

(No Model.)

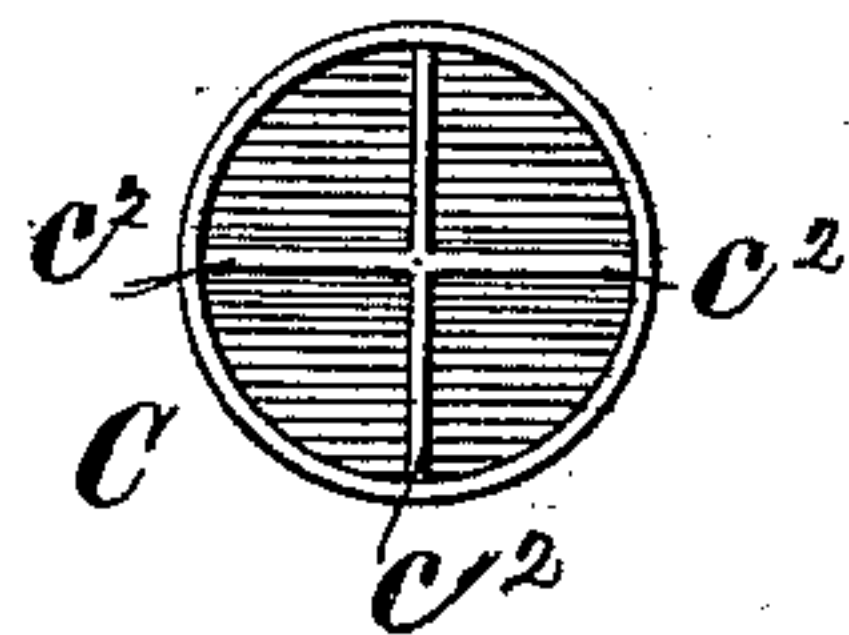
R. S. BACON.  
ROLLER FOR ENDLESS BELTS.

No. 280,282.

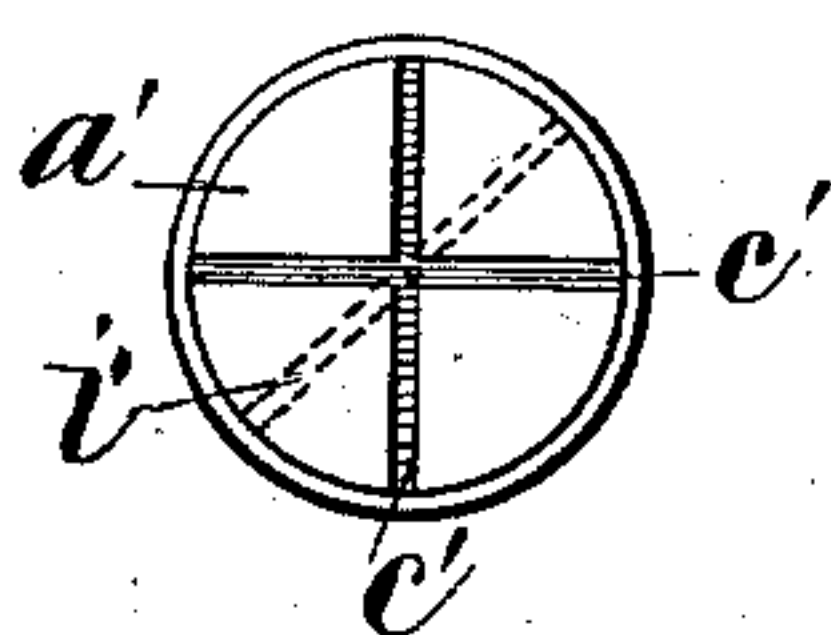
Patented June 26, 1883.



