

(No Model.)

G. H. BONTE.

ROLLER TENSION FOR SELF BINDING HARVESTERS.

No. 407,634.

Patented July 23, 1889.

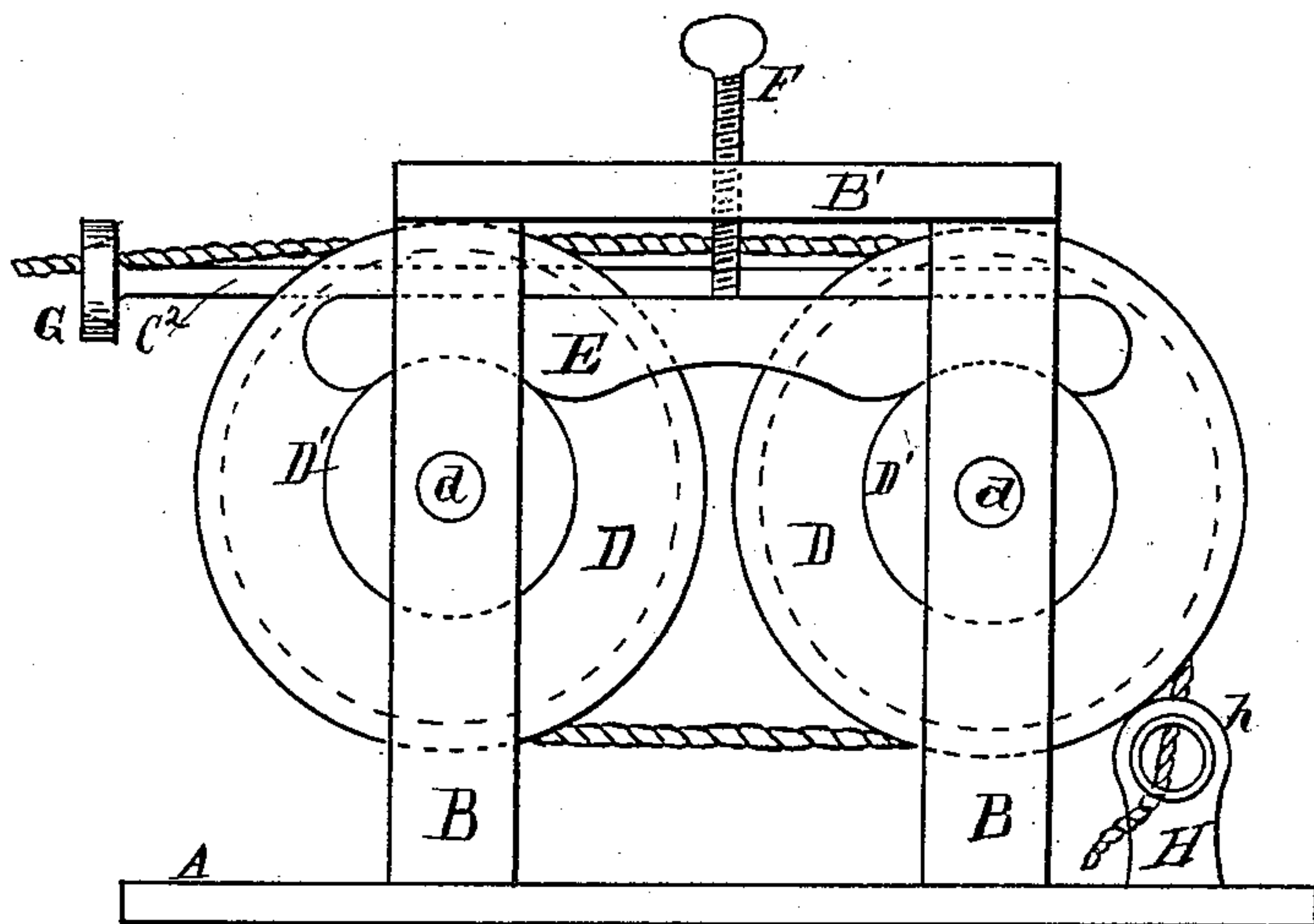


Fig. 1

Fig. 2

