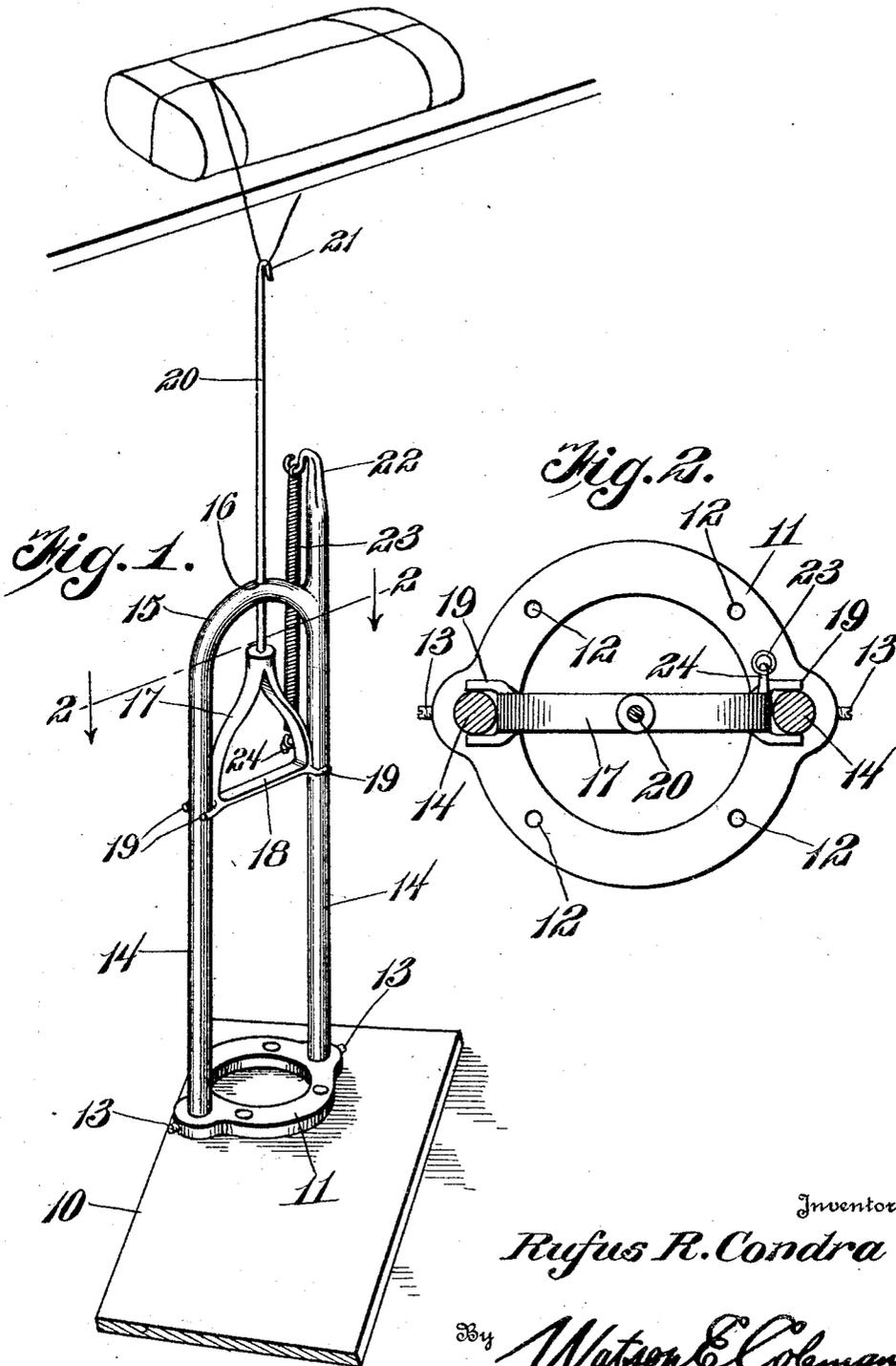


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R. R. CONDRA
TWINE TENSIONING DEVICE

Filed April 14, 1925



UNITED STATES PATENT OFFICE.

RUFUS R. CONDRA, OF NASHVILLE, TENNESSEE.

TWINE-TENSIONING DEVICE.

Application filed April 14, 1925. Serial No. 23,091.

To all whom it may concern:

Be it known that I, RUFUS R. CONDRA, a citizen of the United States, residing at Nashville, in the county of Davidson and State of Tennessee, have invented certain new and useful Improvements in Twine-Tensioning Devices, of which the following is a specification, reference being had to the accompanying drawings.

This invention relates to devices for placing tension upon string or cord, and particularly to a device designed for the purpose of placing tension upon twine as packages are being tied.

The general object of the invention is to provide a device of this character which is designed to be placed upon the floor so as to be operated by the foot of the person who is tying up the package and with which the twine is adapted to be engaged so that at the proper time the operator may depress a portion of the tension device to place any desired amount of tension upon the twine in the operation of tying up the package.

