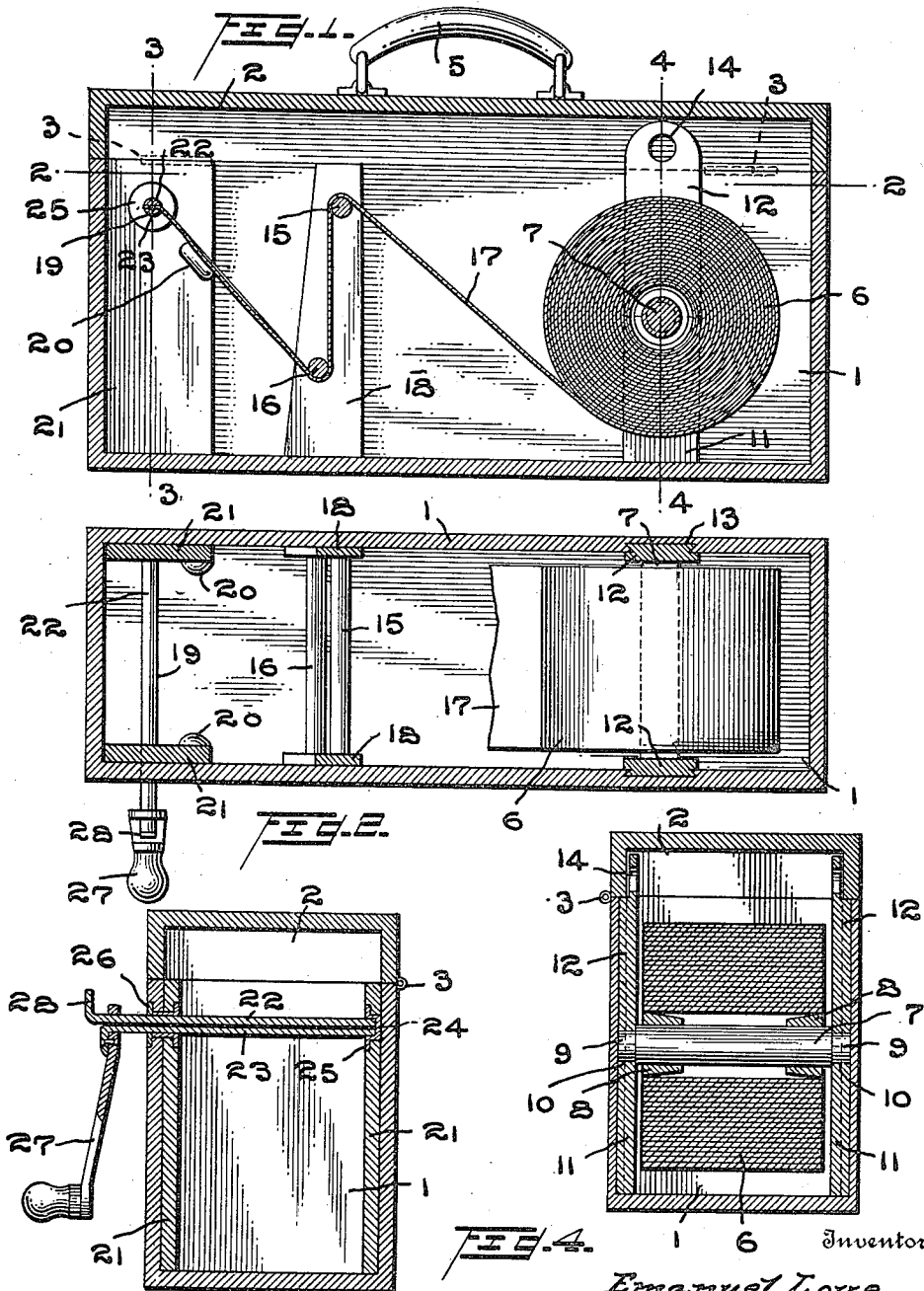


E. LOVE.
PAPER ROLL MAKING APPARATUS.
APPLICATION FILED DEC. 15, 1914.

1,143,214.

Patented June 15, 1915.

