

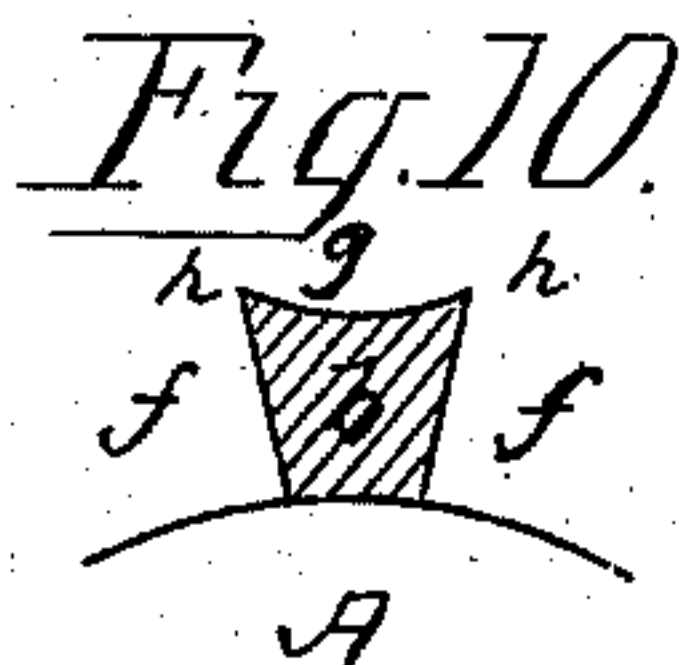
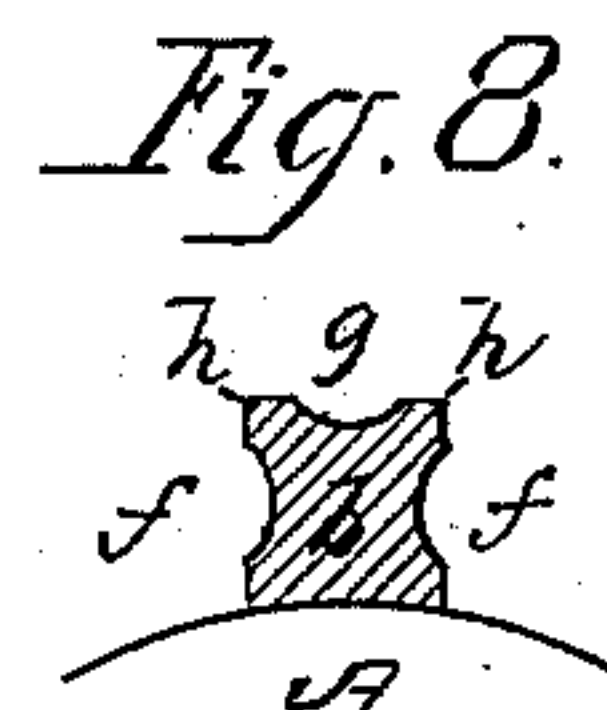
