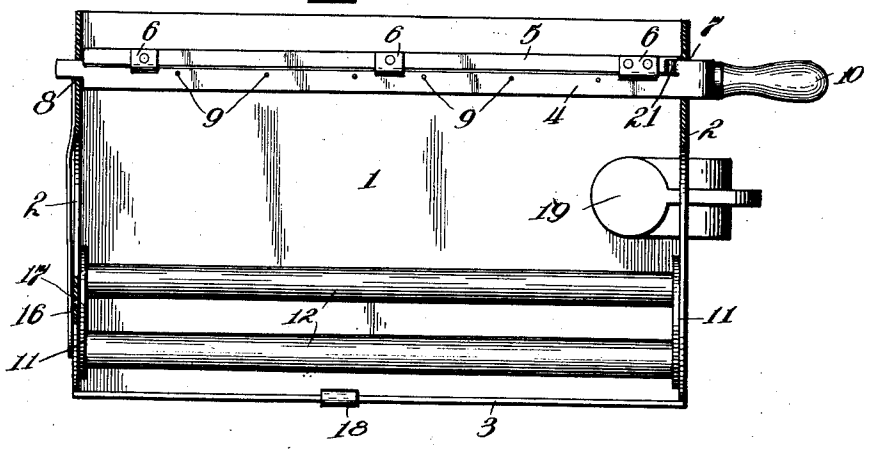
No. 797,483. PATENTED AUG. 15, 1905.

F. G. WILKINS.

BANDAGE ROLLING MACHINE.

APPLICATION FILED OCT. 13, 1904.

Fig. 1.



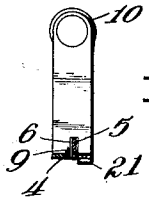


Fig. 4.

Fig. 2.

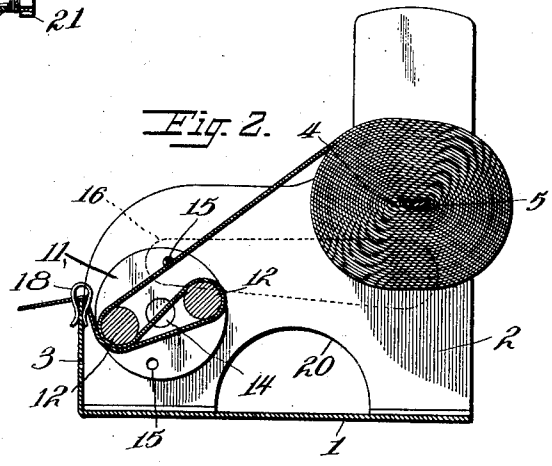
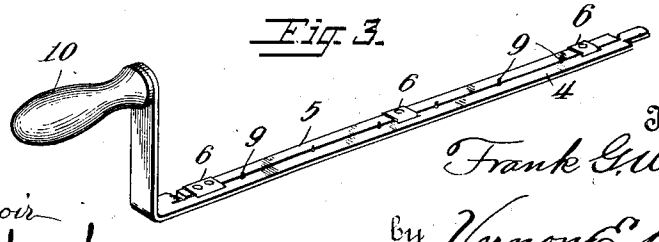


Fig. 3.



Witnesses
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Inventor
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By Vernon E. Hodges.
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UNITED STATES PATENT OFFICE.

FRANK G. WILKINS, OF WASHINGTON, DISTRICT OF COLUMBIA.

BANDAGE-ROLLING MACHINE.

No. 797,483. Specification of Letters Patent. Patented Aug. 15, 1905.

Application filed October 13, 1904. Serial No. 228,361.

To all whom it may concern:

Be it known that I, FRANK G. WILKINS, a citizen of the United States, and a resident of the city of Washington, in the District of Columbia, have invented a new and useful Improvement in Bandage-Rolling Machines, of which the following is a specification.

My invention relates to an improvement in bandage-rolling machines, and the object primarily is to provide means for facilitating the removal of the winding-spindle without pulling out or disturbing in any wise the center of the bandage.

Another object is to provide an improved tension device.

With the foregoing objects in view my invention consists in a collapsible or folding winding-spindle which is expanded to its greatest dimensions while the bandage is being rolled and which collapses or folds by reversing its movement whereby it may be withdrawn from the rolled bandage practically without resistance, thus leaving the bandage intact and in perfect condition at the core or center as elsewhere.

This invention further consists in certain novel features of construction and combinations of parts, which will be hereinafter described, and pointed out in the claims.

In the accompanying drawings, Figure 1 is a plan view. Fig. 2 is a vertical section. Fig. 3 is a detached perspective view of the improved winding-spindle, and Fig. 4 is a sectional view of the winding-spindle.

