

(No Model.)

W. T. KELLOGG.
TOP ROLL FOR SPINNING MACHINES.

No. 414,224.

Patented Nov. 5, 1889.

Fig. 1.

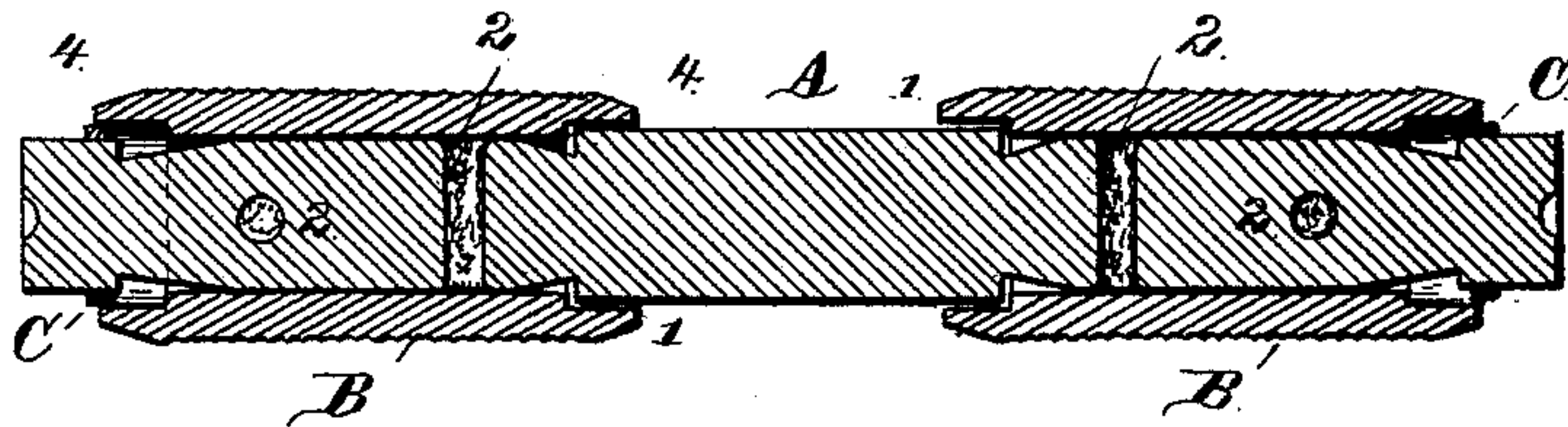


Fig. 2.