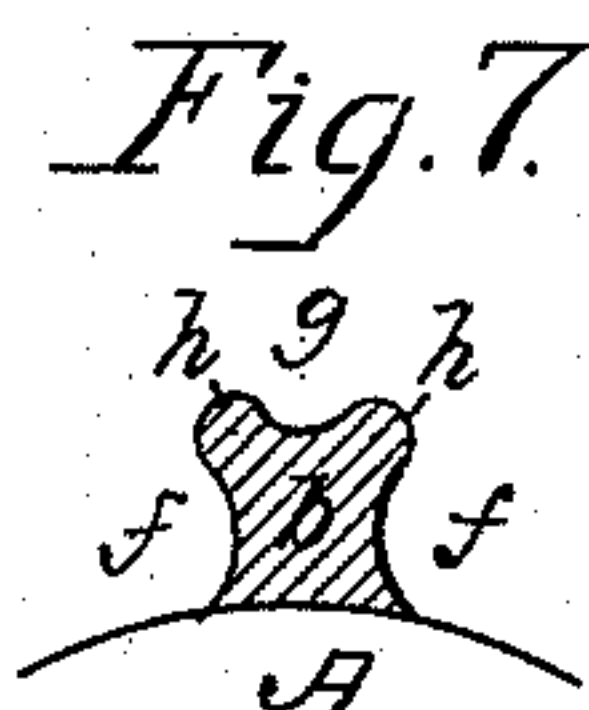
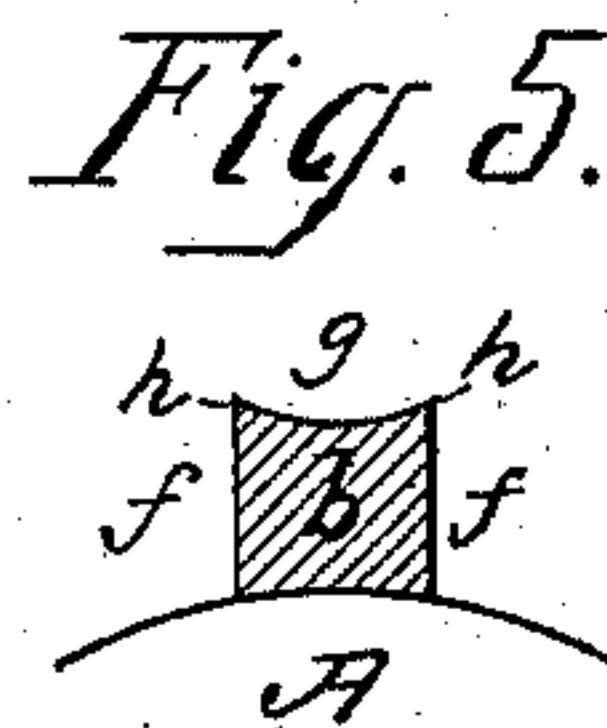
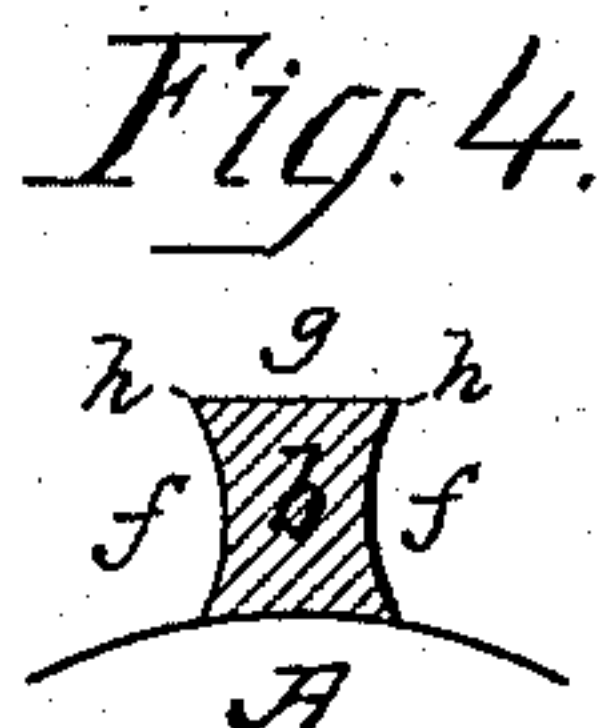
