality of string-guiding notches in the edge or margin of the board, and with string-fastening means on the same side of the board as the letters and near the edge of the backing board, so that the string may be passed over the letters transversely and longitudinally, pulled taut and its free end gripped by the fastening means, so that the string may be quickly fastened and quickly unfastened.

My invention also includes means for receiving surplus string, such as a final string-guiding notch provided in the edge on margin of the board adjacent to a corner thereof and coöperative with one of the other

string-guiding notches to permit the winding of surplus string around the corner of the board.

My invention also includes other features of construction and combinations of parts, as will appear from the following description.

I shall now describe the packaging device illustrated in the accompanying drawings and embodying my invention and shall thereafter point out my invention in claims.

Figure 1 is a plan view of the device as arranged for receiving the letters. Fig. 2 is a plan view of the same containing a package of letters of the larger size. Fig. 3 is an elevation as viewed from the right in Fig. 2.

The letter packaging device illustrated in the accompanying drawings is designed for use in Government post offices. It has a letter receiving backing board 1 carrying a tie string 2 and a string fastener therefor. The letter receiving board is of a size suitable for loosely fitting into a pigeon-hole of a distributing case so as to form a supplemental or false bottom upon which the letters are thrown in the usual operation of distribution, there being a similar letter packaging device for each pigeon-hole of the distributing case. The backing-board may be composed of any suitable material, for example, wood or metal, the former being indicated in the drawings, and the tie string 2 may be of any suitable strong and flexible material. Since the backing board substantially covers the bottom of a pigeon-hole, it is of somewhat larger dimensions than the letters of the larger size so as to leave a free marginal space around a pile of letters upon it. The tie string 2 is secured at one of its ends to the board at one side of the middle portion thereof which receives the letters and is shown as tied through a hole 3 provided through the board at the left side near the edge thereof at about the middle from front to back. The backing board is provided with guiding means for the tie string 2.

A string-guiding notch 4 is provided in the board 1 in the edge or margin thereof at the right or other side from that at which the string 2 is secured, this notch having a rounded bottom and flaring so as to present a sloping shoulder at the front and a perpendicular or square shoulder at the rear. Other string-guiding notches 5 and 6 are

provided in the respective ends of the backing board, these notches also having rounded bottoms and have square or perpendicular shoulders at the right and sloping shoulders at the left of the notches, in the position of the board shown in the drawings. A final string-guiding notch 7 is provided in the edge or margin at the right of the board and adjacent to the right forward corner thereof, this latter notch having a flaring entrance and presenting a square or perpendicular shoulder at the front and a sloping shoulder at the rear. The sloping shoulders and the square shoulders of the several string-guiding notches are so disposed or arranged as to facilitate the entrance of the tie string 2 into the notches and also so as to more securely retain the string in the notches in the letter tying position.

A string fastener is carried by the backing board on the same side thereof as the letters and is located near the edge of the backing board at the corner of the board adjacent to the final string-guiding notch 7, being located in the forward right corner of the board as shown in Figs. 1 and 2, the free marginal area around the pile of letters being sufficient at this point to provide space for the string fastener. The string fastener shown is a disk clamp of well known construction, and includes an upper clamp disk 8 and a lower clamp disk 9, the latter of slightly larger diameter than the former, and the two disks are suitably secured together by a tubular rivet or eyelet in the usual manner, and are slightly spaced apart to allow proper space for the reception of the string 2 and to permit of its easy entrance between the disks. The string fastener may be of metal and is made up as a unitary device and is attached as a whole to the backing board by a screw 10 passing through the central hole in the tubular rivet of the fastener. The location of the string fastener on the same side of the board as the letters, leaves the underside of the board free so that it rests flatly on the bottom of the pigeon-hole, forming a false bottom and may be readily pushed in or pulled out, as is highly desirable, since speed in every detail of mail handling is a desideratum. The location of the string fastener near the edge of the board leaves the central portion thereof which is adapted to receive the letters free of obstruction and assures that the fastener shall not be obstructed by the letters on the board, and the location of the fastener in the forward right corner puts it out of the way when the letters are thrown in upon the board and enables it to combine effectively with the other parts in its string securing function, and permits high speed in the packaging or tying operation.