The frame of the machine may be variously constructed, but preferably consists of the base 1 and the sides 2 2, and in the construction shown the forward end of the base is upturned for a short distance to form the flange 3, although in place of this a rod or bar might be employed as a guide over which the bandage is drawn as it is rolled.

A winding-spindle comprises, preferably, two plates 4 and 5, which are held together by hinges 6 6, whereby to permit them to partially fold together or assume a position either in alinement with each other or flat or at right angles to each other, as illustrated in the drawings. A projection 21 on the plate 4 serves as a stop against which the adjacent end of the plate 5 engages to limit the outer movement or the expanded position of the spindle, and the hinges themselves are with the plates so constructed as to limit the folding of the spindle. The winding-spindle is removably journaled at its ends in the bearings 7 and 8. Bearing 8 is just a trifle less in diameter than the width of the spindle when in its expanded condition, so that the latter is not removable when in the act of rolling a bandage or in its normally expanded condition, but when reversed and folded its diameter is reduced and sufficiently less than the diameter of the bearing 8 to admit of its easy removal from the frame.

On one or both of the inner surfaces of the two plates of the winding-spindle I prefer to have teeth or pins 9 9, which are adapted to take hold of the end of the bandage and facilitate the initial fastening to the spindle at the beginning of the winding operation. These teeth or pins, however, are not absolutely necessary, though preferred, and when employed they withdraw themselves from the bandage when the spindle folds or collapses, as the drawings illustrate. The outer end of the spindle has a crank 10, by which it is manipulated and turned.

The tension device comprises two disks 11 11 and rods 12 12, connecting them with trunnions at the centers of the disks, which turn in bearings 14 14 in the sides of the frame. One of the disks is provided with two orifices 15 15, diametrically opposite and on corresponding sides adjacent to the points where the rods join the disks. These orifices are adapted to receive a spring-dog 16, which is secured outside of the frame and slides through and is guided in its motions in the hole 17, which it fits. One edge of this dog is beveled, whereby the tension device may be turned in one direction without manipulating the dog, it acting to force the latter aside; but the dog locks it against moving in the reverse direction. The special arrangement of orifices with respect to the rod insures uniformity of tension upon the bandage as it is drawn through the tension device and rolled.

As a simple means for guiding bandages of different widths and keeping them against one side of the machine a spring-clip 18 may be placed on the flange or rod 3.

While the machine may be held by hand when operated, the preferred method is to clamp it to a table or bench, and the clamp 19 may be inserted through one of the openings 20 20 in the sides of the frame or over the rear edge of the bottom, as desired.

In operation the bandage is threaded at one end through the tension device and then held

on the winding-spindle until one or two revolutions of the latter are made. Then the tension device is turned to give the required tension, and the gage-snap, if used, is adjusted to the width of the strip to be rolled. The operator then takes the crank between his fingers and turns the spindle forward, which action tends all of the time to retain the spindle in its expanded condition. When the bandage is completely rolled, the operator holds it and reverses the spindle—say a quarter or half turn—which causes it to collapse and the teeth or pins, if such be employed, to withdraw from the fabric. Then by a gentle pull the spindle is removed from the machine and bandage without pulling, distorting, or disturbing the bandage. The spindle is then returned to its position in the machine.

In lieu of the pins 9 9 the plates might be roughened or corrugated, and other slight changes might be resorted to in the form and arrangement of the several parts described without departing from the spirit and scope of my invention, and hence I do not wish to limit myself to the exact construction herein set forth; but,

Having fully described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. A winding-spindle comprising two plates hinged together, and folding approximately along its longitudinal axis, said spindle being collapsed by reversing the direction of its rotation.

2. A winding-spindle comprising two plates hinged together and folding along its longitudinal axis.

3. A winding-spindle comprising two plates hinged together and folding along its longitudinal axis, one plate provided with a stop in position to be struck by the end of the other plate whereby to limit their hinging or swinging movement in one direction.

4. The combination with the frame of a winding-machine, having bearings therein, of a winding-spindle removably journaled in said bearings, said spindle being collapsible, its greatest diameter when expanded being in excess of one of the bearings in which it is journaled whereby to prevent the removal of the spindle from its bearing when winding a bandage.

5. The combination with a base, sides having openings therein to receive a clamp, and an upturned flange at one end of the machine, of a collapsible winding-spindle, a tension device and an adjustable gage on the flange.

6. A winding-spindle comprising collapsible parts hinged together and which maintain an enlarged or expanded condition when turned in one direction and which automatically collapse when turned in the reverse direction.

In testimony whereof I have signed this specification in the presence of two subscribing witnesses.

FRANK G. WILKINS.

Witnesses:
GEORGE H. CAMPBELL,
VERNON E. HODGES.