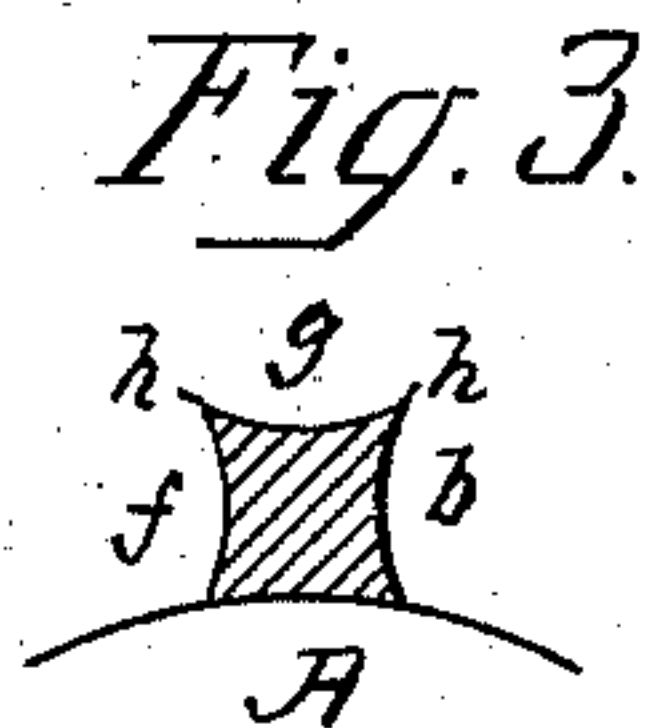
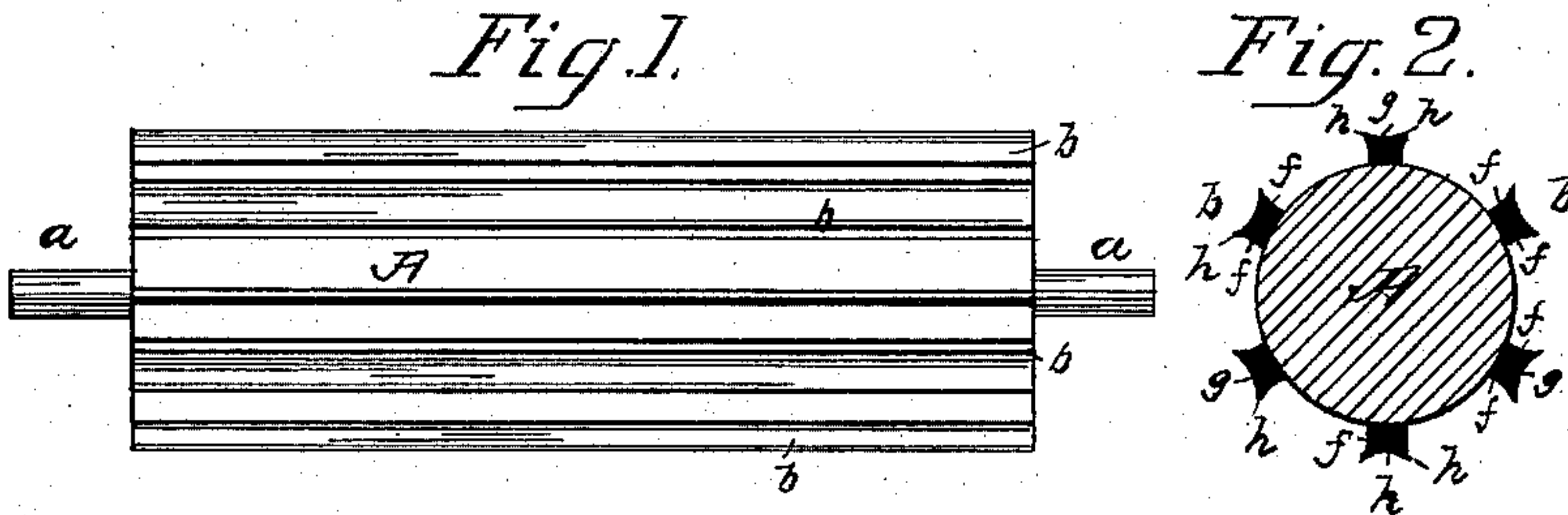
(No Model.)

