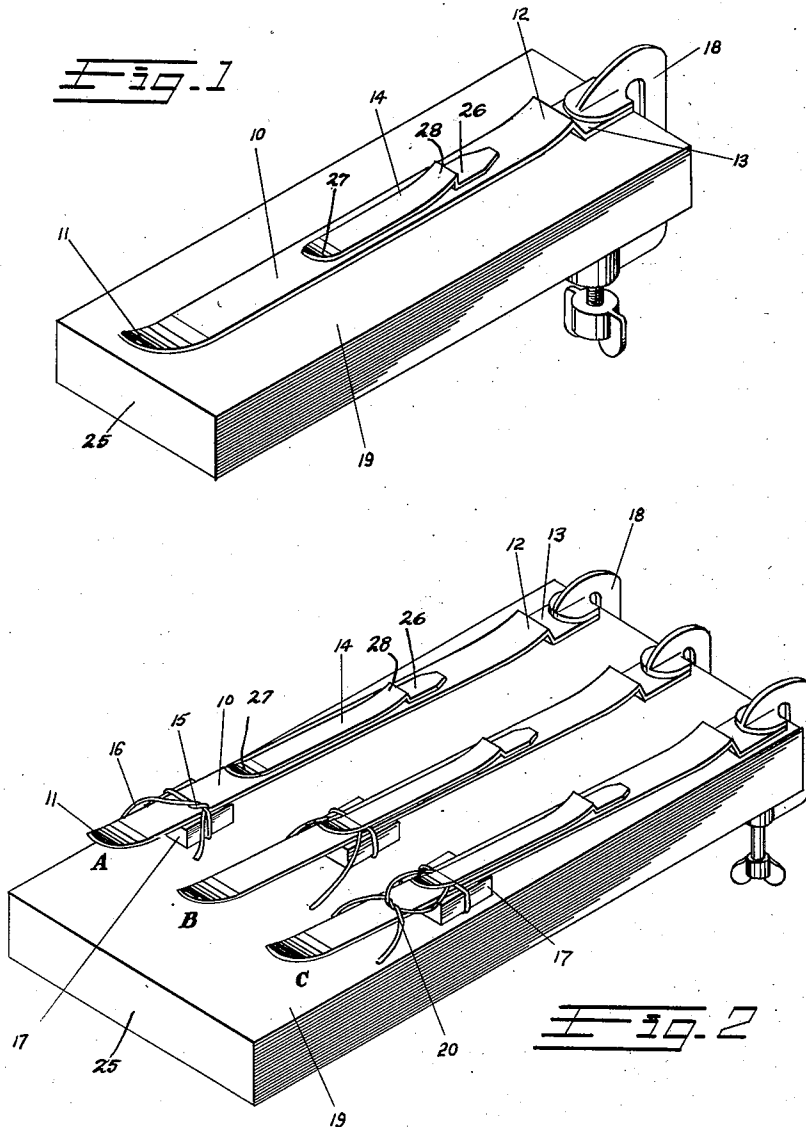


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DEVICE FOR HOLDING A PACKAGE OR THE
LIKE WHEN TYING CORD AROUND IT
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DEVICE FOR HOLDING A PACKAGE OR THE
LIKE WHEN TYING CORD AROUND IT

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1 Claim. (Cl. 29—284)

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The invention described herein may be manufactured and used by or for the Government of the United States of America for governmental purposes without the payment of any royalties thereon or therefor.

This invention relates to retaining devices and more particularly to clips for holding small packages stationary while the latter are being tied by cord or string.

An object of this invention is to produce a neat and uniform tying of small packages.

Another object is to expedite the tying of small packages with string.

Further objects and advantages of this invention, as well as its construction, arrangement and operation, will be apparent from the following description and claim in connection with the accompanying drawing, in which

Fig. 1 is a view in perspective, illustrating a device of the invention, in position for use, and

Fig. 2 is a view similar to Fig. 1, illustrating the device of the invention at various stages of its operation.

The present invention comprises a pressure plate or finger 10 which is attached at its one end at 13 to work table 19. The finger 10 extends from its end attachment at 13 forwardly along the table top 19. The other end 11 of finger 10 is free, and is pressed resiliently against the top surface of table 19, the free end 11 being positioned near the front edge 25 of the work table. The free end 11 of finger 10 is preferably tapered as shown to comprise a tip, and is turned up slightly.

In the disclosed embodiment, the finger 10 is a leaf spring, and accordingly is made of any suitable resilient material such as phosphor bronze, steel, aluminum, etc. The end of attachment at 13 is flat, and is clamped against the top surface of table 19, for example by means of D-clamp 18.

Near the end of attachment at 13, and forwardly therefrom the spring 10 comprises the lateral offset or bend 12, the extent of which is determined by the thickness of the package 17, Fig. 2, which is to be tied by use of the device of the invention. From the offset 12, the spring 10 extends forwardly away from the end of attachment 13 along the table top 19 in pressure engagement therewith to its free end terminus or tip 11. Thus, by the finger 10 pressing downwardly against the top surface of the table 19, it is used to hold an object steady that is positioned under it to rest on the table top.

