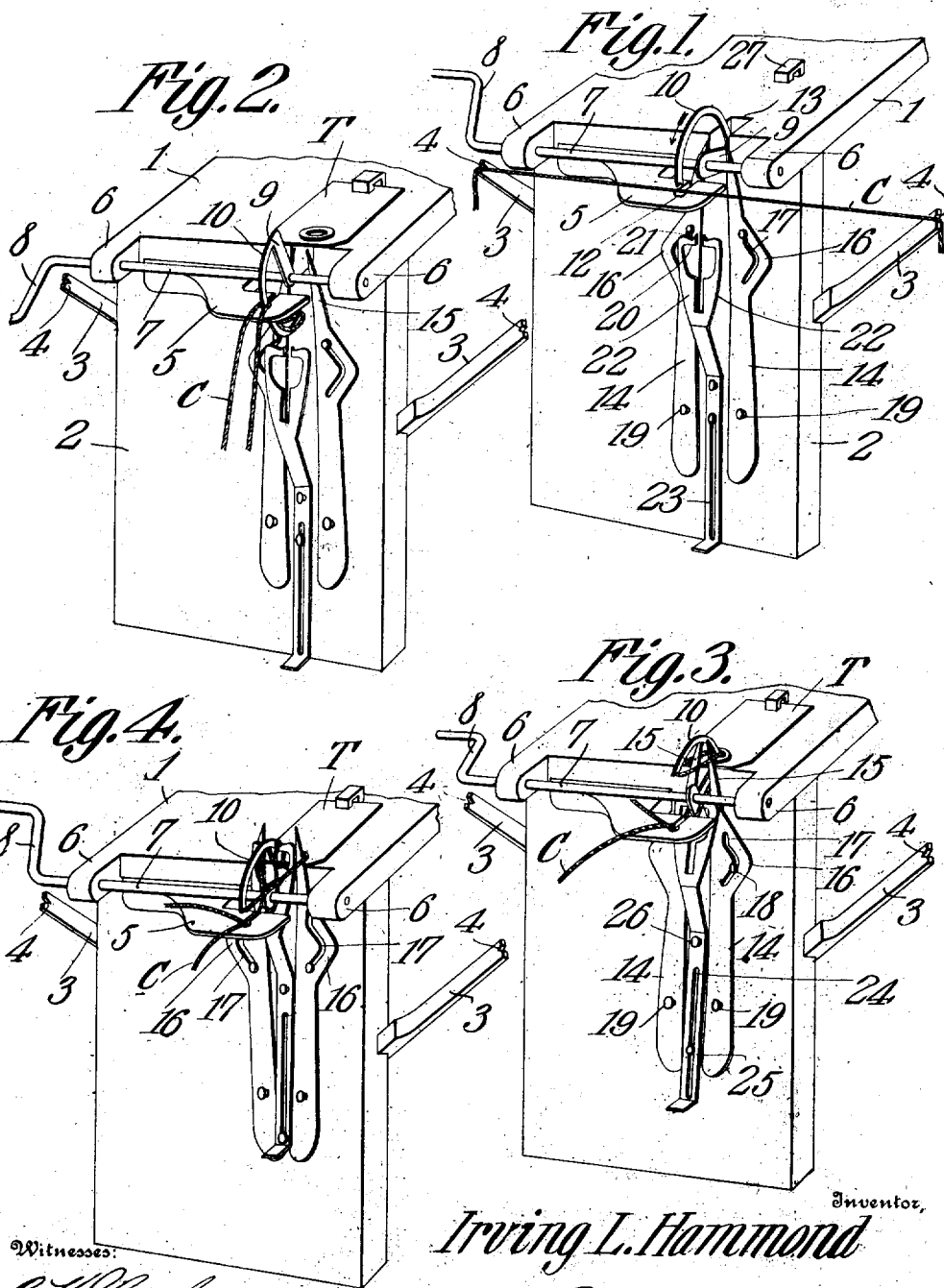


I. L. HAMMOND.
MACHINE FOR CORDING SHIPPING TAGS.
APPLICATION FILED MAR. 21, 1908.

950,667.

