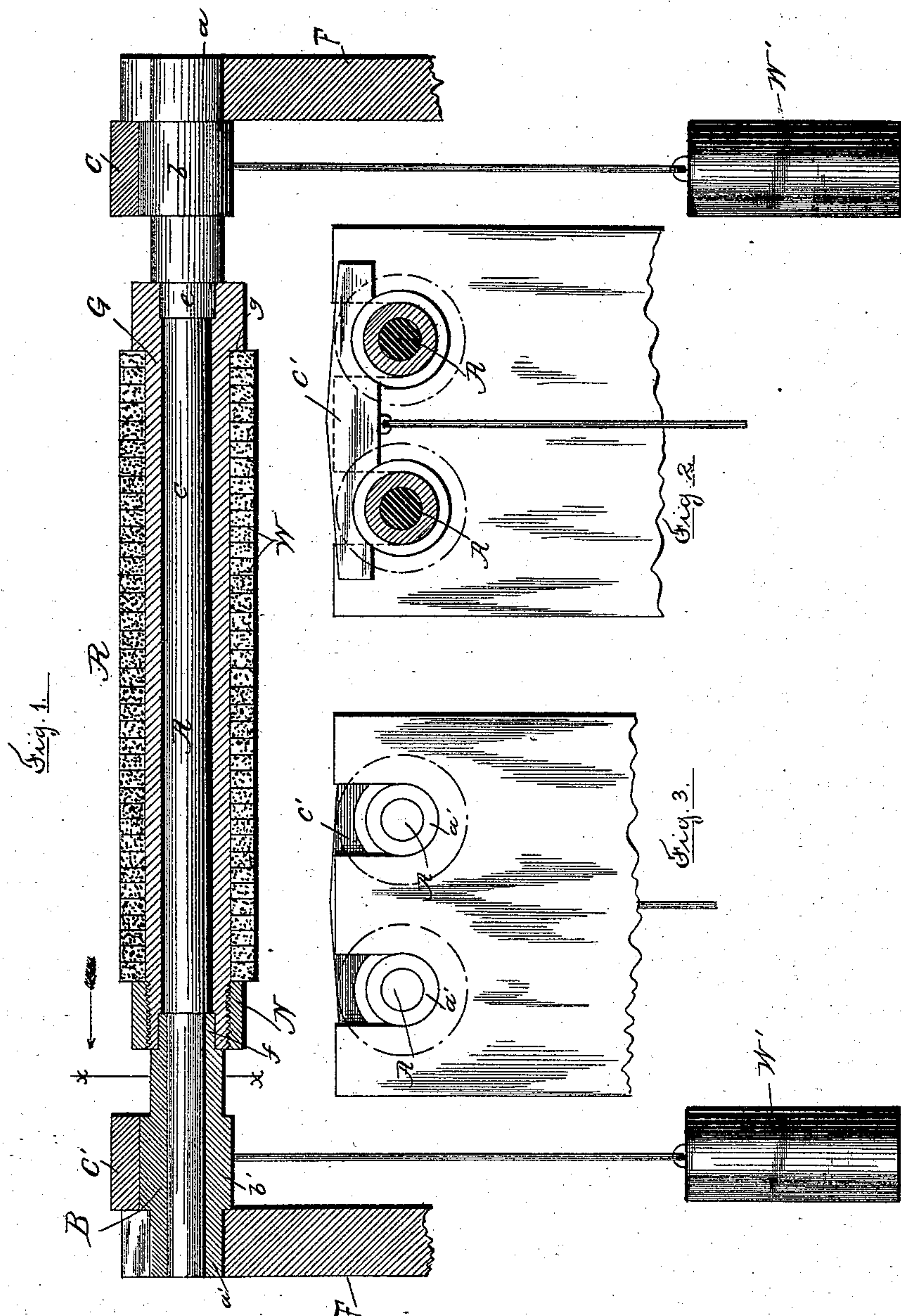


(No Model.)