A further object is to provide a device of this character which is very simple, light, portable, may be easily handled, and cheaply made.

My invention is illustrated in the accompanying drawing, wherein:—

Figure 1 is a perspective view of my twine tension device;

Figure 2 is a section on the line 2—2 of Figure 1.

Referring to the drawing, 10 designates a base board to which the tensioning device is adapted to be attached. The tensioning device proper comprises an annular base 11 formed with apertures 12 for the passage of screws whereby it may be held down upon the base board and with apertures for the passage of the supporting frame for the device, the ends of the base being provided with set screws 13. Extending upward from this base are the vertical supports 14 of the frame, these vertical supports being connected by a transverse, preferably upwardly curved, integral portion 15 this portion 15 having a medially disposed aperture 16.

Slidably mounted upon this frame is a stirrup 17 having a transverse cross bar 18. This cross bar at its ends is formed to provide forks 19 which slidingly engage the standards or rods 14 and the upper end of the stirrup carries a vertical rod 20 which

extends up through the aperture 16 and at its upper end is provided with a hook 21 having a downwardly extending bill, the hook being so formed as to grip a piece of cord placed within the hook.

Projecting upward from one side of the frame 14 is an extension 22 hook-shaped at its upper end to provide for engagement with a coiled contractile spring 23, the lower end of which engages with a hook 24 formed upon the stirrup at one side thereof. The cross bar 18 of the stirrup and the stirrup itself are made of such size that the foot may be readily inserted in the stirrup and over the cross bar 18 to depress the rod 20 against the action of the spring 23.

In the use of this device, any hard finished twine, cord or rope may be used when tying packages, it being understood that this device does not act to tie the packages in any way but merely places tension on the twine or rope to any degree desired, this tension being applied by depressing the stirrup by means of the foot. A package of any dimensions large enough to require tight tying may be tied two, three, four, five or six ways without cutting the cord or turning the package over. A special slip knot made by looping the short end of the string around the long end is used. This knot will not tighten until the proper amount of tension is secured.

The package or bundle to be tied is laid on a table and the tensioning device sits on the floor and the operator stands upon the base board 10. One end of the package extends over the edge of the table and the operator takes the short end of the string in his left hand and with the right winds the string around the end of the package, crosses on top with the short end under the long end, and turns the package around and as he turns it lets the string slip under the package and come under and up to the top where it again crosses with short end under and the string is wound around the other end of the package, bringing the long string to a point where it meets with the short end of the string. A slip knot is made by looping the short end of the string around the long end of the string, and the long end of the string is hooked under the hook 21. The right foot is placed on the stirrup and pushed down until the proper amount of tension is acquired. The string may be wrapped around the package as many ways as desired from two to six

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times, and any bulky or heavy package may be tied with any desired amount of tension. The time required for tying the package is from fifteen to thirty-five seconds.

5 The machine is very simple, is practically indestructible, and is readily portable by simply carrying it from place to place. It may be used with great advantage by daily papers, publishers, printers, magazine publishers, mail order houses, and in any situation where a good deal of package wrapping is to be done, as with this machine even an inexperienced man can learn to tie a package efficiently in a few minutes.

15 While I have illustrated a particular embodiment of my device which has been found in practice to be thoroughly effective, I do not wish to be limited thereto as the principle of the device may be varied in many ways without departing from the spirit of the invention as defined in the appended claims.

I claim:—

1. A twine tensioning device of the character described including a support, a depressible member having a hook and mounted upon the support, and operator operable means whereby the depressible member may be depressed on the support.

2. A twine tensioning device of the character described including a support, an operator operable depressible member having a hook and mounted upon the support, and means yieldingly resisting the depression of said member.

3. A twine tensioning mechanism of the character described comprising a base, a support thereon, a member longitudinally shiftable upon the support and having a hook at its upper end, means whereby the foot of an operator may engage with said member to

cause its depression, and a spring resisting the depression of the member.

4. A twine tensioning device of the character described comprising a base, a support mounted thereon, a stirrup slidably mounted upon the support, a rod extending upward from the support, a guide on the support and having a downwardly extending hook at its upper end, and a spring mounted on the support and engaging said stirrup and urging it upward.

5. A twine tensioning device of the character described comprising a base, a supporting frame including vertical parallel standards, a cross bar, a stirrup slidably mounted upon the standards and having a rod extending up through the cross bar, the upper end of the rod having a downwardly extending hook, and a spring mounted upon the frame and resisting downward movement of the stirrup.

6. A twine tensioning device of the character described comprising a base, a supporting frame mounted upon the base and embodying two vertical parallel standards and a cross bar, the cross bar being perforated, a stirrup mounted upon the frame and having forks loosely embracing the standards, there being a rod mounted upon the stirrup and extending upward through the aperture in the cross bar, the upper end of the rod having a downwardly opening hook, one of said standards being extended vertically upward, and a contractile spring connected to the upper end of said standard and to said stirrup and resisting downward movement of the stirrup.

In testimony whereof I hereunto affix my signature.

RUFUS R. CONDRA.