Patented Mar. 1, 1910.

2 SHEETS—SHEET 1.



Witnesses:

R. M. Suitt

Inventor,
Irving L. Hammond

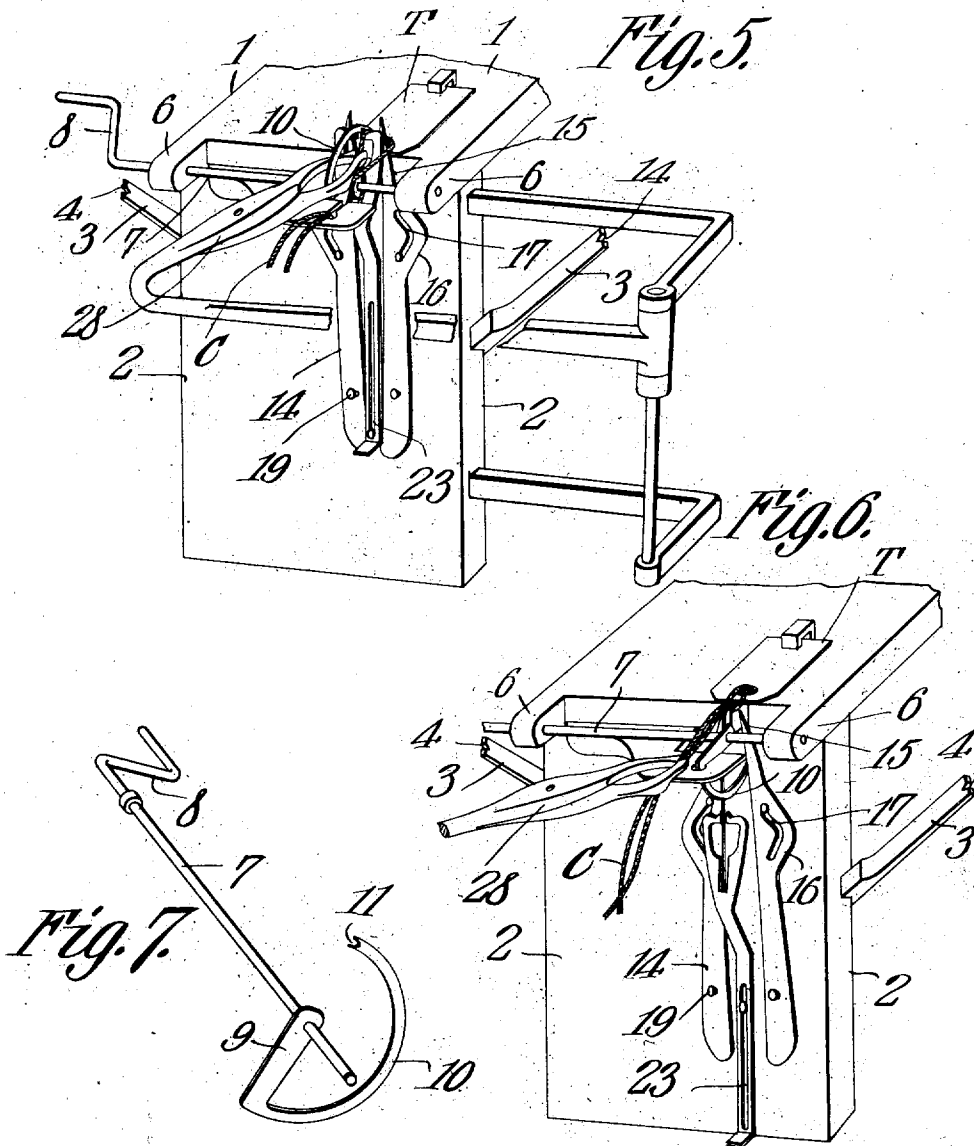
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UNITED STATES PATENT OFFICE.

IRVING L. HAMMOND, OF LEWISTON, MAINE.

MACHINE FOR CORDING SHIPPING-TAGS.

950,667.

Specification of Letters Patent.

Patented Mar. 1, 1910.