The second finger 14 is attached at its end

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26, the attachment being preferably to the first finger 10. The second finger is also a leaf spring, and its end of attachment 26 is preferably flat, the flat surface thereof being secured to the top surface of leaf spring 10 by soldering, welding or the like suitable means. The leaf spring 14 extends from its end of attachment 26 forwardly along the leaf spring 10 towards the free end 11 thereof. The end 27 of the second finger 14 is free, and it is also tapered to a tip and bent to curve slightly away from the top surface of spring 10.

Adjacent its end of attachment 26, the leaf spring 14 comprises the lateral offset 28 similar to offset 12 of spring 10, and from the offset 28, spring 14 extends forwardly along, and presses resiliently against, the top surface of spring 10. Preferably there is a considerable space along spring 10 between its tip 11 and the tip 27 at the free end of spring 14, and the first knot 15 is tied in this space and is then slid under the spring 14 to be held thereby while the second knot 20 is being tied. The end of attachment 26 of spring 14 is positioned at any suitable point along the spring 10, its preferred position being anywhere between the offset 12 and tip 11 for the desired spacing between tips 11 and 27 of respective springs 10 and 14.

Fig. 2 illustrates the various steps in one method of operating the device of the invention. A knot 15 is made in a piece of string or cord 16, and the loop formed by the knot 15 is positioned around a package or wrapping 17. The package 17 is positioned to rest on the table 19, and under the finger 10 by means of which it is pressed resiliently against the table top and held steady, while the knot 15 is tied. This step in the operation is illustrated at —A— in Fig. 2.

The package 17 is now slid manually from position —A— to position —B— in Fig. 2. During this step the operator pulls the ends of cord 16 taut to tighten the knot 15 against the top surface of finger 10, and he guides the package 17 along the finger 10 towards position —B— while he holds the knot 15 tight. At position —A— the package 17 is positioned along spring 10 between its tip 11 and the tip 27 of spring 14. At position —B— the package 17 has passed beyond the tip 27 of spring 14, and at position —B— the knot 15 is positioned under the spring 14, by means of which the knot 15 is pressed against the top surface of finger 10 and held tight.

A second knot 20 is now tied in the string 16, as illustrated at —C— in Fig. 2, and the knot 20 is positioned over the leaf spring 14 and is drawn

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tight so that the second knot 20 becomes superimposed on the first knot 15. The knot 20 is drawn tight around the leaf spring 14, and is held manually in tightened condition while the package 17 is slide forwardly along the table surface 19 and along the spring 10 towards a position between the tip 27 of spring 14 and tip 11 of spring 10. The lengths of cord 16 between the knots 15 and 20 are drawn taut around the clip 14 by the knot 20 being drawn tight, and as the knots 15 and 20 move along spring 14 and beyond the tapered tip 27 thereof, the knot 20 becomes tightened against knot 15 to secure the cord 16 around the package 17. Throughout the operation of forming the knot 20 as hereinbefore described, the spring 14 bears resiliently against knot 15 and holds it pressed against the package 17, so that the cord 16 remains tightly around the package 17 and the knot 15 does not become loose before it is permanently tied by the securing knot 20.

As many knots as are deemed necessary can be made in this manner, and as many sides of the package 17 can be girdled with string 16 as is felt necessary adequately to secure the package 17 for shipment or storage.

The device of the present invention has been found greatly to assist in the wrapping of small packages, especially packages that contain such objects as fine parts for machinery, jewelry, or similar valuable articles. When packages containing the above mentioned articles are wrapped by hand, the person holding the package must also tie the knots. When the second knot is being tied, it often happens that the first knot is loosened while the second knot is being drawn tight. This results in a tightly drawn knot superimposed upon a loose knot, causing a loose fitting string to girdle the package, resulting in a defective knot.

Prior to this invention, in order to prevent the cord from loosening around the package, a second person held his finger over a first knot while the operator tied a second knot and drew it tight in securing relationship with the first knot. The second person held his finger on the first knot until the second knot was ready to be drawn tightly about the first knot, then quickly with-

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drew his finger as the second knot was tightly drawn.

This procedure is clumsy and wasteful. Not only are two people necessary for tying a small package, but as often happens, the finger holding down the first knot is withdrawn too soon so that the first knot is not tightly drawn when the second knot is made fast.

This invention saves time, affords a neater and more uniform wrapping of packages, and is a very simple device to operate. It can be made in various sizes to permit tying packages of different sizes.

It is to be understood that various modifications and changes may be made in this invention without departing from the spirit and scope thereof as set forth in the appended claim.

What is claimed is:

In a device for tying cord around a package, a work table, a finger attached at its one end to the table and extending from its attachment forwardly along the table top, the other end of the finger being free and pressing resiliently against the table top at a position near the front edge thereof, a second finger comprising a leaf spring attached at its one end to the first finger and extending from its attachment forwardly along the first finger, the other end of the second finger being free and pressing resiliently against the top surface of the first finger, the free end of the second finger being tapered to comprise a tip and being positioned along the first finger rearwardly away from the free end of the first finger, the first finger comprising a leaf spring and comprising a lateral offset away from the table top positioned along the first finger near its end attachment and forwardly thereof.

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