C. W. GLOVER.

ROLLER FOR FELTING HAT BODIES.

No. 284,411.

Patented Sept. 4, 1883.



Witnesses

Mrs. S. Bellows  
H. M. Coney

Carlos W. Glover  
Inventor,

per Brown Bros.  
Attorneys.



# UNITED STATES PATENT OFFICE.

CARLOS W. GLOVER, OF BOSTON, MASSACHUSETTS.

## ROLLER FOR FELTING HAT-BODIES.

SPECIFICATION forming part of Letters Patent No. 284,411, dated September 4, 1883.

Application filed June 21, 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 the construction of lags of rollers used in a machine for felting or sizing hats or other articles, such a machine being shown in an application for Letters Patent of the United States, filed by me in the United States Patent Office, December 19, 1882; and it consists in a peculiar construction and shape of the lags in cross-section for rollers of such machines, substantially as hereinafter fully described, reference being had to the accompanying plate of drawings, in which—

Figure 1 is a side view of a felting-roller having lags arranged longitudinally thereon, and constructed in cross-section according to this invention. Fig. 2 is a transverse section of Fig. 1. Figs. 3, 4, 5, 6, 7, 8, 9, and 10 represent, respectively, lags in cross-section constructed according to this invention, and as attached to a roller in detail.

In the drawings, A represents a roller for use in a machine for felting or sizing hats, &c., such as shown in my said application, except as to this invention, and having a journal, *a*, at each end, by and on which it is supported and rotates in said machine.

*b b* are lags on the outer surface of the roller A, extending longitudinally in a line parallel to its axis, and secured in any suitable manner to the roller. These lags *b* have a shape or outline in cross-section for the purposes of this invention, as will now be described. In Figs. 1, 2, and 3 each lag *b* has its sides *f f* and upper or outer surface, *g*, concave, forming between the concave sides *f f* and the surface *g* edges *h*, which, in relation to the sides and upper surface, are prominent and projecting. In Fig. 4 the sides *f f* are concave and the upper and outer surface, *g*, flat or straight, leaving the prominent and projecting edges *h*, as in Figs. 1, 2, and 3, while in Fig. 5 the upper and outer surface, *g*, is concave and the sides *f f* flat or straight, leaving the prominent and projecting edges *h*. In Fig. 6 the sides *f f* and upper or outer surface, *g*, are concave; but the

concavity of each side runs in two straight lines, *l* and *m*, inclining inward, as shown, leaving the prominent and projecting edges *h*. In Fig. 7 the sides *f f* and upper or outer surface, *g*, are concave. The edges *h* are rounded, as shown, but prominent and projecting. In Fig. 8 the sides *f f* and upper or outer surface, *g*, are concave. The edges *h* are square, as shown, but prominent and projecting. In Fig. 9 the sides *f f* are concave; but the line of each side inclines inward and extends to the surface of the roller, the upper or outer surface, *g*, being flat or straight, leaving the edges *h* prominent or projecting. Fig. 10 has similar concave sides *f f* to those shown in Fig. 9; but the upper or outer surface, *g*, is concave, which leaves the edges *h* prominent and projecting. These lags, as described and shown, are all shaped in cross-section so that an edge or edges, *h*, are formed on the outer or working portion of the lag, which in relation to the sides or upper or outer surface of the lags are prominent and projecting, and rollers having lags of the construction herein described and shown, when used in a machine to felt and size hats, &c., will bear in a positive manner, by reason of such prominent and projecting edges, upon or press or take hold of the hat-roll, so that the same will be surely turned and rolled in the machine, and the felting or sizing of the hat, &c., the quicker, better, and more certainly accomplished than with rollers having lags constructed as at present and heretofore.

The lags, in lieu of extending the length of the roller in one piece, can be in sections, and can run in a line parallel with or at an angle to the axis, or spirally around the roller, or in any suitable manner, this invention not being limited to the arrangement of the lags upon the roller; also, these lags can be arranged upon a flat surface or upon belts, or on the interior surface of the drum, or in any suitable manner for operation upon the hat-roll, &c., and the lags can be made of metal or wood, or of any suitable material. They can be constructed with only one prominent edge, and that the working-edge; but it is preferable to have both edges, as described; also, the concave sides or surfaces can be of any depth desired.

Having thus described my invention, what I claim is—



1. A roller for felting hats or other articles, having a lag or lags with a concave side, substantially as and for the purpose specified.
2. A roller for felting hats or other articles, 5 having a lag or lags with concave sides *f f*, substantially as and for the purpose specified.
3. A roller for felting hats or other articles, having a lag or lags with a concave upper or outer surface, *g*, substantially as and for the 10 purpose specified.
4. A roller for felting hats or other articles,

having a lag or lags with concave sides *f f* and concave upper surface, *g*, substantially as and for the purpose specified.

In testimony whereof I have hereunto set my 15 hand in the presence of two subscribing witnesses.

CARLOS W. GLOVER.

Witnesses:

EDWIN W. BROWN,  
WM. S. BELLOWS.