2 SHEETS—SHEET 1.



Witnesses
L. R. Meyer
C. R. Fiegler

FIG. 4.
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Emanuel Love,
 By *Joshua R. H. Potts*
 His Attorney

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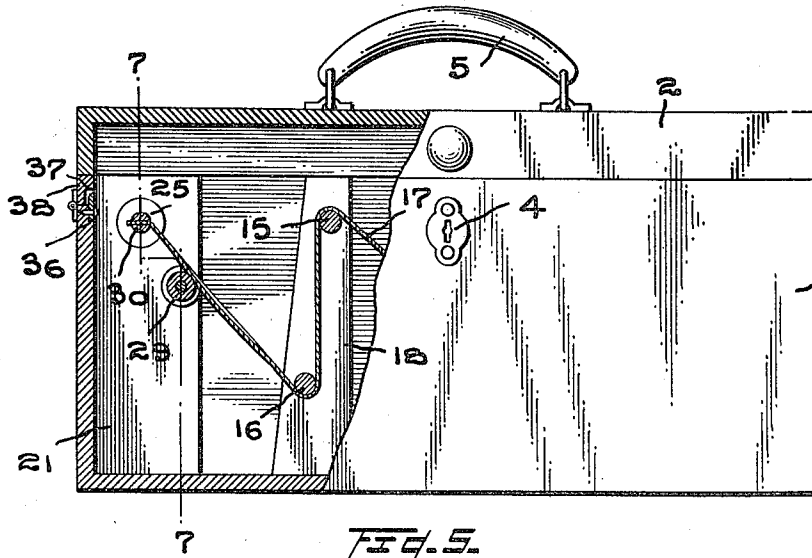


FIG. 5.

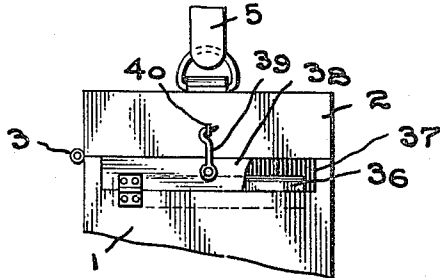
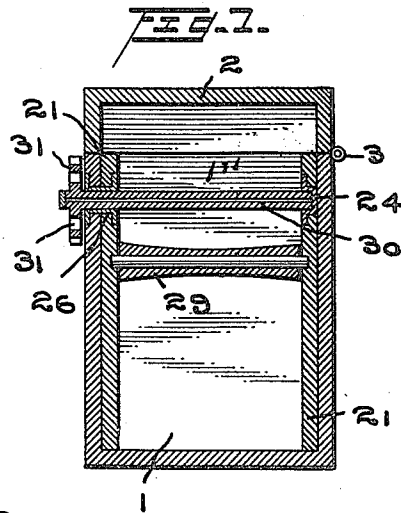
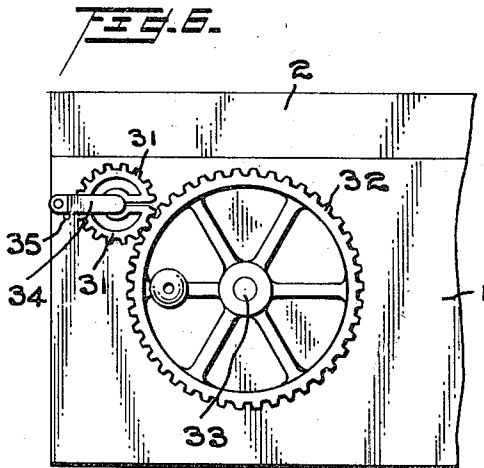


FIG. 8.

Witnesses
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UNITED STATES PATENT OFFICE.

EMANUEL LOVE, OF TRENTON, NEW JERSEY.

PAPER-ROLL-MAKING APPARATUS.

1,143,214.

Specification of Letters Patent. Patented June 15, 1915.

Application filed December 15, 1914. Serial No. 877,290.

To all whom it may concern:

Be it known that I, EMANUEL LOVE, a citizen of the United States, residing at Trenton, in the county of Mercer and State of New Jersey, have invented certain new and useful Improvements in Paper-Roll-Making Apparatus, of which the following is a specification.

