

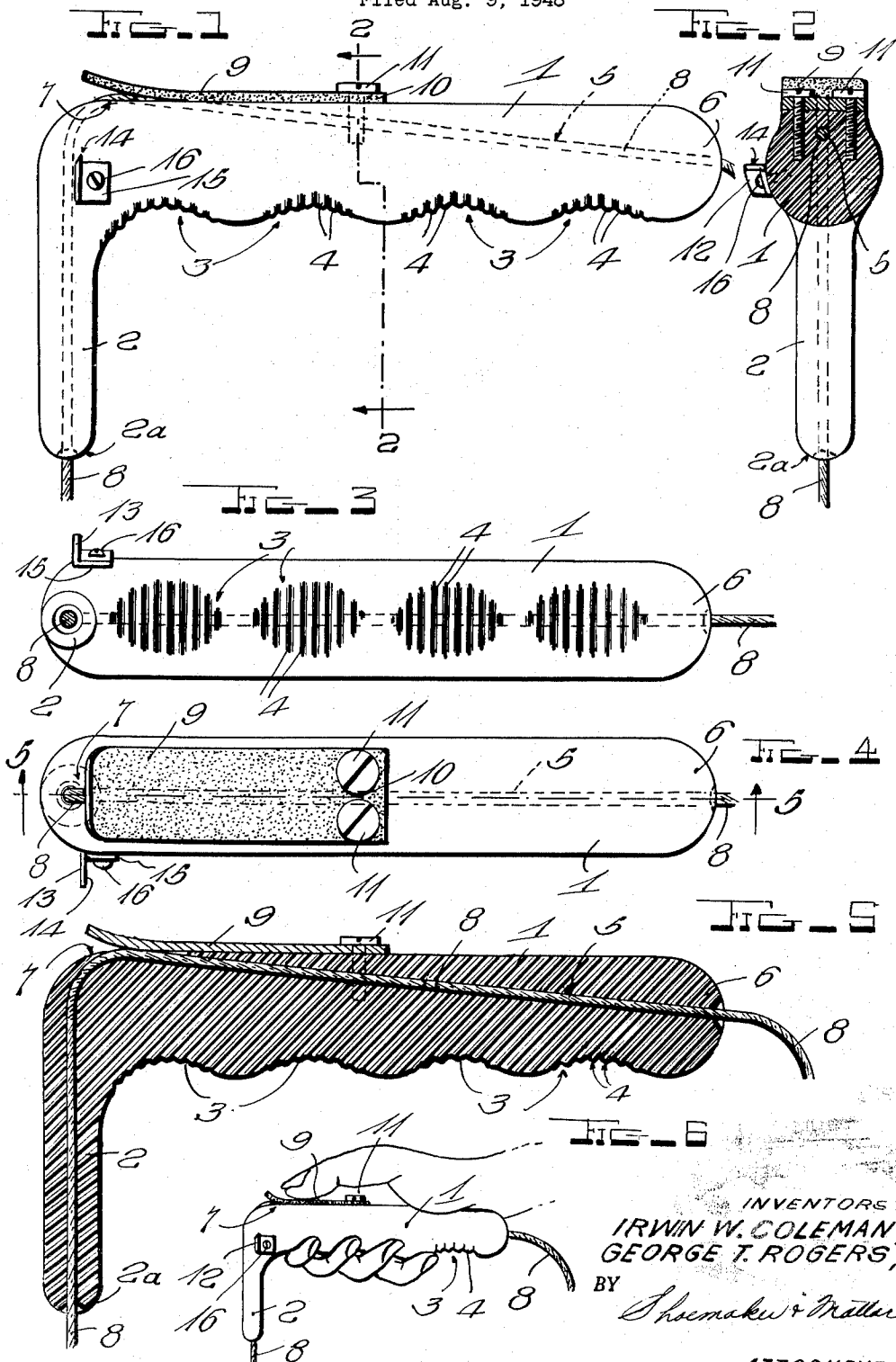
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TYING DEVICE

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TYING DEVICE

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The invention relates to a tying device particularly adapted for use by farmers and tobacco growers in tying together tobacco leaves on to drying sticks. While the tying device is especially adapted for the purpose referred to, it is also useful in tying up bundles and other articles.

Heretofore, in the work of stringing or tying leaves of tobacco which have been freshly pulled and are being made ready for curing while attached to the curing sticks, the operator using his bare hands, allowed the string to slip between his forefinger and thumb. In operating in this way, the necessary pressure exerted on the string to properly tension the same and the continued, consequent friction or rubbing of the string against the operator's fingers causes abrasion and injury to the fingers of the stringer and is a severe handicap to the operator.