Application filed March 21, 1908. Serial No. 422,458.

To all whom it may concern:

Be it known that I, IRVING L. HAMMOND, a citizen of the United States, residing at Lewiston, in the county of Androscoggin and State of Maine, have invented a new and useful Machine for Cording Shipping-Tags, of which the following is a specification.

This invention relates to machines for cording or stringing shipping tags.

The object of the invention is to provide a machine of this character which shall, in a thoroughly practical, feasible and rapid manner, thread cords or strings through the eyes of shipping tags, and tighten the cord in the eye, whereby to prevent accidental disconnection thereof.

With the above and other objects in view, as will appear as the nature of the invention is better understood, the same consists, generally stated, in a machine for cording shipping tags embodying means for passing a doubled cord through the eye of a shipping tag, means for spreading the loop thus formed, means for threading the free ends of the cord through the loop, and means for drawing up the loop.

The invention consists further in the various novel details of construction of a machine for cording shipping tags, as will be hereinafter fully described and claimed.

In the accompanying drawings forming a part of this specification, and in which like characters of reference indicate corresponding parts, Figures 1 to 6, inclusive, are perspective views of a machine for cording shipping tags, displaying, in sequence, the various steps of the operation leading up to the final result. Fig. 7 is a perspective detail view of the needle for threading the cords through the tags.

Before entering into a detailed description of the machine, it may be stated that from choice the invention is illustrated somewhat diagrammatically, the various mechanisms for driving the different parts mechanically being omitted, and such parts being displayed as manually actuated. The object for thus presenting the invention is to exhibit only its broad underlying features without limiting it to details of construction.

Referring to the drawings, 1 designates a table or tag support, and 2 a suitable up-

right for maintaining it in operative position. The upright carries two arms or cord holders 3, the outer ends of which are provided with seats 4 to be engaged by the cord C. The cord is supplied to the holders mechanically, from a suitable reel, not shown, and is also cut into desired lengths by suitable cutting mechanism, illustration of which is also omitted. The cord rests with its intermediate portion upon a cord support 5, in the nature of a ledge which is secured to the upright 2, and may be made of any suitable material, preferably of wood.

The cord support is disposed below a recess formed by two projecting arms 6 carried by the tag support 1, and in which is journaled a shaft 7 having at one end a crank 8. This shaft supports the needle, which constitutes one of the essential features of this invention. The needle and shaft are shown in detail in Fig. 7, and the former is shown as consisting of a straight member 9 and an approximately semi-circular hook 10, the free end of which is provided with a cord engaging seat 11. While it will generally be preferred to make the arm or member 9 straight, as shown, it is to be understood that it may be of other contours without departing from the scope of the invention.

The cord support 5 is provided with a slot 12 that extends through the inner edge of the table and registers with a slot 13 in the tag support 1, and these two slots are designed to permit rotative movement of the needle in a manner that will be readily understood by reference to the various figures.

As will be obvious, owing to the small size of the eye of the tag, the loop projected therethrough will have its members so closely juxtaposed as to preclude the ready threading through them of the free or loose ends of the cord to complete the knot, and, in order to provide for this contingency, spreading mechanism is provided for expanding the loop sufficiently to permit the ready passage therethrough of the cord ends. This mechanism comprises two plates 14, preferably of metal, the upper ends of which are formed into pointed bills 15, one of which is disposed on each side of the needle. The inner sides of the bills are straight and their outer sides are curved, the two curved sur-

faces forming an approximate wedge, which, when passed through the loop of the cord, will effect its distention. At an intermediate portion of each of the plates is a lateral enlargement 16 in which is arranged a cam-shaped slot 17, and through each of these slots passes a pin 18, the two pins being secured in the upright 2. These pins not only serve to hold the plates 14 assembled with the upright, but also, by coaction with the cam slots when the plates are moved upward, cause the bills 18 to be moved laterally away from each other and thus effect spreading or distending of the cord loop. Any means may be employed for lifting the plates, that herein shown consisting of two knobs 19.