A. A. ANDREWS.  
TOP ROLL.

No. 455,434.

Patented July 7, 1891.



Witnesses  
Walter S. Bowen  
J. H. Reynolds.

Inventor

Albert G. Andrews

By his Attorney

Louis W. Southgate



# UNITED STATES PATENT OFFICE.

ALBERT A. ANDREWS, OF WHITINSVILLE, MASSACHUSETTS.

## TOP ROLL.

SPECIFICATION forming part of Letters Patent No. 455,434, dated July 7, 1891.

Application filed December 19, 1890. Serial No. 375,183. (No model.)

*To all whom it may concern:*

Be it known that I, ALBERT A. ANDREWS, a citizen of the United States, residing at Whitinsville, in the county of Worcester and State of Massachusetts, have invented a new and useful Improvement in Top Rolls, of which the following is a specification.

The object of this invention is to produce a new and improved top or feed roll for cotton and woolen machinery. To this end the invention consists of the device described and claimed in this specification, and illustrated in the accompanying drawings.

Referring to the said drawings, Figure 1 represents a section of one of a pair of top rolls. Fig. 2 is a section on line *xx*, Fig. 1; and Fig. 3 is an end view of the rolls.

In detail, A represents an arbor, which extends from one side of the frame to the other. B represents a sleeve, which is fitted to arbor A at one end. The arbor A is made with the portion *a*, adapted to rest in a slot in the frame F, and the portion *b*, upon which rests the saddle C. This saddle C bears upon the arbors of the two rolls, and a weight W' is attached thereto, so that the stirrup may be removed and a new roll quickly substituted. The arbor-sleeve B has the portions *a'* *b'*, corresponding to the portions *a* and *b*, and a weighted stirrup C', the same in construction as the stirrup C, holds these arbor-sleeves in place in the slots in the frame.

By extending the arbor A through the arbor-sleeve B a very strong construction is obtained and one which readily admits of a shell-roll being placed quickly in position on the arbor.

The arbor A has a reduced portion *e* and the arbor-sleeve a reduced portion *f*. These portions are the same in diameter, and upon these portions turns the shell-roll R.

The portion of the arbor *c* where the same passes through the roll is reduced so that the roll turns and rests only on the sections *e* and *f*. The object of this construction is to provide a small bearing-surface for the shell-roll only at each end of the same, so that these portions may be easily lubricated and so that friction may be reduced.

The shell-roll R consists of the sleeve G, upon the end of which is threaded the nut N. The sleeve G has a shoulder *g*, and between this shoulder and the nut are clamped a series of leather washers W. These washers replace the old lining slipped on from the end of the roll and have many advantages over the same, among which may be noted that with the improved construction, if the roll becomes worn at any point, two or three washers may be replaced to remedy the evil, or the whole roll may be turned off true in a lathe to give an entire new surface. Furthermore, the surface presented by a series of washers arranged in the manner described is admirably adapted for the use to which the roll is put, as the surface of the same will take a very high polish. It is evident, of course, that the particular mode of applying the leather washers to the roll is not necessarily limited to a shell-roll, but the same may be just as well applied to any of the well-known forms of solid rolls without departing from the scope of my invention.

Having thus fully described my invention, what I claim, and desire to secure by Letters Patent, is—

1. The combination of the arbor provided at one end with an enlarged portion *e*, the arbor-sleeve mounted on the other end of said arbor and having a reduced portion *f*, and the shell-roll running on said portions *e* and *f*, substantially as described.

2. The combination of the arbor provided at one end with an enlarged portion *e*, the arbor-sleeve mounted on the other end of said arbor and having a reduced portion *f*, the shell-roll consisting of the shouldered sleeve, the series of leather washers, and the clamping-nut turning on said portions *e* and *f*, substantially as described.

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

ALBERT A. ANDREWS.

Witnesses:

GEORGE S. TAFT,  
EDWIN J. SMITH.