

(No Model.)

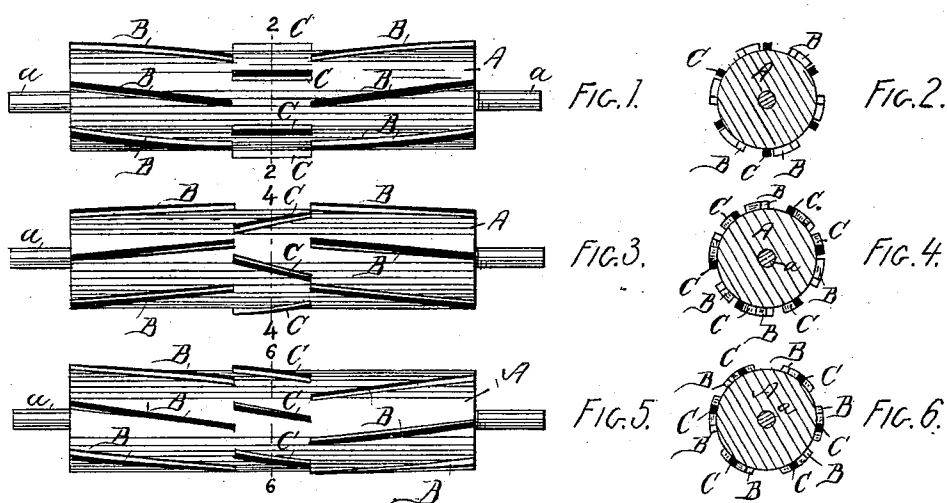
2 Sheets—Sheet 1.

C. W. GLOVER.

ROLLER FOR FELTING HAT BODIES.

No. 282,881.

Patented Aug. 7, 1883.



Witnesses

Wm. S. Fellows  
Frank B. Mitchell

Carlos W. Glover  
Inventor

per Brown Bros.  
Attorneys

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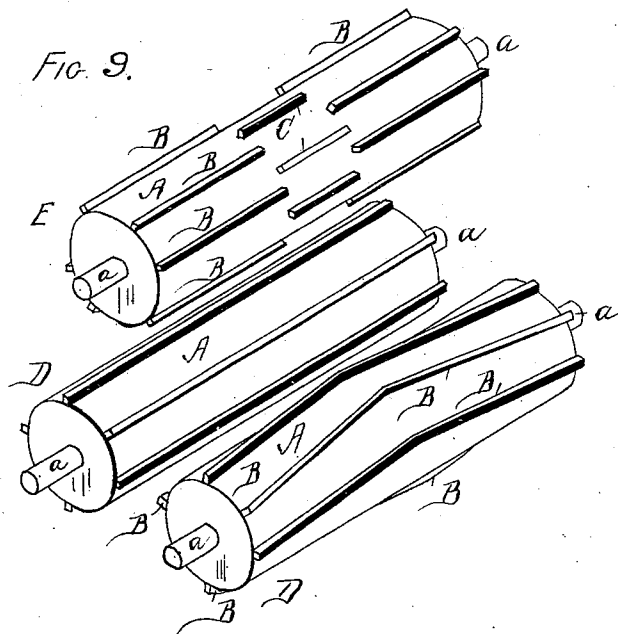
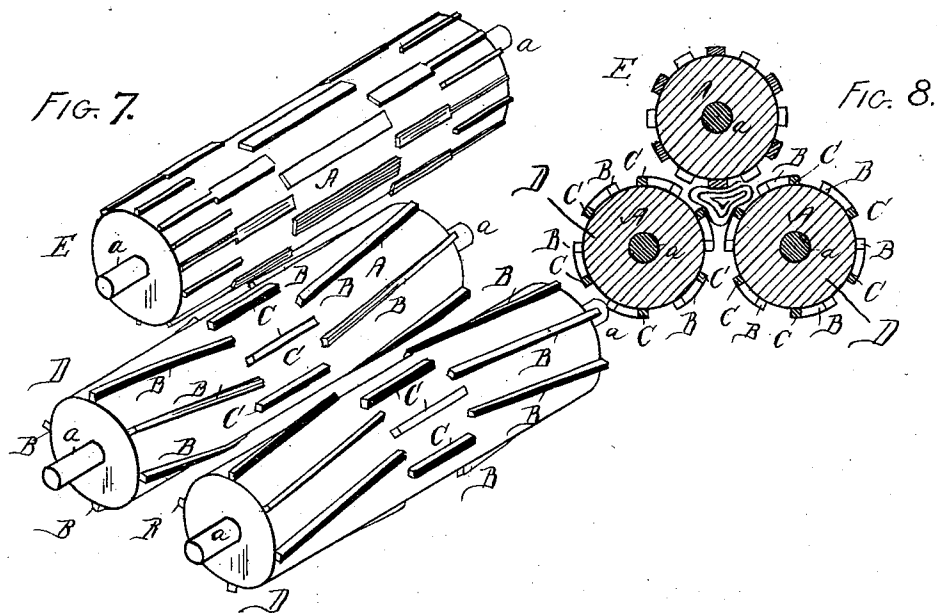
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# UNITED STATES PATENT OFFICE.

