

(No Model.)

E. ROTH LISBERGER.

DEVICE FOR LINING BANDS OF WHEEL HUBS.

No. 318,927.

Patented May 26, 1885.

Fig. 1.

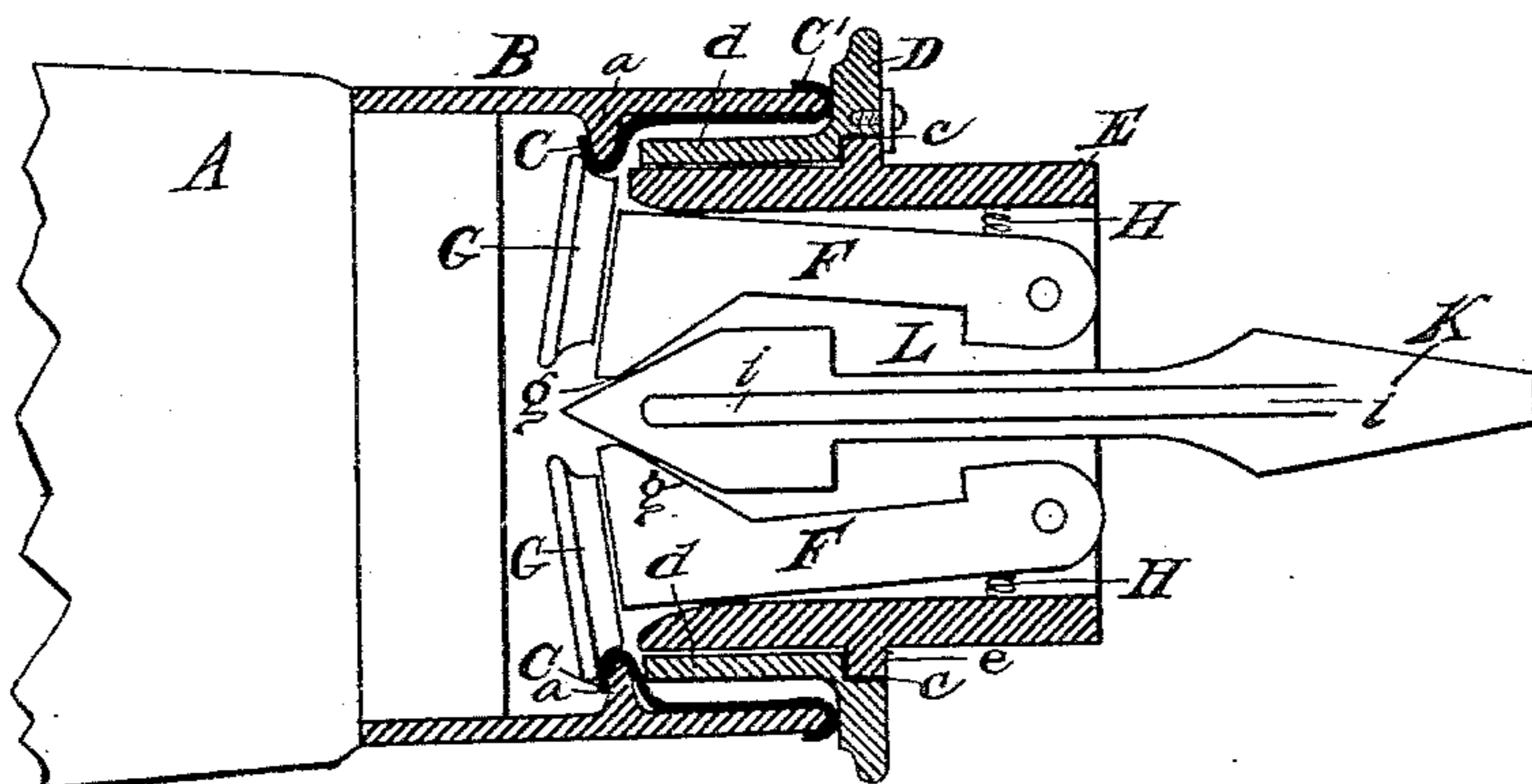


Fig. 2.