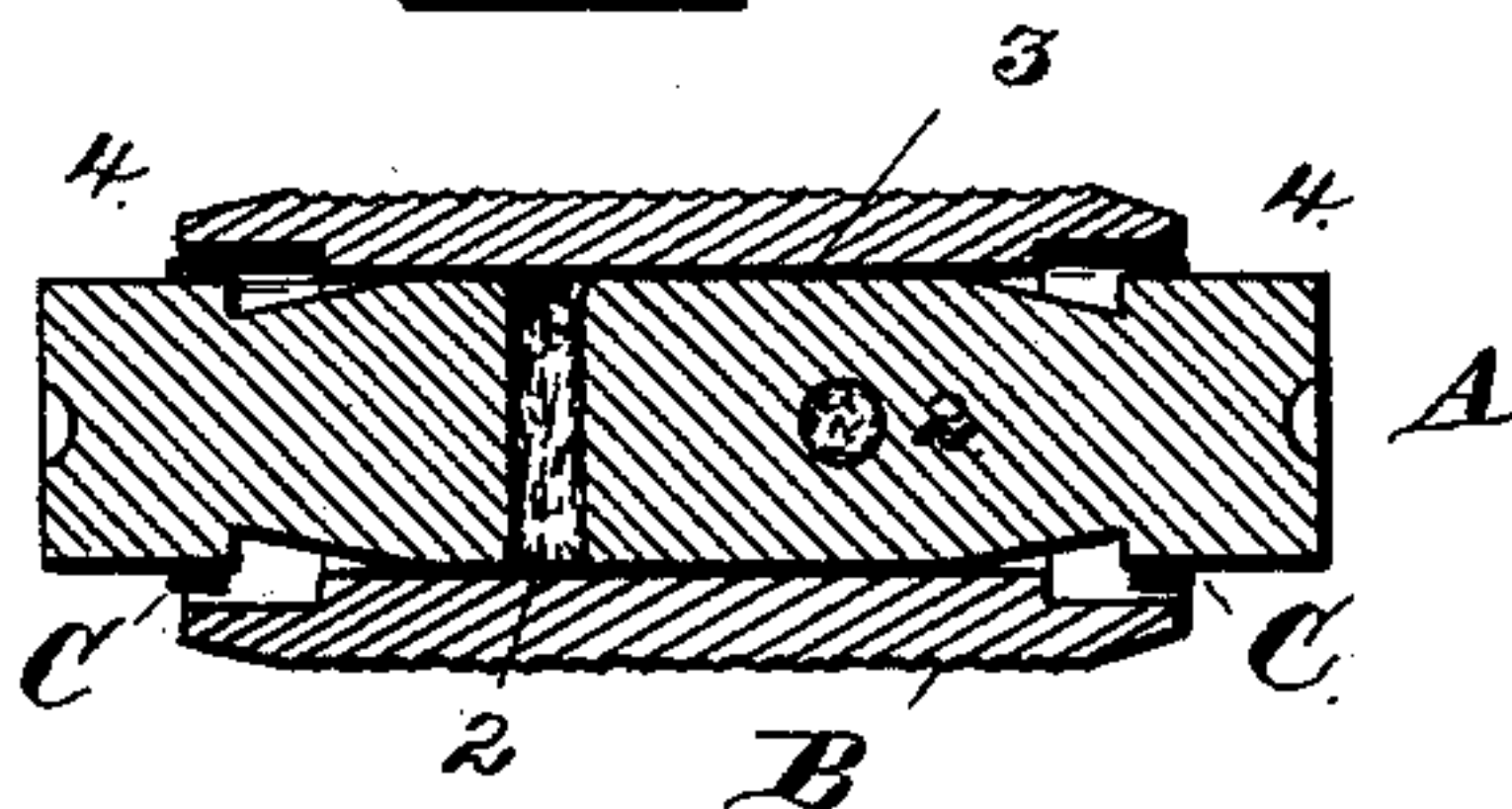
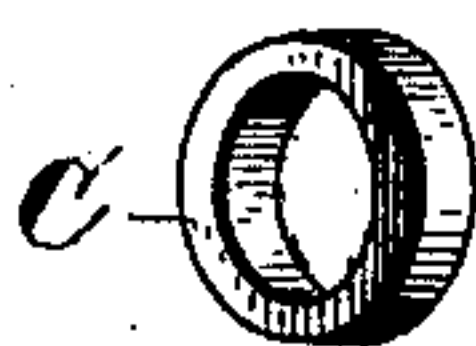


Fig. 3.



Witnesses:

J. Thomson Cross.
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Inventor.

Warren T. Kellogg.

per A. G. Kuyman

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UNITED STATES PATENT OFFICE.

WARREN T. KELLOGG, OF COHOES, NEW YORK.

TOP ROLL FOR SPINNING-MACHINES.

SPECIFICATION forming part of Letters Patent No. 414,224, dated November 5, 1889.

Application filed March 14, 1888. Renewed April 2, 1889. Serial No. 305,800. (No model.)

To all whom it may concern:

Be it known that I, WARREN T. KELLOGG, a citizen of the United States of America, residing at Cohoes, in the county of Albany and State of New York, have invented new and useful Improvements in Top Rolls for Spinning-Machines, of which the following is a specification.

My invention has relation to improvements in top rolls for spinning-machines, and the object is to provide improved means for holding the bosses on the spindle or arbor.

With this object in view my invention consists of a pliant and elastic washer sprung on the projecting end of the spindle and arranged adjacent to the shoulder of the boss in position to keep it on its bearing.