My invention relates to improvements in paper roll making apparatus, the object of the invention being to provide an apparatus of the character stated which will permit the operator to wind rolls of paper from a supply roll in any length desired.

A further object is to provide an apparatus of the character stated which is particularly adapted for barber's use in the form of paper rolls for chair backs such as commonly used to protect the head from the cushion or back of the chair.

The rolls are now bought by the barbers of a size for use, and with my improvements the barber can secure a large supply roll and wind rolls for use and save the expense of purchasing the smaller rolls.

A further object is to provide an improved apparatus of the character stated which can be manufactured and sold at a reasonably low price, which is simple in construction, and which will efficiently perform the functions for which it is intended.

With these and other objects in view, the invention consists in certain novel features of construction and combinations and arrangements of parts as will be more fully hereinafter described and pointed out in the claims.

In the accompanying drawings: Figure 1 is a view in vertical longitudinal section illustrating a preferred form of my improvements. Fig. 2 is a view in horizontal transverse section on the line 2—2 of Fig. 1. Fig. 3 is a view in vertical transverse section on the line 3—3 of Fig. 1. Fig. 4 is a view in vertical transverse section on the line 4—4 of Fig. 1. Fig. 5 is a view partly in elevation and partly in longitudinal section illustrating a modified form of apparatus. Fig. 6 is a fragmentary view in side elevation showing the means for winding the roll. Fig. 7 is a view in vertical transverse section on the staggered line 7—7 of Fig. 5, and Fig. 8 is a fragmentary view in end elevation partly in section showing the cutter illustrated in Fig. 5.

1 represents a box, and 2 a cover connect-

ed to the box by hinges 3, and having a lock 4 to secure the same in closed position. A handle 5 is provided on the cover 2, so that the apparatus may be conveniently carried from place to place.

6 represents a roll of paper constituting the supply roll which is supported on a shaft 7, the latter having conical sleeves 8 thereon to maintain the roll in central position. The shaft 7 has reduced journals 9 at its ends supported in bearings 10 at the upper ends of bars 11, the latter secured in the box as shown.

12, 12 represent slides which are dove-tailed in cross section and fit in vertical grooves 13 in the sides of box 1. These slides 12 project above the sides of box 1, and have perforated finger holds 14 at their upper ends, so that they may be readily removed and replaced as desired.

15 and 16 represent transverse rods around which the paper strip 17 is passed in order to offer sufficient frictional resistance to the movement of the paper to insure a proper winding. These rods 15 and 16 are supported in vertical bars 18 secured in the box, and the paper is passed over the upper roll 15, thence under the lower roll 16, and is guided from the lower roll 16 to the winding shaft 19 by means of enlargements 20. These enlargements 20 may be formed integrally with vertical bars 21 secured to the sides of the box 1 at the end thereof, and they operate to compel the strip 17 to curve or sag slightly at its center, and thereby direct the same uniformly to the winding shaft 19.

The winding shaft 19 consists of two half sections 22 and 23. These sections 22 and 23 are semi-cylindrical in cross section, and they receive the paper strip 17 between them. This shaft 19 is supported at its inner end in a bearing 24 in a disk 25, the disk 25 being of the same diameter of the roll to be wound, so that it operates as a guide to discontinue winding when the roll hides the disk. The shaft 19, comprising the sections 22 and 23 projects through a bearing sleeve 26 in the box 1, and section 23 at its outer end is secured to a crank arm 27 to turn the shaft. The section 22 has a finger hold 28 at its outer end, so that it may be readily manipulated to insert or withdraw the same.

In operation, the section 22 of shaft 19 is first removed and the end of strip 17 positioned over section 23. Section 22 is then

placed in position as shown in Figs. 1 and 3, to clamp the paper between the shaft sections. The shaft is then turned by means of the crank arm 27, and the paper will be wound upon the shaft. When the proper diameter of roll is had, as indicated by the disk 25, the operator stops the winding, and withdraws section 22 of shaft 19. He can then withdraw shaft section 23 while he holds the roll in his hand, and can then tear off the paper strip, using the end of the box as a straight edge for this purpose.