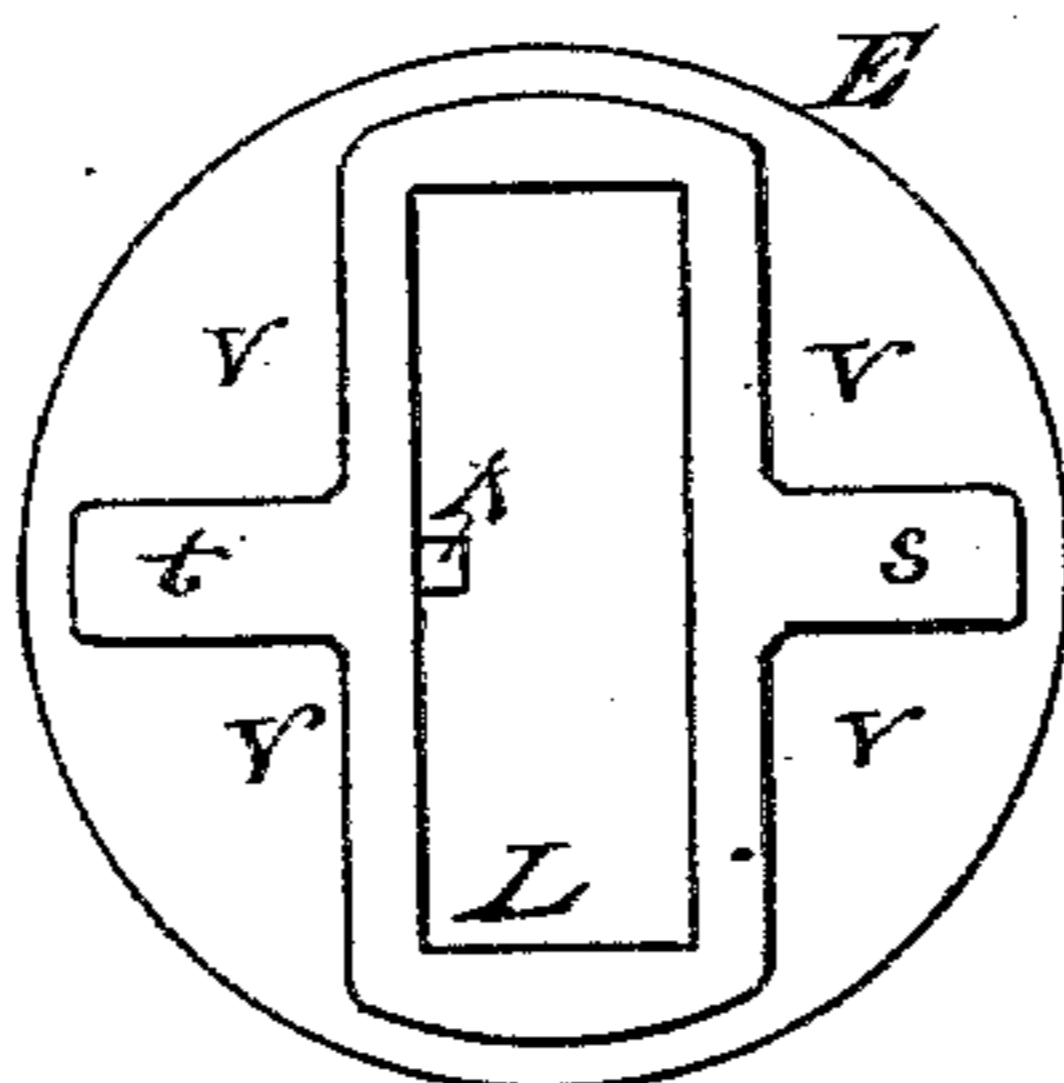
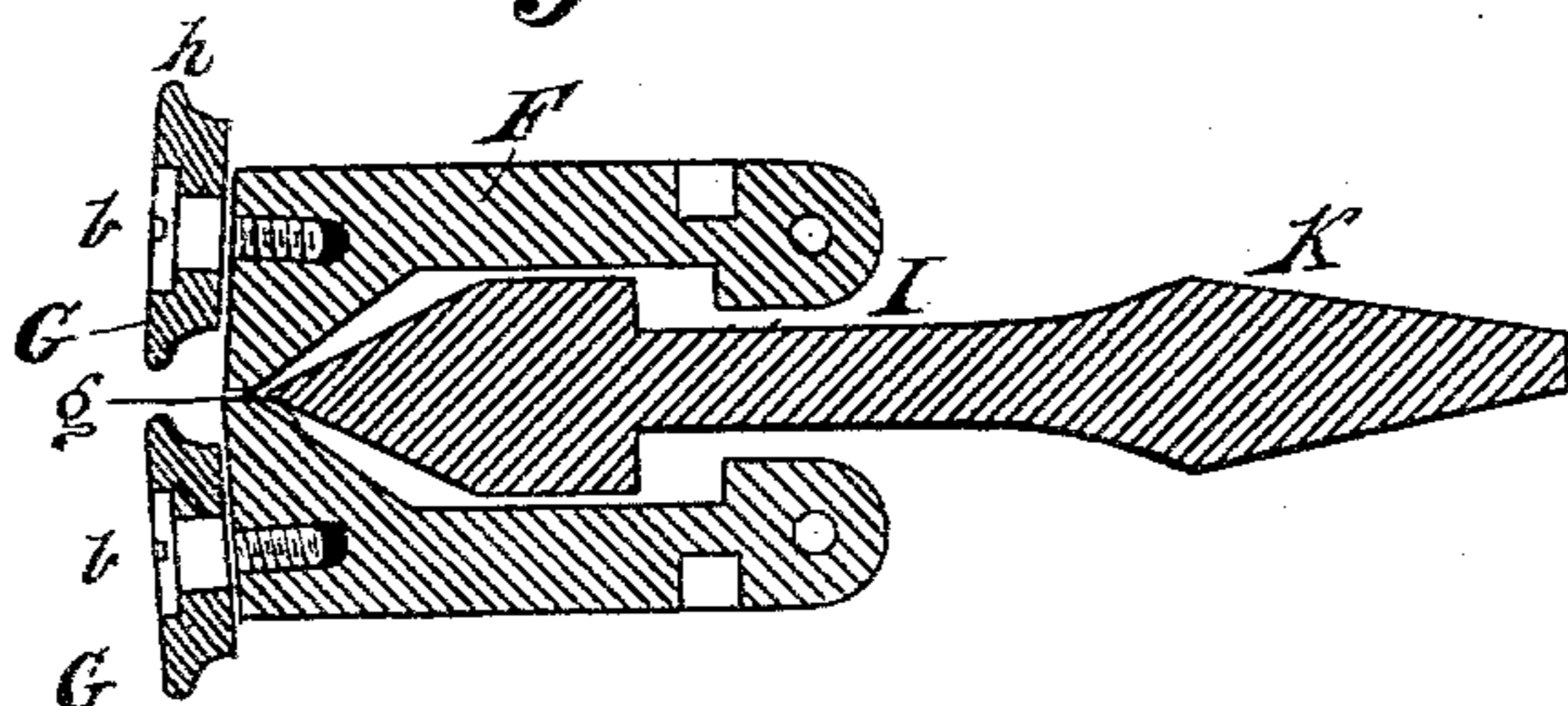


