(No Model.)

C. E. BRAINARD.

MACHINE FOR MAKING CORD OR ROPE.

No. 378,491. Patented Feb. 28, 1888.

Fig 1.

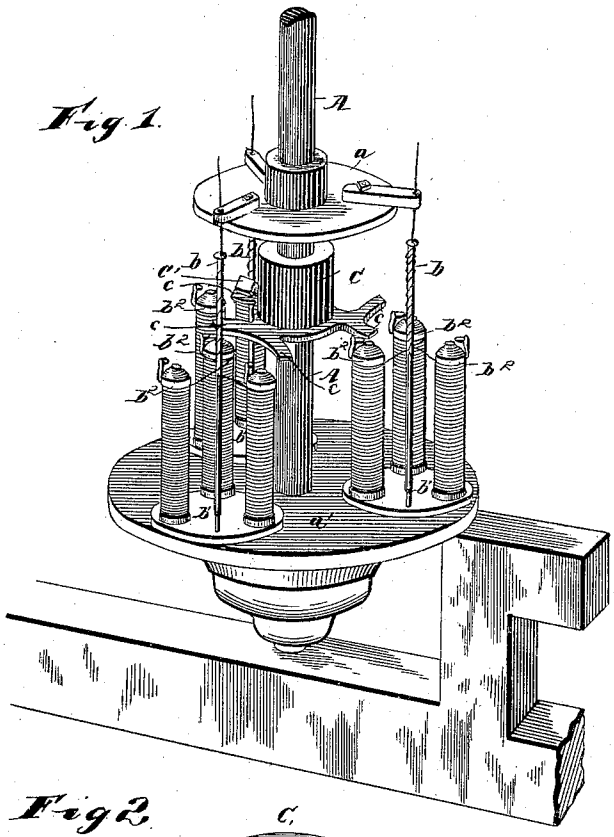
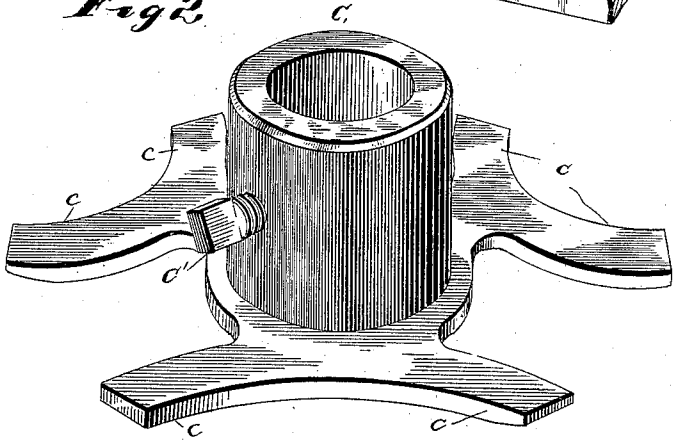


Fig 2.



Witnesses
Geo. Boyle & Co.
C. A. Snow

Inventor
Chas. E. Brainard.

By his Attorneys,
C. A. Snow & Co.

N. PETERS, Photo-Lithographer, Washington, D. C.

UNITED STATES PATENT OFFICE.

CHARLES E. BRAINARD, OF MOODUS, CONNECTICUT.

MACHINE FOR MAKING CORD OR ROPE.

SPECIFICATION forming part of Letters Patent No. 378,491, dated February 28, 1888.

Application filed April 30, 1887. Serial No. 236,678. (No model.)

To all whom it may concern:

Be it known that I, CHARLES E. BRAINARD, a citizen of the United States, residing at Moodus, in the county of Middlesex and State of Connecticut, have invented a new and useful Improvement in Machines for Making Cord or Rope, of which the following is a specification.

My invention relates to improvements in machines for making cord or rope, and more particularly refers to that class of twisters better known as "whirligig twisters;" and it consists in the construction and arrangement of a collar in connection with the central spindle thereof, which will be more fully described hereinafter, and particularly pointed out in the claim.

My device is intended, especially, for use upon the machine for which Reissued Letters Patent No. 423 were granted to W. E. Nichols on January 20, 1857; and in order to properly illustrate the same I have shown it in connection with a part of one of said machines.

The object of my invention is to provide a collar having a series of arms integral therewith in connection with the central spindle, and for the purpose of retaining in place the bobbins. I attain this object by the device illustrated in the accompanying drawings, wherein like letters of reference indicate similar parts in the several views, and in which—

Figure 1 is a perspective view of a portion of a whirligig twister, showing my improvement applied in connection therewith. Fig. 2 is a detailed perspective view of my improved attachment.

A indicates the central spindle; *a a'*, the upper and lower disks, respectively, secured thereto.

b b b are three small spindles suitably mounted in the lower disk and extending vertically upward from the centers of the platforms *b'*, upon which the bobbins b^2 are placed, all of which will be readily understood upon reference to the patent hereinbefore referred to.

My improvement is secured to the central spindle, A, between the two disks *a* and *a'*, in a position just above the top of the bobbins b^2.

The device consists, essentially, of a hub, C, fastened securely to the central spindle, A, by means of a set-screw, C', and is provided with three projecting arms integrally formed therewith and projecting outwardly therefrom, which are constructed of curved configuration in the form of a sector of a circle. These arms are adapted to be revolved over the central portion of the bobbins, and should the bobbins rise from the platforms upon which they are situated they will hit the beveled portions of the arms *c* and be forced back into position, thus allowing the machine entire to be driven at a much higher rate of speed without danger of throwing the bobbins off their spindles or skewers, thereby preventing breakage and serious injury to the machine.

By the use of my improvement the machine with which it is connected can be run at a higher rate of speed, and while running at said speed no risk will be incurred by the bobbins flying off their spindles, due to the centrifugal action, as the said attachment herein described will retain the bobbins in their relative position with the machine.

The novelty and utility of my device being apparent, it is unnecessary to further enlarge upon the same herein.

Having thus described my invention, I claim—

The combination, with the central spindle of a whirligig twister, the disks *a a'*, the spindles *b*, and the platforms *b'*, adapted to carry the bobbins, of a collar, C, having integral arms *c*, of curved configuration, as set forth, whereby the bobbins are retained in their relative positions when the machine is running at a high rate of speed, substantially as described.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in presence of two witnesses.

CHARLES E. BRAINARD.

Witnesses:
CHAS. H. EMILY,
WILLIAM J. THOMAS.