

(No Model.)

C. A. KOHL.
WRINGER ROLLER.

No. 562,542.

Patented June 23, 1896.

Fig. 1.

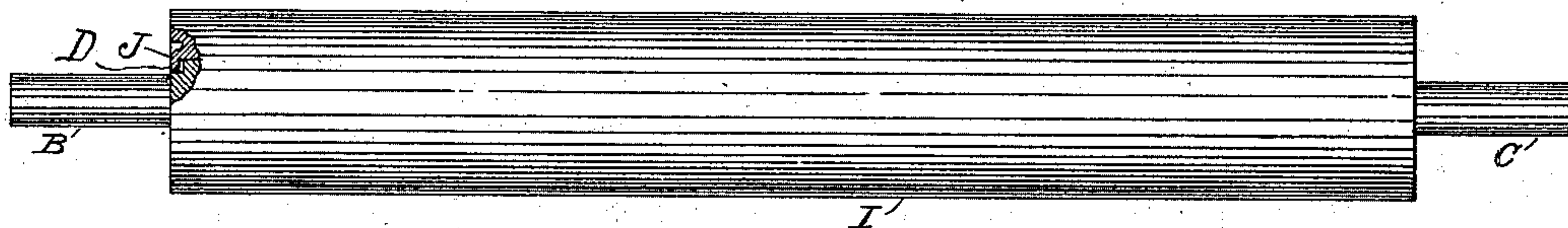


Fig. 2.

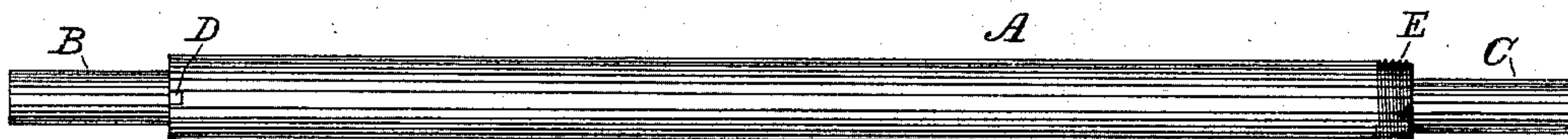


Fig. 3.

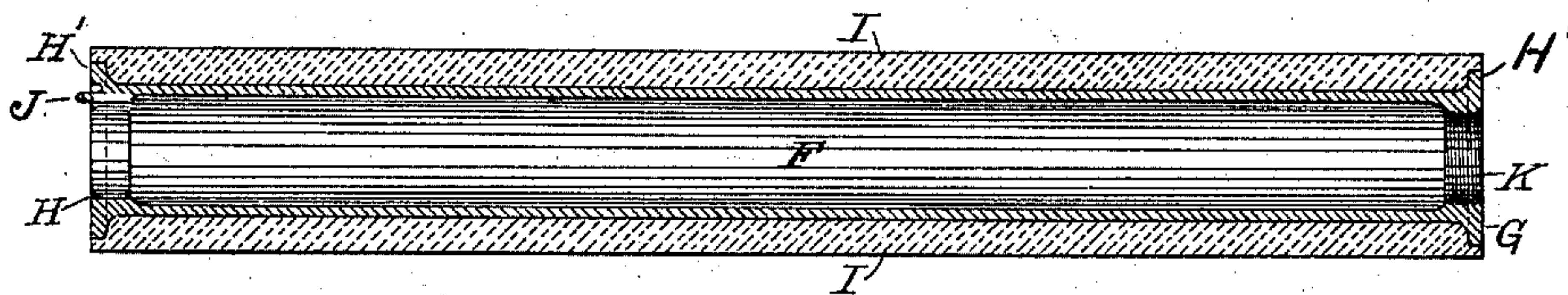
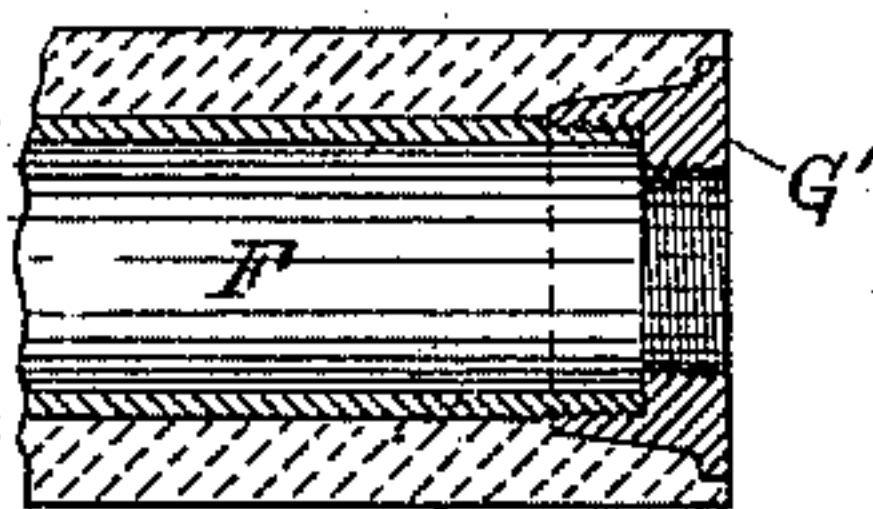


Fig. 4.



WITNESSES:

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WRINGER-ROLLER.