Fig. 3.



Attest

Joseph H. Sims
Jno. S. Roebuck

Inventor

Ernest Rothlisberger
by Wood & Boyd
his Attorneys &c.

UNITED STATES PATENT OFFICE.

ERNESTE ROTH LISBERGER, OF CINCINNATI, OHIO.

DEVICE FOR LINING BANDS OF WHEEL-HUBS.

SPECIFICATION forming part of Letters Patent No. 318,927, dated May 26, 1885.

Application filed January 16, 1885. (No model.)

To all whom it may concern:

Be it known that I, ERNESTE ROTH LISBERGER, a citizen of the United States, and a resident of Cincinnati, in the county of Hamilton and State of Ohio, have invented certain new and useful Improvements in Apparatus for Lining Bands of Wheel-Hubs, of which the following is a specification.

My invention relates to an apparatus for spinning the lining of a hub-band upon the interior of the band after it has been driven upon the hub of the wheel.

Previous to my invention various methods of securing the ornamental lining of hub-bands were employed, all of which necessitated the placing of the lining in position within the band and securing it before the band was driven upon the wheel. As the linings were turned out over the end of the band, and usually made of thin polished sheet metal, the lining was injured in the driving of the band upon the wooden hub of the wheel. Not only was the polished surface of the sheet metal injured, but the driving of the band stretched and loosened the lining, injuring its ornamental appearance as well as durability. My invention effectually obviates all these difficulties, and allows the lining of the band to be spun within the band after it has been driven upon the wheel, which is accomplished by means of a peculiar tool operated in the manner hereinafter explained in the description of the accompanying drawings, making a part of this specification, in which—

Figure 1 represents my improvement in position for spinning the lining. Fig. 2 is a plan view of the inner end of the tool-stock. Fig. 3 is a central longitudinal section of the spinning-tool.

A represents the outer end of the hub for an ordinary carriage-wheel.

B represents the metal band, driven thereon. It is shown as provided with a shoulder, *a*, over which the lining C is spun. The outer end, C', of the lining is shown as turned over the end of the hub.