An object of the invention is to provide a hand tying device or tool of simple inexpensive construction whereby the work of the tying tobacco leaves can be performed without injury to the hands of the operator and that will enable the operator to work more rapidly.

Another object of the invention is to provide a hand tying device of the character referred to which will act as a gauge to facilitate tying the stems of the leaves together at a predetermined distance from the outer ends of the stems and thus assuring the tying of the leaves at a uniform distance from the ends of the stems.

A further object of the invention is to provide a tying device that can be firmly and comfortably grasped by the operator and can be easily manipulated.

Still another object of the invention is to provide in a tying device of the character referred to, simple, efficient, easily operable string clamping and tensioning means.

A still further object of the invention is to provide in a hand tying device of the kind mentioned, means whereby the string may be conveniently severed after the tying operation and arranged so as not to interfere with the manipulation of the tool in the tying operation and so that the operator's hands will not be injured by the same.

The invention, with other objects and advantages thereof, and the particular construction, combination, and arrangement of parts comprising the same, will be understood from the hereinafter contained detail description, when considered in connection with the accompanying drawings forming part hereof and illustrating one embodiment of the invention.

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In the drawings:

Fig. 1 is a side elevation of a tying device constructed in accordance with the present invention.

Fig. 2 is a transverse section on the line 2-2 of Fig. 1 looking in the direction of the arrows.

Fig. 3 is a bottom plan view of the device.

Fig. 4 is a top plan view.

Fig. 5 is a longitudinally sectional view.

Fig. 6 is a side elevation, on a reduced scale, illustrating how the device is adapted to be grasped in the hand of the operator.

While a preferred embodiment of the invention is illustrated in the drawings, it will of course be understood that minor changes and modifications may be made in the particular construction shown, and the invention may be embodied in other forms as will appeal to those skilled in the art and falling within the scope of the appended claims without departing from the spirit of the invention.

Referring to a detail description of the particular embodiment of the invention illustrated in the drawings, the construction shown comprises an elongated handle 1 and a stem part 2 on the handle integral therewith and extending laterally therefrom at the forward part and underside thereof. The handle 1 is preferably formed as shown in the drawing, of general semi-circular shape in cross section with concave finger receiving recesses 3 in the underside thereof, the walls of the finger recesses being formed with serrations 4. The handle is provided with an interior string guiding channel 5 extending longitudinally from its rear end 6 to and along a face portion 7 at the upper side thereof, said channel continuing forwardly and inwardly in a gradual curve from said face portion 7 and then extending transversely through the handle and lengthwise of and through the stem part 2 to the outer end thereof.

On the handle 1 at the forward part thereof, is means for gripping and putting tension on the string 8 passing through the channel 5. The means for this purpose comprises a flexible strip member 9 secured at one end at 10 to the handle at its upper side by screws 11 or equivalent securing means, said flexible cord gripping member 9 extending over the channel 5 at the upper face portion 7 of the handle and being adapted to be pressed inwardly by the thumb of the user of the tying device into frictional engagement with the exposed portion of the string 8 to exert a braking action thereupon, to put tension on the string passing through the channel, or to clamp the

same against movement along the channel. As shown in Figs. 1 and 5 of the drawing, that portion of the string 8 in the channel 5 at the upper face portion 7 of the handle projects thereabove.

The flexible brake member 9 is preferably constructed of leather but it may be formed of any other suitable fabric having a like degree of flexibility and similar qualities providing a yieldable, frictional gripping surface. The handle 1 and stem part 2 may be made of wood or plastic or any other suitable material. The string or cord 8 is threaded into the tying device from the rear end 6 of the handle, the string extending through the channel 5 and out of the outer end of the stem part 2, as shown, the supply ball of string, not shown, being carried by the operator in any suitable way, as in a bag hung from the belt. On the handle 1 at the forward part and at one side thereof is a string cutter 12. This is shown as formed from a small strip of steel bent intermediate its ends to provide a blade portion 13 having a cutting edge 14, and an angularly disposed attaching portion 15 that is fixedly secured to the handle by a screw 16, or like fastening means.

