

(No Model.)

E. B. KARN.

ROLLER TENSION FOR SELF BINDERS, &c.

No. 395,059.

Patented Dec. 25, 1888.

Fig. 1

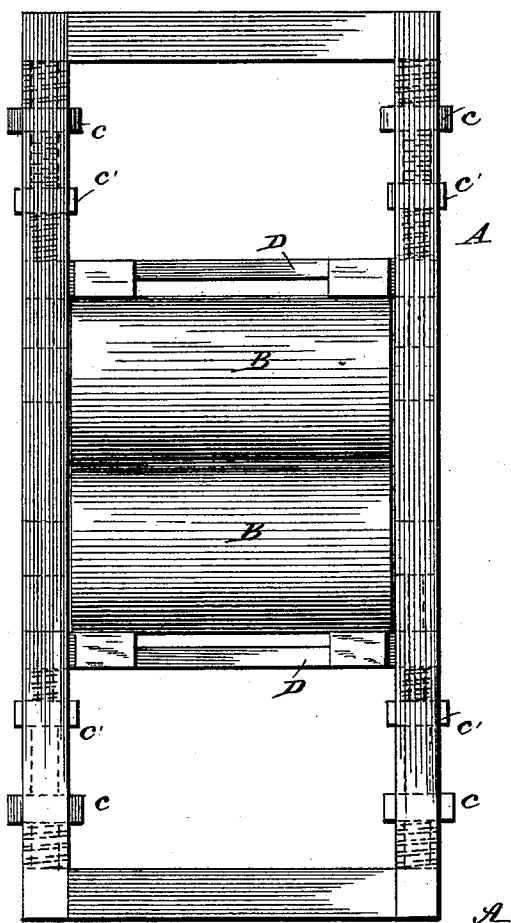
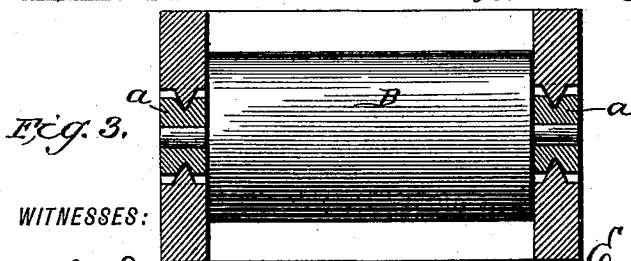
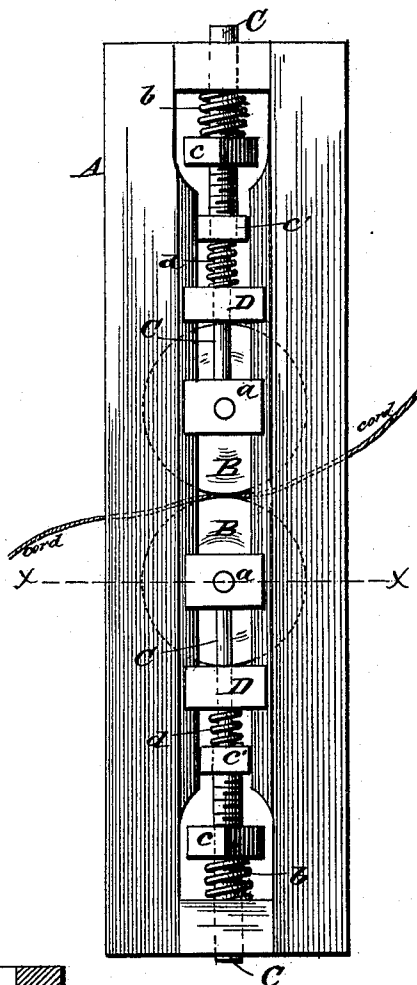


Fig. 2.



WITNESSES:

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ROLLER-TENSION FOR SELF-BINDERS, &c.

SPECIFICATION forming part of Letters Patent No. 395,059, dated December 25, 1888.

Application filed April 25, 1888. Serial No. 271,864. (No model.)

To all whom it may concern:

Be it known that I, EDWIN B. KARN, a citizen of the United States, residing in Britton, in the county of Marshall and Territory of Dakota, have invented certain new and useful Improvements in Roller-Tensions for Self-Binders, &c., of which the following is a specification.

My invention is in the nature of a tension device designed for the twine of self-binding harvesters, but applicable also to general use; and it consists in the peculiar construction and arrangement of devices operating under a rolling friction, as will be hereinafter fully described, and pointed out in the claim.

Figure 1 is a front view, and Fig. 2 is a side elevation, of the device; and Fig. 3 is a cross-section through the axis of one of the rollers on line *xx* of Fig. 2.

A is any suitable frame.

B B are two rollers arranged to bear against each other. Both these rollers are arranged exactly alike. Each has its journals in movable boxes *a*, which slide longitudinally in the slots of the frame A. Against these boxes there bears at each end of the roller rods C, which are forced by spiral springs *b* inwardly, so as to cause the roller to be spring-seated or yielding. The rods C pass through end bars of the frame A, and are screw-threaded and provided with nuts *c*. Against these nuts one end of the springs *b* bear, while the other end of the spring bears against the end bar of the frame. By turning these nuts *c* it will be seen that the springs are put under more or less tension, and the pressure which the roller exerts is thus regulated. On the rods,

just inside the nuts *c*, are other nuts, *c'*, and around the rods, just inside these, are disposed spiral springs *d*, which at their inner ends bear against a brake-bar, D, which bears with a sliding frictional contact against the surface of the roller. These brake-bars supply a retardation for the cord as it passes between the rollers by retarding the rollers, and this serves to tighten the cord to suit the requirements of the knotting devices. This retardation of the rollers may be varied by varying the tension of the spiral springs *d* by screwing the nuts *c'* up or down on the rods.

With this form of tension device for the cord the tension is not liable to break the cord or twine if lumpy or weak in places, as is likely to occur when it passes over or through stationary holders.

I do not confine my invention to use on self-binding harvesters; but may use it generally in the arts as a tension device for a passing cord or thread.

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

The tension device consisting of the frame A, the rollers B B, having their journals in boxes sliding in guides in the frame, the screw-rods C, with springs *b*, nuts *c*, springs *d*, nuts *c'*, and brake-bar D, sliding in the guide and bearing upon the circumference of the roller, substantially as and for the purpose described.

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Witnesses:

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