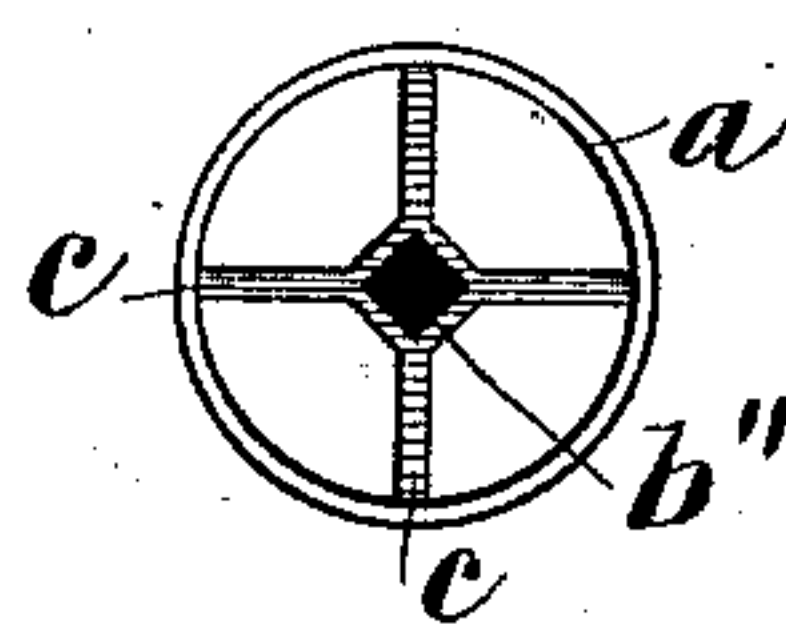
*Fig. 2.*



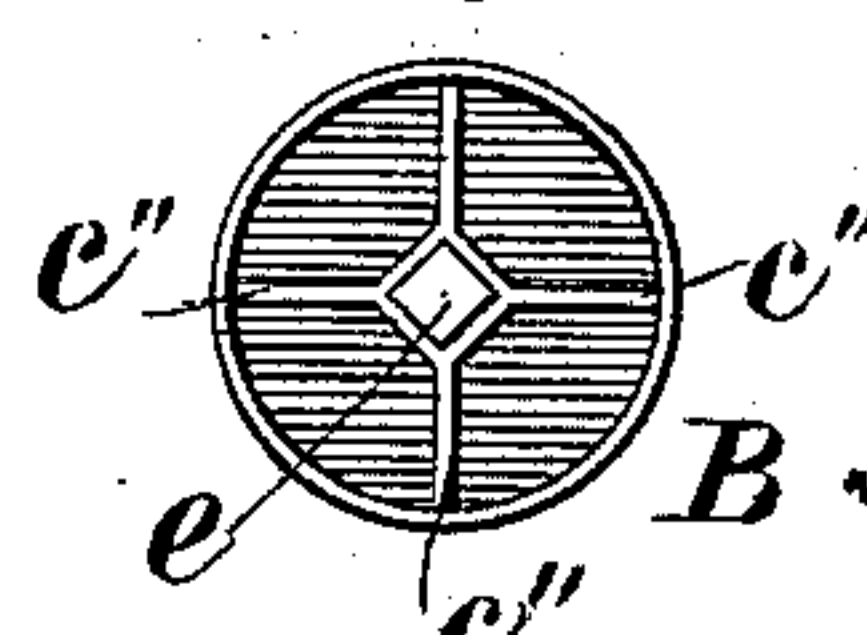
*Fig. 3.*



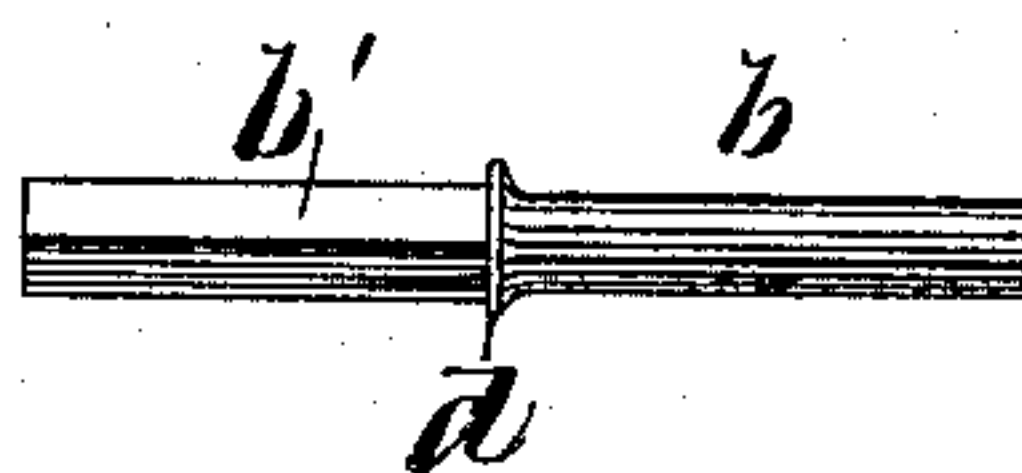
*Fig. 4.*



*Fig. 5.*



*Fig. 6.*



Attest  
Geo. W. Briscoe  
G. W. Gridley

Inventor  
Reuben S. Bacon  
per B. C. Converse, Atty.

# UNITED STATES PATENT OFFICE.

REUBEN S. BACON, OF SPRINGFIELD, OHIO, ASSIGNOR OF ONE-HALF TO  
EDGAR J. PELTON, OF SAME PLACE.

## ROLLER FOR ENDLESS BELTS.

SPECIFICATION forming part of Letters Patent No. 280,282, dated June 26, 1883.

Application filed April 21, 1883. (No model.)

*To all whom it may concern:*

Be it known that I, REUBEN S. BACON, a citizen of the United States, residing at Springfield, in the county of Clarke and State of Ohio, have invented certain new and useful Improvements in Rollers for Endless Belts; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the letters and figures of reference marked thereon, which form a part of this specification.