SPECIFICATION forming part of Letters Patent No. 562,542, dated June 23, 1896.

Application filed March 7, 1896. Serial No. 582,213. (No model.)

To all whom it may concern:

Be it known that I, CHARLES A. KOHL, a citizen of the United States, residing at Cleveland, in the county of Cuyahoga and State of Ohio, have invented certain new and useful Improvements in Wringer-Rollers, of which the following is a specification, reference being had therein to the accompanying drawings.

10 The invention relates, broadly, to wringers of that particular type wherein the rubber roller may, when worn out, be replaced by another, thus preventing the necessity of obtaining an entire new wringer. More particularly, however, the invention has reference to the novel construction of the wringer-roller and the shaft to which the same is secured.

20 To this end my invention consists in the peculiar construction of the parts and in the novel arrangement and combination of the same, as more fully hereinafter described, and specifically pointed out in the claim.

25 In constructing wringer-rollers of this particular type, it has been customary to make, first, a hollow cylindrical tube upon which the rubber is placed, and then sleeve said tube over the wringer-shaft, thereby affording a means to replace the tube or roller when the rubber has worn away. Many devices have 30 been used to secure the shaft to the tube, but few, if any, have given as satisfactory results as desired. In many cases the devices employed have been of such a nature that when the shaft is suitably secured to the tube and the parts prevented from turning the adjustment has been such as to throw a greater amount of the rubber on the tube on one side than on the other, thus throwing the parts out of the position required of them to perform the work satisfactorily. To avoid these 35 difficulties, I so construct my roller and shaft as to obtain the proper adjustment, and while providing means to secure the parts together in a quick, cheap, and efficient manner, at the same time allow of the ready removal of the roller when desired.

45 In the drawings, Figure 1 is a front elevation of the complete wringer-roller, partially broken away at one end thereof. Fig. 2 is a front elevation of the shaft. Fig. 3 is a vertical central section through the tubular roller; and Fig. 4 is a similar section through

a portion of the tubular roller, showing a modified form of head.

A represents a wringer-shaft having extensions B C, of lesser diameter, which form journals for the same. One of the ends of said shaft is threaded as shown in Fig. 2, while upon the face of one of the shoulders, as plainly illustrated in the same figure, is a keyway D. 55 60

F is a cylindrical tube of the required length, made, preferably, of wrought or malleable iron. The interior thereof is enlarged in such manner that the diameter of the same is considerably larger than the diameter of the body of the shaft. Upon each end of the tube are heads G and H, provided with external flanges H', adapted to retain the rubber upon the tube. The internal diameters of these heads are less than the internal diameter of the tube and also less than the diameter of the shaft. The object of this construction is to provide a tube that can be easily sleeved over any wringer-shaft. 65 70 75

It is customary, as before stated, when repairing wringers, when the rubber roll is worn out, to remove said roll or tube from the shaft and replace the same by a new one. The shafts, however, are not of the same diameter in all cases, and unless some provision is made whereby, with little trouble, the parts may be made to correspond, the repairs will be too costly. By constructing the interior of the tube of larger diameter than the shaft there will be no difficulty whatever in having said tube fit any shaft desired. The heads, on the other hand, being of small diameter, may be readily made to fit the shaft and hold the parts securely in their required position by slightly boring out the same, the amount bored depending upon the diameter of the particular shaft. 80 85 90

The preferable form of construction is with the heads integral with the tube, as plainly shown in Fig. 3, as in this case there are only two parts required to be used, namely, the shaft and the tube, which greatly simplifies the construction. I do not wish, however, to limit myself to this alone, as it is obvious that other modes of construction may be employed without departing from the spirit of my invention, such as that shown in Fig. 4. In this type, heads G' are shown of similar construc- 95 100

tion to those set forth in Fig. 3, but detachably secured to the tube, said tube being externally threaded at each end to receive the threaded heads.

5 The head H is bored out just enough to allow the passage through the same of the shaft A, said shaft fitting snugly therein. The head G is bored to a less extent than head H, allowing a thread K to be cut upon its interior,
10 which will engage with the thread E on the shaft.

The parts being thus described, the manner of securing the same is as follows: The rubber having been fastened upon the tube as shown
15 in Figs. 1, 3, and 4, the operator inserts the threaded end of the shaft into the head H of the tube, forcing the same in until the thread E on said shaft engages with the thread K on the interior of head G. Then screwing the
20 shaft in until the shoulder becomes flush with head G, the keyway D will be directly under projecting lug J on head H. The lug is then bent and securely driven into the keyway, as shown in Fig. 1, thereby preventing the tube

from turning upon the shaft. By this novel 25 and peculiar construction the shaft will at all times be perfectly centered and fit snugly in the ends of the cylindrical tube, thus preventing any wobbling of the parts. The lug J can be easily removed after being driven 30 into the keyway, thus allowing the shaft to be quickly withdrawn from the tube.

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

35 A wringer-roller comprising a cylindrical tube covered with rubber and provided with headed ends, one of which heads is internally threaded, a lug upon one of the heads, and a wringer-shaft threaded upon one of its ends 40 and provided with a keyway adapted to receive the lug, substantially as described.

In testimony whereof I affix my signature in presence of two witnesses.

CHARLES A. KOHL.

Witnesses:

V. S. IVES,

JOHN M. LARIMER.