In order to spin the metal over the shoulder *a*, I provide the following tool:

D represents an annulus, attached to the interior projecting cylinder, *d*, which loosely fits within the hub of the band B and lining C,

and which rests against the lining of the hub-band.

e represents an annular recess, chased in the inner periphery of the annulus D. This recess serves as a bearing for the spinning-tool. The spinning-tool is composed of a revolving stock, E, provided with a disk, *e*, which fits and journals in the recess *c* of the holding-ring D.

L represents the interior of the stock E, which is shown of rectangular form.

F F represent arms, pivoted at their upper ends within the outer end of stock E and on opposite sides thereof. They are provided with projecting inclined surfaces *g*. Upon the outer ends are journaled compressing-rollers G G, which are journaled upon centers *b* projecting from the outer ends of arms F. The centers are preferably made of screws. The peripheries of rollers G are formed with a concave surface, *h*, with a forwardly-projecting lip, which serves to turn the lining over onto the shoulder *a*. The peripheries of the rollers G are made to conform to the shape of shoulder *a*, so that the lining C may be pressed firmly down over the shoulder, the shape of which may be variously modified.

H H represent springs, which seat in the arms F and bear against the interior of the periphery of stock E, which serves to compress and keep the arms F and the rollers G normally in the position shown in Fig. 3, so that the tool may be readily inserted and pass the narrowest point of shoulder *a*, and readily withdrawn therefrom.

In order to spread the arms F and rollers G apart, so that the periphery of the rollers will bite and bear against the lining C, I provide a tapered plunger, I, which fits against the inclined *g* of the arms F. As the plunger I is pressed inward, it spreads the rollers G and causes them to bear against the lining C.

K represents a shank, adapted to engage in the socket of a brace-stock, so that the tool may be revolved. The plunger I, arms F, rollers G, and stock E being revolved as plunger I is pressed inward, it spins the flange of lining C over the shoulder *a*.

In order that the plunger I may be reciprocated longitudinally, and yet be held in place, I provide a slot, *i*, which engages with a pin, *k*,

which projects inward from the sides of the guide L. When pressure is removed from the shank K, the springs H, bearing against the arms F, press the plunger I backward, and the parts automatically come into the position shown in Fig. 3, so that the tool may be readily withdrawn from the hub.

In securing lining C to the hub-band B the outer flange, C', may be spun over first by a suitable tool, and then the spinning-tool herein shown and described for spinning the inner flange, C, is applied.

By the use of the tool herein described the lining may be readily and rapidly secured to the band B after it has been driven upon the hub A, making at once a neater and more durable finish for the band of the wheel.

s t represent wings or guides, projecting from the sides of the stock outward, so as to serve as guides bearing in the cylinder *d*, the stock being cored or cut away, the points marked *v* are simply for lightening the stock, which might be made cylindrical throughout its entire length on its exterior, and of any shape upon the interior to correspond with the arms FF and plunger I, reciprocating longitudinally within the space L, for the purposes above specified.

Instead of turning the tool E by means of the shank K, the latter may be held in position and the wheel-hub A and band B revolved upon the tool and accomplish just the same results as here specified, the plunger I being pressed inward, so as to turn the shoulder over in the desired manner.

What I claim as my invention is—

1. A spinning-tool consisting of a revolving stock carrying one or more revolving pivoted rollers, G, adapted to spin and turn the inner

end of the hub-lining over the flange inside of the hub of the wheel, substantially as described.

2. A spinning-tool adapted to spin the linings of the hub-band after it is placed upon the wheel, consisting of the revolving stock E, arms F F, rollers G, and spreading-plunger I, constructed and operated substantially as herein specified.

3. A spinning-tool consisting of the annulus D, stock E, arms F, rollers G, and plunger I, adapted to spin the metal of the lining C over the shoulder *a* of the band B, substantially as described.

4. A spinning-tool adapted to spin the lining of hub-bands after they are placed on the wheel, consisting of stock E, and arms F F, carrying shaping or spinning surface *h* upon their inner ends, adapted to be spread to turn the lining over the shoulder *a* as the parts are revolved, substantially as specified.

5. In combination with the stock E, the spreading-plunger I, arms F F, spinning-surface *h*, and springs H, whereby the tool is readily inserted into the hub, and the lining spun over the shoulder as the tool is pressed inward, substantially as herein specified.

6. In combination with the stock E, the plunger I, provided with grooves *i*, and guide *k*, adapted to spread two spinning-tools, G, as the plunger I is pressed inward, substantially as specified.

In testimony whereof I have hereunto set my hand.

ERNESTE ROTH LISBERGER.

Witnesses:

ROBERT ZAHNER,
M. E. MILLIKAN.