My invention relates to improvements in rollers for endless belts.

My invention relates to that class of rollers which are made of wood and used in harvesters, thrashing-machines, and all kinds of machines in which canvas belts are used for conveyers or elevators.

In the rollers now in use, more especially those in harvesters, used for conveying and elevating the grain to the binder, the rollers are often split in pieces by the strain upon the journals from the shrinkage of the canvas and from other causes; and the object of my invention is to obviate the danger of thus having the rollers destroyed, by constructing the ends and the journals so as to prevent all tendency to splitting of the wood.

Figure 1 is a view of my improved roller with the ends shown detached. Fig. 2 is an inside view of the cap end seen on the left end. Fig. 3 is an end view of the body part as seen from the left. Fig. 4 is a view of the opposite end of the same. Fig. 5 is an inside view of the cap seen at the right in Fig. 1. Fig. 6 is a longitudinal elevation of the journal seen on the right in Fig. 1.

A, Fig. 1, represents a wooden roller, such as is used to carry an endless canvas belt in a harvester having a binder attachment. It has long tenons *a* and *a'* at either end, which each have cross-slots *c* and *c'* cut in them, at right angles with each other, across the center of the tenon. They extend about two inches into the wooden piece, to allow the web flanges or feathers *c''* and *c''* in the bottom of the caps B and C to enter them as the latter are driven on over the tenons *a a'*. The caps B and C are

both made of malleable iron, and are cast entire with end pieces and the web-flanges *c''* and *c''* within them. The cap C is cast integral with its journal *b* thereon; but the cap B is cast with a square hole, *e*, in its center, the angles of which are in line with the inner flanges, *c''*, as seen in Fig. 5. The wooden shaft of the roller has also a corresponding hole, *b''*, cut centrally therein, to admit the square portion of the journal-iron *b*, which is driven through the hole *e* in cap B and into the hole *b''* after the cap has been driven over the tenon *a* to its place. A shoulder or collar, *d*, on the journal-iron prevents any danger of its being driven in too far.

In all machinery where wooden rollers are used they are more or less liable to split from torsion, and in the construction of my improved roller with the cap ends having the cross-flanges to secure them on the inside, and a pin driven through each of the caps diametrically across their axial line after they are driven upon the roller-shafts to further secure them, it becomes almost impossible to tear the roller asunder, no matter what the strain or shearing stress upon it may be. Holes *i* in the caps and *i'* in the tenons *a* and *a'*, for the purpose of fastening the caps on, can be made to register. An iron pin for this purpose can be used.

By reference to the cap B in Fig. 1 it will be seen through the opening broken out that the hole *e* is strengthened by the flanges *c''*, extending inward a sufficient distance to support the sides of the square sleeve, within which the hole *e* is located.

As there is no difference between the operation of this roller and those in ordinary use, the motion being continuous rotary obtained from the driving-belt, it will not be necessary to describe it. In case repairs are needed or a new shaft is required, the caps can be removed by driving out the pin *i'*, which is dressed off smooth at either end when inserted.

I claim as my invention—

1. A roller for endless belts, having tenons with a cross-cleft therein to adapt it to engage with cross-flanges in the interior of a metal cap provided with a journal-bearing extending therefrom, substantially as set forth.

2. A cap for a roller for endless belts, of malleable iron, cast integral with its journal, and



having cross-flanges extending inward from the bottom of the same, said flanges being adapted to enter a cross-cleft in the end of the roller when the cap is driven over the tenon of 5 the same, as set forth.

3. In a roller for endless belts, a cap driven over a tenon on the end of the same, having an interior sleeve central therewith, flanges connecting the angles of said sleeve with its inner 10 walls to strengthen the same, and having a square hole through said sleeve to adapt it to receive the square shaft of a journal-iron extending through said cap into the body of the roller, substantially as set forth.

15 4. A roller for endless belts, having a cross-cleft in the tenon end of the same, and a square hole in its center to adapt it for the engagement of a cap having a square inner sleeve, and cross-flanges connecting said sleeve with its interior 20 walls, substantially as set forth.

5. The combination, with the roller having a tenon end provided with a cross-cleft and a square hole central therewith, of a cap having

a central sleeve with flanges connecting it with the interior walls, a square hole therein, and 25 a journal-iron having a square shaft adapted to be inserted through said cap into the body of the roller, as set forth.

6. In a roller for endless belts, having caps of malleable iron driven over the tenon ends 30 of the same, the combination, with said caps and the roller-shaft, of an iron pin driven diametrically through said cap and shaft, substantially as and for the purpose hereinbefore set forth.

7. An insertible journal for a roller for endless belts, having a malleable-iron cap, as described, provided with a square shaft and a collar, as set forth. 35

In testimony whereof I affix my signature in 40 presence of two witnesses.

REUBEN S. BACON.

Witnesses:

B. C. CONVERSE,  
G. M. GRIDLEY.