In Figs. 5, 6, 7, and 8, I illustrate a modification in which I dispense with the enlargements 20 for guiding the paper strip and employ in lieu thereof a roller 29 which is of least diameter at its center and gradually increases in diameter to its ends. This roll causes the strip to sag or belly, and insures a proper guiding of the same onto the winding shaft 30. The winding shaft 30 corresponds to the winding shaft 19 except that at the outer end of the shaft 30, I provide gear segments 31. These segments are preferably integral with or rigidly fixed to the sections of the shaft, and when together constitute a complete pinion which meshes with the drive gear 32 having a rotary mounting 33 on the outside of the box 1. To hold the shaft 30 against longitudinal movement, I provide a pivoted spring tongue 34 which may be swung up out of the way or may be swung down into position against the end of the shaft as shown clearly in Fig. 6, a pin 35 being provided to limit the downward movement of the spring tongue, and hence prevent its accidental displacement. In this modification illustrated in Figs. 5, 6, 7, and 8, I also illustrate a cutting blade 36 located in a recess 37 in the end of the box. This blade 36 is preferably a straight piece of steel or other sharp metal which is covered by a hinged section 38 when not in use. This section 38 has a hook 39 to engage an eye 40 on the cover 2 to cover the knife when not in use.

When in operation, the cover 38 is dropped down and the paper can be readily torn or cut when pressed against the cutting blade 36. With my improved apparatus, a barber can purchase a large supply roll and wind for himself rolls of the proper size for use on his chairs and save money by so doing, as the small rolls for the chairs are sold at a much higher price than the barber could make them with my improved apparatus.

Various other slight changes might be made in the general form and arrangement of parts described without departing from my invention, and hence I do not limit myself to the precise details set forth, but consider myself at liberty to make such changes and alterations as fairly fall within the spirit and scope of the appended claims.

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

1. An apparatus of the character described, comprising a receptacle having bearings therein, and grooves in its side walls above the bearings, a roll in the bearings adapted to support a supply roll of paper, removable slides located in the grooves above the bearings and engaging the ends of the shaft, and a winding shaft supported in the receptacle and adapted to wind thereon the paper from the roll, substantially as described.

2. An apparatus of the character described, comprising a receptacle having bearings therein, and grooves in its side walls above the bearings, a roll in the bearings adapted to support a supply roll of paper, removable slides located in the grooves above the bearings and engaging the ends of the shaft, a winding shaft supported in the receptacle and adapted to wind thereon the paper from the roll, and means in the receptacle between the first-mentioned shaft and the winding shaft for holding taut the strip of paper, substantially as described.

3. An apparatus of the character described, comprising a receptacle having bearings therein, and grooves in its side walls above the bearings, a roll in the bearings adapted to support a supply roll of paper, removable slides located in the grooves above the bearings and engaging the ends of the shaft, a winding shaft supported in the receptacle and adapted to wind thereon the paper from the roll, means in the receptacle between the first-mentioned shaft and the winding shaft for holding taut the strip of paper, and means for bellying said strip downwardly, substantially as described.

4. An apparatus of the character described, comprising a receptacle having bearings therein, and grooves in its side walls above the bearings, a roll in the bearings adapted to support a supply roll of paper, removable slides located in the grooves above the bearings, and engaging the ends of the shaft, a winding shaft supported in the receptacle and comprising two removable sections adapted to receive the end of the paper strip between them, devices in the receptacle supporting the paper strip before its engagement with the winding roll and compelling the strip to belly downwardly, means for frictionally engaging the strip between the supply roll and the winding shaft, and means for turning the winding shaft, substantially as described.

5. An apparatus of the character described, comprising a receptacle, a supply roll in the receptacle, a winding shaft in the receptacle, a cutting blade on one end of the

receptacle, a hinged section adapted to cover the blade when in closed position, a hinged cover on the receptacle, and means for securing the blade covering hinged section to the
5 cover when the latter is in closed position, substantially as described.

name to this specification in the presence of two subscribing witnesses.

EMANUEL LOVE.

Witnesses:

C. R. ZIEGLER,
CHAS. E. POTTS.

In testimony whereof I have signed my

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents,
Washington, D. C."