I am fully aware that metallic spring-rings have been used for the purpose of keeping the bosses from slipping off the spindle, these rings being fitted in annular grooves on the spindle or sprung into a channel into the interior of the boss. Metal washers or keepers of either of the forms mentioned are liable to abrade the bearing-surface of the boss when it is removed from the spindle, and their application is inconvenient, and they do not serve to prevent the oil from leaking or wasting from the bearings of the bosses.

I have fully illustrated my improvements in the accompanying drawings, wherein—

Figure 1 is a longitudinal central section of a top-roll spindle, the revoluble bosses, and my improved elastic washer. Fig. 2 is a similar view showing a short spindle and single boss. Fig. 3 is a view of the washer.

Reference being had to the drawings, A designates the spindle on which the revoluble bosses are mounted. This spindle, when made for more than one boss, is formed with shoulders 1 at the middle part, where the saddle is applied, to keep the bosses in their relative positions in that direction, and when the spindle is designed to carry but one boss each end of the spindle is provided with a washer and the boss thus kept from slipping off when the spindle is removed from its bearings. The bearing-seats of the bosses may be turned to slightly taper at each end, as seen in the drawings, to form oil-channels, and in these bearings are holes 2, in which is tightly packed

some material adapted to hold oil and feed it to the bearing-surfaces of the parts.

B designates the bosses, which are of identical construction, whether intended for use singly or mounted in pairs on the spindle. The middle and bearing-surfaces 3 are a straight polished bore, and the ends 4 are counter-bored to project over the shoulders at the middle of the spindle and over the bearing end of the spindle and over the elastic keeper or washer, as seen in the drawings.

C designates my improved pliant and elastic washer or keeper. This consists of an india-rubber band or similar material having the essentials of pliancy and elasticity and without the rigidity or flexibility of metals. These elastic washers are of such size as to be readily stretched over the ends of the spindle, and are held in arranged position by the retractive force of the material. The bands or washers are set back on the spindle under the projecting counterbore of the bosses, and are thus protected from the saddle and serve, as stated, to hold the oil in the boss and prevent it from running out at the ends. The yielding character of the washer also prevents all abrasion of the boss and arbor such as takes place when the bosses are held on the spindle by metallic washers or bands. It will also be perceived that by the use of a pliant and elastic band, keeper, or washer, the end of the spindle may be without the usual channel formed therein when a metallic keeper is used. These channels are objectionable, because they collect oil and hold dust, and thus cause friction and consequent wear of the parts.

My improved keeper or washer is not in contact with the boss, except, may be, at the end of the bearing, and is not carried with the boss in revolving, and hence imposes no friction on the parts. The bands used for the washers are preferably of that character or kind of rubber prepared by the trade and known as "anti-oil" bands. These will stand for many months; but the common band will serve the purpose effectually for the usual time (usually a month) the bosses are run before removing them to be cleaned. If it is desired to remove the boss from the spindle, the elastic band may be very readily re-

moved, when the boss will slide off. The band may be as readily replaced, and if it becomes worn a new one can be easily slipped on the spindle.

5 I make no claim in this application to the special construction of the spindle with transverse oil-packing holes, as I have made that feature the subject of another application for Letters Patent, Serial No. 267,144, filed on the
10 14th day of March, A. D. 1888.

My improved keepers or washers are applicable to any construction of bosses, but are especially intended for use with light bosses.

What I claim is—

15 1. The combination, with a tubular boss and the spindle of a top roll of a spinning-machine, of a pliant and elastic washer sprung on the end of the spindle, substantially as described, and for the purpose specified.

20 2. The combination, with a tubular boss formed with counterbored ends, and the spin-

dle of a top roll of a spinning-machine, of a pliant and elastic washer sprung on the end of said spindle and arranged under the projecting counterbore end of the boss, sub- 25
stantially as described, and for the purpose specified.

3. The combination, with a tubular boss formed with counterbored ends, and the spindle of a top roll of a spinning-machine, of 30
an india-rubber washer C, arranged on the end of the spindle and under the projecting counterbore end of the boss, substantially as described, and for the purpose specified.

In witness whereof I have hereunto set my 35
hand in the presence of two attesting witnesses.

WARREN T. KELLOGG.

Attest:

JAMES H. MASTEN,
ISAAC HILLER.