CARLOS W. GLOVER, OF BOSTON, MASSACHUSETTS.

## ROLLER FOR FELTING HAT-BODIES.

SPECIFICATION forming part of Letters Patent No. 282,881, dated August 7, 1883.

Application filed April 14, 1883. (No model.)

*To all whom it may concern:*

Be it known that I, CARLOS W. GLOVER, of Boston, in the county of Suffolk and State of Massachusetts, have invented certain new and useful Improvements in Rollers for Felting Hat-Bodies, of which the following is a full, clear, and exact description.

This invention relates to rollers for use in machines otherwise constructed and arranged for the felting of hat-bodies and other articles, such as shown and described in a pending application of mine for Letters Patent of the United States. These rollers, as well known, are provided with lags or projections to insure a more rapid felting and sizing of the hat-bodies and other articles subjected to them; and this invention pertains to these lags or projections of the rollers, and to the construction of such rollers in a machine substantially as hereinafter described, and for the purpose of acting upon the hat-roll, &c., by bending the same, whereby a more rapid sizing and felting of the same are secured.

In Plate 1, Figures 1, 3, and 5 are side views of rollers having lags or projections arranged in accordance with this invention; Figs. 2, 4, and 6, cross-sections, respectively, on the lines bearing the corresponding numbers in the preceding figures. In Plate 2, Figs. 7 and 8 are perspective views of a series of rollers combined, but for a better illustration the upper roller raised above its proper position relative to the other rollers; Fig. 9, a cross-section of Fig. 7 with the three rollers in their true working position.

In the drawings, A represents a roller having a journal, *a*, projecting from each end, by which to suspend it in position for operation. Each roller A is provided with a series of lags or projections or ribs, B, (shown in Figs. 1, 3, and 5 of Plate 1 as in broken lines,) having intermediate lags, C. These lags B, in accordance with this invention, have an angular or a spiral or diagonal direction, running in the direction of the length of the roller or relative to its axis toward the central transverse line thereof. It is by means of this spiral or diagonal direction of the lags upon the rollers that the longitudinal extension of the hat-roll, &c., is prevented, for the reason that they act to bend the hat-roll in a transverse direction, while at the same time it is to be turned over and over between the rollers, and again the hat-roll is bent at different points, causing it to contract lengthwise.

The lags of each of the lower rollers, D, in Fig. 7, diverge from a line parallel with the axis of the roller, while in Fig. 8 the lags of only one of such rollers have such divergence. The upper roller in Fig. 7 and in Fig. 8, as well as the rear roller in Fig. 8, have their lags in a line parallel with the axis.

The divergence of the lags, as described, facilitates, by bending the hat-roll, &c., the felting of the same, and it is preferable to have the lags of both lower rollers diverge, as shown in Fig. 7, although good results can be produced when arranged as shown in Fig. 8, and as it is not so essential for the lags on the upper roller to diverge, they can be in a line parallel with the axis of the roller. Although the arrangement of these lags on the rollers with the divergence described and shown serves to contract the hat-roll and prevent its longitudinal distention, such results are not from crowding or forcing the fibers together, but from the bending of the same, whereby they naturally draw or close together.

Having thus described my invention, what I claim is—

1. A roller for felting hats, &c., having lags or projections extending from each end to nearly its central portion in a slightly angular circumferential direction relative to the axis of the roller, in combination with intermediate short lags at the central portion thereof, substantially as described.

2. Two rollers for felting hats, &c., having lags or projections extending from their ends to their central portions, and arranged in such manner that the lags of the two rollers, while operating on the hat-roll, run in reverse directions, thereby having greater space laterally between the lags of the two rollers at their ends than at or near their central portions, in combination with one or more rollers having lags or projections in a line parallel to the axis of said rollers, substantially as described.

In testimony whereof I have hereunto set my hand in the presence of two subscribing witnesses.

CARLOS W. GLOVER.

Witnesses:

EDWIN W. BROWN,  
WM. S. BELLows.