In the use of our tying device in stringing or tying tobacco leaves, with the string threaded through the channel 5 in the handle, the end of the string that extends from the outer end 2a of the stem part 2 is attached to one end of a tobacco drying stick. A small bunch of leaves is held in one hand with the stems extending upwardly. The handle 1 of the device grasped in the other hand, is positioned outwardly of the outer or top ends of the stems transversely thereof with the stem part 2 of the device disposed substantially parallel with the stems. The string 8 is then wrapped several times around the stems, by bodily movement of the transversely disposed handle beyond and in a plane transversely of the outer ends of the stems to carry the stem part 2 around the stems, the string being drawn from the outer end of the stem part 2, pressure being exerted on the flexible brake or stop member 9 to put tension on the string as desired in the wrapping operation. The bunch of leaves with the stems thus bound together is then flipped completely over the string so that a hitch is made therein. This hitch keeps the string from becoming untied and the bunch of leaves is then allowed to hang on one side of the drying stick. The stems of another bunch of leaves are similarly tied and permitted to hang on the opposite side of the stick. Then the device is moved a short distance along the drying stick and the tying operations repeated, the tying operations being continued to the opposite end of the stick where the string drawn from the stem part 2 is severed by pressing the same against the cutting edge 14 of the cutter 12, the string being then tied to the end of the stick.

As will be understood, with the handle 1 disposed at the top ends of the stems transversely thereof and the stem part 2 of the device extending alongside the stems, the wrapping operations can be easily and quickly performed, and the stem part 2 acts as a gauge to regulate the distance from the outer ends of the stems, that the string is tied thereabout, the stem part 2 thus providing for substantial uniformity in the distance from the ends of the stems, the string is tied thereabout.

It will be noted that the invention provides a tying device of simple construction by which the work of tying tobacco leaves together, and of

tying up bundles and other articles, can be rapidly and efficiently performed without injury to the hands of the operator, the tying device being easily manipulated in the tying operation. The invention provides in a simple way for guiding the operator in tying the stems of tobacco leaves together at a predetermined distance from the outer ends of the stems to insure substantial uniformity in this respect, and simple, efficient, easily operable means is provided for exerting braking action on the string passing through the interior guide channel of the device, and which provides for readily varying the tension on the string as desired.

What we claim is:

1. A device for tying together tobacco leaves including a handle of a length to be grasped in the hand, a stem part on the handle at the forward part thereof normally extending laterally from the underside of the same, the handle being provided with an interior string guiding channel extending longitudinally from the rear end of the same to and thence through an upper face portion thereof at its forward part, and said handle having an interior channel leading from the forward end of said upper face portion of the handle transversely through the handle and through the stem part to the outer end of the same, said laterally extending stem part constituting gauge means to facilitate tying of the stems of the leaves together at a predetermined distance from the outer ends of the stems, and means on the handle extending over said upper face portion of the same at the forward part thereof to be pressed inwardly into frictional engagement with a string extending along said upper face portion to exert a braking action thereupon to clamp or apply tension to the string passing through said interior channels and said stem part.

2. A device for tying together tobacco leaves including a handle of a length to be grasped in the hand, a stem part on the handle at the forward part thereof normally extending laterally from the underside of the same at substantially a right angle thereto, the handle being provided with an interior string guiding channel extending longitudinally from the rear end of the same to and thence through an upper face portion thereof at its forward part, and said handle having an interior channel leading from the forward end of said upper face portion of the handle transversely through the handle and through the stem part to the outer end of the same, said laterally extending stem part constituting gauge means to facilitate tying of the stems of the leaves together at a predetermined distance from the outer ends of the stems, and means on the handle extending over said upper face portion of the same at the forward part thereof to be pressed inwardly into frictional engagement with a string extending along said upper face portion to exert a braking action thereupon to clamp or apply tension to the string passing through said interior channels and said stem part.

3. A device for tying together tobacco leaves including a handle of a length to be grasped in the hand, the handle being provided with an interior string guiding channel extending longitudinally from the rear end thereof to and along an upper outer face portion of the same at the forward part thereof and thence transversely through the handle to the underside thereof, that portion of said channel that extends along the upper outer face portion of the handle at the

forward part thereof being open at its upper side so that a string extending along this portion of the channel projects above the adjoining outer side face portions of the handle, and a flexible member secured at one end to the handle at the upper side thereof and extending over the open portion of the channel at said upper outer face portion at the forward part of the handle, said flexible member being adapted to be pressed inwardly into engagement with a string in the channel at the portion of the channel that extends along the upper outer face of the handle and is open at its upper side to press the string against the wall of said channel to exert a braking action upon the string to clamp or apply tension to the string passing through the channel.

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