Aug. 7, 1923. 1,464,349

C. M. BURG ET AL

GAUZE AND CLOTH WINDING MACHINE

Filed June 21, 1918

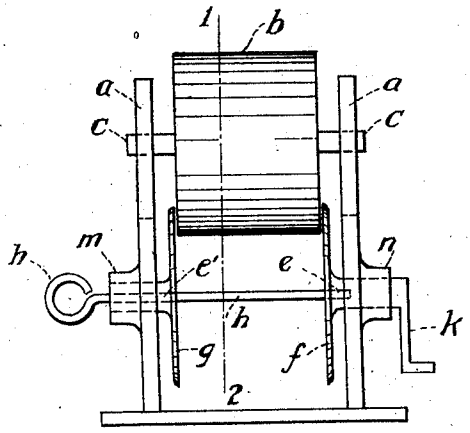



Fig. 1.

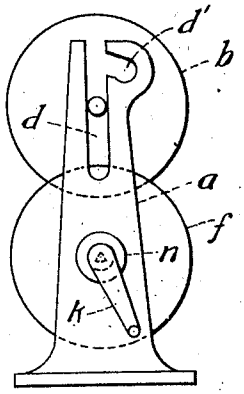



Fig. 2.

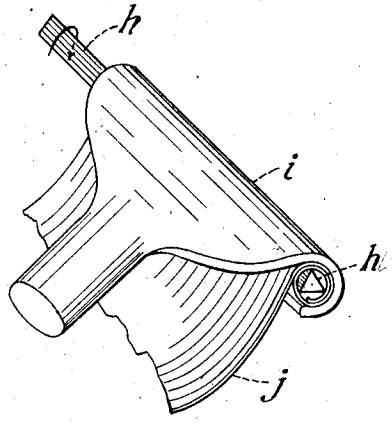



Fig. 3.

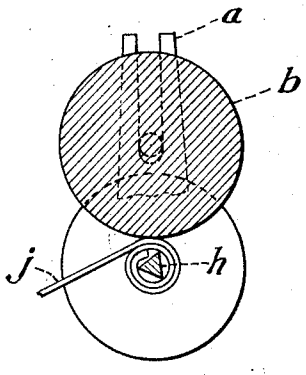



Fig. 4.

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# UNITED STATES PATENT OFFICE.

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## GAUZE AND CLOTH WINDING MACHINE.

Application filed June 21, 1918. Serial No. 241,228.

*To all whom it may concern:*

Be it known that we, CARL M. BURG, ERNEST DECKER, and LOUIS C. LE DUC, citizens of the United States, residing at Midvale, in the county of Salt Lake and State of Utah, have invented a new and useful Improvement in a Gauze and Cloth Winding Machine, of which the following is a specification.

Our invention relates to the art of winding rolls of cloth or other materials, that are presented in the open market in rolled shapes, and in this particular case the machine of our invention is peculiarly adapted for rolling gauze bandages such as are used by surgeons and nurses for dressing wounds or any other case where a rolled bandage is used.

We are aware that several machines for this purpose have been manufactured, but none has proved to be able to do the work with entire satisfaction. The main object to be attained in winding a gauze bandage into a roll is to apply a continuous even tension to the winding material so that this material presents smooth edges and face, but not so tightly wound but what it can be easily sterilized throughout. To make the tension and subsequent distribution of material being wound so perfect that it is the same both for the first and the last layer of the bandage is the purpose of our invention. Another feature of our invention is the easy, smooth, and even starting of the bandage cloth on the needle, which we accomplish by using a removable hook shaped tool.

In our invention the gauze or cloth bandage is wound on a removable needle, and the proper tension secured by means of a horizontal roller, with either smooth or knurled concave surface depending upon the kind of material to be wound, which moves vertically in slotted guides and rests on top of the bandage while the bandage is being wound.

We attain these objects by the mechanism illustrated in the accompanying drawing, in which:—

Figure 1 is a front view of the machine; Figure 2 a side view of the machine; Figure 3 a perspective view of the bandage starting tool; and Figure 4 a section through the roller and the bandage winding needle on the line 1—2 in Figure 1, showing the bandage winding needle and tension roller in position for winding.

Similar letters refer to similar parts throughout the several views.

In Fig. 1 and Fig. 2 the base and standards "*a a*" constitute the frame work of the machine. In the standards "*a a*" are slots or recesses "*d*" into which fit the spindles "*c c*" of the weighted roller "*b*," thus allowing the roller "*b*" to move freely vertically in the slots "*d*." The upper ends of the slots "*d*" widened out into slots "*d'*" which form a rest for the roller "*b*" when not in use. The roller "*b*" can have its concave surface either smooth finished, rough, or knurled, depending upon the kind of material to be wound into a roll. The crank disc "*f*" and the disc "*g*" are carried by the standards "*a a*" in containers "*m*" and "*n*" and form the side guides for the bandage "*j*" to be wound and also for the roller "*b*." The loose pin or needle "*h*" which can have any cross section desired but which we show triangular in section as being preferable, fits into recesses "*e*" and "*e'*," in discs "*f*" and "*g*" and moves as an integral part of these discs. When a bandage of gauze or cloth is about to be wound, the needle "*h*" is inserted into the recesses "*e*" and "*e'*," as shown in Fig. 1, forming the removable core of the bandage. The end of the loose bandage is then loosely folded over the needle "*h*," and the starting tool "*i*" is hooked over the cloth and the needle "*h*" as shown in Fig. 3. The crank disc "*f*" is then given a turn or two by means of crank "*k*" winding the cloth tightly about the needle "*h*." The starting tool "*i*" is now removed, and the roller "*b*" lifted out of the slots "*d'*" and lowered into the position as shown in Fig. 4 where it rides freely of its own weight giving the required tension to the bandage while the bandage is being wound into a roll upon needle "*h*" when the crank "*k*" is turned. When the bandage roll is completed, the roller "*b*" is lifted until the spindles "*c c*" rest in slots "*d'*," the crank "*k*" is then given a slight backward motion that loosens the needle "*h*" which can now be withdrawn and the completed bandage removed.

The starting tool "*i*" can be made of any kind of smooth material with a hook shaped

front, open on the under side so as to be easily placed over the needle "*h*" and the bandage "*j*."

Having thus fully described our machine and the operation, thereof, we claim:

1. A mechanism for winding bandages comprising two opposed rotary discs centrally recessed to receive a winding needle, an axially removable winding needle fitting the recesses and connecting the discs, and a vertically movable pressure roll mounted to rest on the material wound on the needle.

2. A mechanism for winding bandages comprising a winding needle, means for supporting and rotating the needle, a removable starter adapted to closely embrace the needle to start the winding of a web of cloth thereon, and a removable pressure roll adapted to be supported by the cloth as it is wound upon the needle after the removal of the starter.

3. A mechanism for winding bandages comprising two opposed rotary discs centrally recessed to receive a winding needle, an axially removable winding needle fitting the recesses and connecting the discs, standards in which the discs are mounted, a vertically movable pressure roll having spindles at its ends, and vertical slots in the standards for the spindles transversely recessed to support the roll during the starting of the bandage on the needle.

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