The packaging devices of the required number are placed in the pigeon-holes, and

the letters are then distributed to the pigeon-holes in the usual manner. When the distribution is completed the tying up of the packages takes place. Just before tying up a package a usual destination slip 11 is placed on the face of the pile of letters 12 in position to be held by the tie string 2 (Fig. 2). The backing board for the letters is long enough to project a short distance from the pigeon-hole, to permit it to be readily grasped for removal from the pigeon-hole together with the stack of letters upon it.

The tie string 2 in its letter tying position passes transversely over the letters 12 and is first guided by the guide notch 4, passing downward through this notch and thence beneath the board 1 to the guide notch 5, as shown by the broken lines in Fig. 2. After passing up through the guide notch 5 the tie string passes longitudinally over the letters and is next guided by the guide notch 6 at the other end of the backing board. Thence the tie string 2 passes again beneath the board 1 and upward through the remaining or final guide notch 7. The free end of the string 2 may now be fastened, providing the package of letters 12 is large enough so that there is not too much of excess or surplus free string. In case the package of letters is smaller so that there is surplus free string, then the surplus string is wound about the adjacent corner of the board 1, the winding being in a counter-clockwise direction, there being as many turns or coils in this winding as may be necessary, only one such turn being shown in Figs. 2 and 3. When the surplus string has been disposed of the free end of the string is engaged with the string fastener. The string is fastened by giving it one or more turns beneath the outer disk 8, as shown in Figs. 2 and 3 of the drawings, these turns preferably being in a counter-clockwise direction, as indicated by the arrows shown in Figs. 1 and 2. The tying operation is thus exceedingly simple and may be performed at high speed and in a very small interval of time. Whether the package consists of one letter or a thick pile of letters, it is securely fastened. It is evident that the package as thus made up can be readily untied, without destruction of any part of the packaging device. The post office which receives the packaging device can despatch it, with letters attached to it, to any other post office and the device can be used over and over again. As an article of Government property, it may be plainly marked, as shown in Fig. 1, but need not be identified with any particular post office, since the destination slips identify and direct the packages of letters and are removed with the letters from the packaging device.

It is obvious that various modifications

may be made in the construction shown in the drawings and above particularly described within the principle and scope of my invention.

5 I claim:

10 1. A letter packaging device comprising a backing board adapted to receive the letters on one side thereof, a tie string secured at one of its ends to the board, the board having a plurality of string guides at the edge or margin thereof so that the string when guided by the string guides and pulled taut will pass over the letters transversely and longitudinally with a free end, and string-
15 fastening means on the backing board on the same side thereof as the letters and near the edge of the backing board.

20 2. A letter packaging device comprising a backing board adapted to receive the letters on one side thereof, a tie string secured at one of its ends to the board, the board having a plurality of string guides at the edge or margin thereof so that the string when guided by the string guides and pulled taut
25 will pass over the letters transversely and longitudinally with a free end, means for receiving surplus string provided at the edge or margin at one end of the board, and a string fastener on the backing board on

the same side thereof as the letters and near 30 the edge of the backing board adjacent to the surplus-string receiving means.

3. A letter packaging device comprising a backing board adapted to receive the letters on one side thereof, a tie string secured at 35 one of its ends to the board, the board having a plurality of string-guiding notches in the edge or margin thereof so that the string when guided by such notches and pulled taut will pass over the letters transversely 40 and longitudinally with a free end, a final string-guiding notch provided in the edge or margin of the board adjacent to a corner thereof and coöperative with one of the other string-guiding notches so as to permit 45 the winding of surplus string around the corner of the board in said coöperative notches, and a string fastener on the backing board on the same side thereof as the letters and near the edge of the backing 50 board adjacent to said final string-guiding notch.

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

OPHELIA S. ELLIS.

Witnesses:

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