As above stated, after the loop has been distended, it will be necessary to thread the free or loose ends of the cord through the loop to complete the knot, and this latter step is accomplished by a pair of oppositely disposed fingers 20 the opposed ends of which are spaced apart a sufficient distance to straddle the needle 9, the upper side of each finger being provided with a notch 21 to engage with the cord. The fingers 20 are carried by two arms 22 that are spaced apart a sufficient distance to permit passage therethrough of the needle and the cord loop, and the arms 22 are secured to, or formed integral with, a bar 23 that is provided with a longitudinal slot 24 through which projects a pin 25 that serves to hold the bar assembled with the upright 2 and also to guide it in reciprocatory movements. In order to actuate the bar, a knob 26 is provided.

The operation of the machine is as follows: The parts being in the position shown in Fig. 1, with the cord C held by the seats of the cord holders 4, a tag is placed upon the support 1 with its eye over the slot 13, and is held against movement by a clamp 27 that may be actuated in any preferred manner. Upon rotary movement being imparted to the shaft 7, the needle is moved in the direction of the arrow shown in Fig. 1, and the seat 11 of the needle will engage with the cord and carry the latter downward through the slot 12 of the support 5 and upward through the slot 13 and through the eye of the tag T. At the completion of this operation, the needle occupies the position shown in Fig. 3, and the plates 14 are now moved upward, causing the bills 15, on each side of the needle, to enter the loop of the cord and distend it, as shown in Fig. 4. The cord end threader, which is composed of the fingers 20, arms 22, and bar 23, is now moved upward, and as the fingers 20 pass on each side of the needle, the cord is engaged by the notches 21, and a portion of the length thereof is projected upward through the loop, as shown in Fig. 4. The final step of the operation now takes place, which con-

sists in withdrawing the free ends of the cord out of the slot of the support 5 and drawing up the loop to tighten the knot of the cord in the eye of the tag. This result is accomplished by a pair of grippers 28, in the nature of pincers, the noses of which may be spread apart to permit them to pass by the needle and may then be moved one toward the other to grip the loop, as shown in Fig. 5. The needle, spreaders, and cord end threader are now moved to the position shown in Fig. 6, thereby permitting the grippers 28 to move away from the tag and firmly draw up the loop, and thus complete the operation of knotting. At the instant the knot is drawn tight, the clamp 27 is raised and releases the tag, which is then discharged from the machine by the movement of the grippers.

As will be seen from the foregoing description, the improvements herein defined are simple in character, but will be thoroughly practical in securing the object sought in an efficient and satisfactory manner.

I claim:—

1. In a machine for cording shipping tags, a tag support, a cord support, and a rotary needle to double and carry a length of cord downward through the cord support and upward through the tag support.

2. In a machine for cording shipping tags, a tag support, a cord support, a rotary needle to double and carry a length of cord downward through the cord support and upward through the tag support, and cord spreading means coacting with the needle.

3. In a machine for cording shipping tags, a tag support, a cord support, a rotary needle to double and carry a length of cord downward through the cord support and upward through the tag support, and a cord spreading device arranged on each side of the needle.

4. In a machine for cording shipping tags, a tag support, a cord support, a rotary needle to double and carry a length of cord downward through the cord support and upward through the tag support, and means to thread the free ends of the cord through the loop.

5. In a machine for cording shipping tags, a tag support, a cord support, a rotary needle to double and carry a length of cord downward through the cord support and upward through the tag support, cord spreading means coacting with the needle to form a loop, means operable to thread the free ends of the cords through the loop, and means operable to tighten the loop.

6. In a machine for cording shipping tags, a tag support, a cord support, a rotary needle to double and carry a length of cord downward through the cord support and upward through the tag support, cord spread-

ing means coacting with the needle to form
a loop, means operable to thread the free
ends of the cord through the loop, means for
clamping a tag upon its support, and means
5 operable to tighten the loop and to discharge
the corded tag from the machine.

In testimony that I claim the foregoing as

my own, I have hereto affixed my signature
in the presence of two witnesses.

IRVING L. HAMMOND.

Witnesses:

M. J. HAGERTY,

DANA S. WILLIAMS.