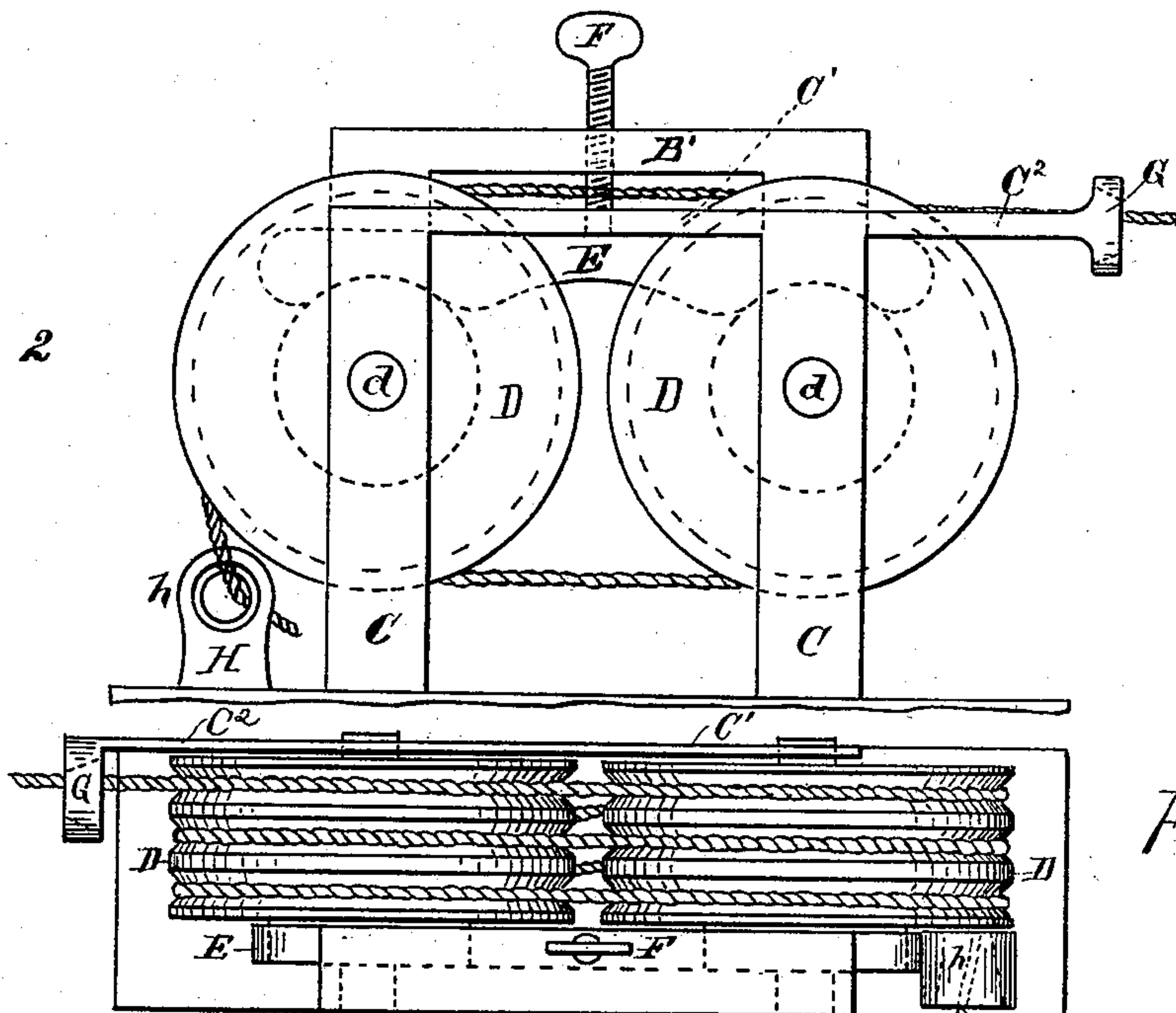


Fig. 3

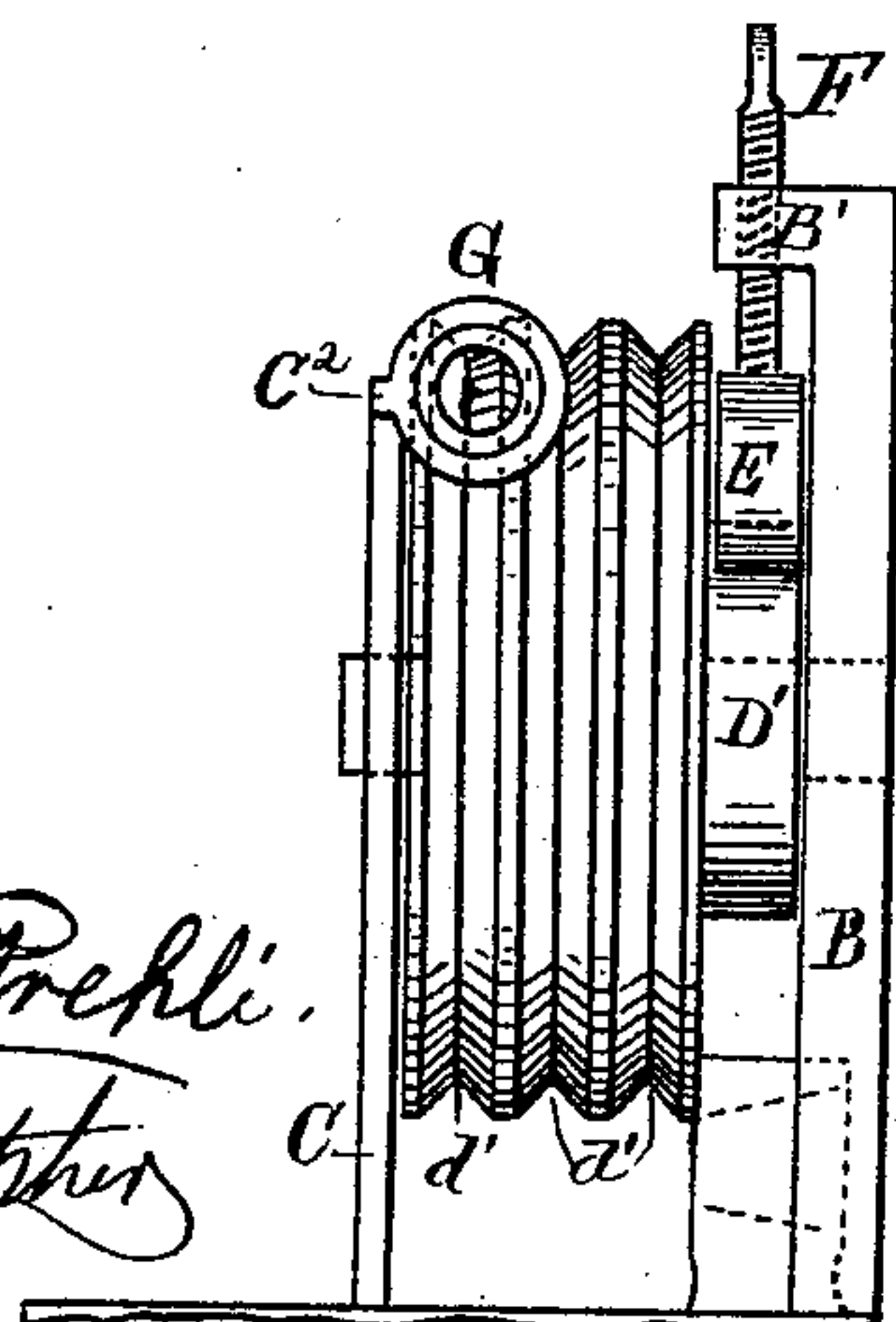


Fig. 4

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GEORGE H. BONTE, OF CINCINNATI, OHIO.

ROLLER-TENSION FOR SELF-BINDING HARVESTERS.

SPECIFICATION forming part of Letters Patent No. 407,634, dated July 23, 1889.

Application filed February 15, 1886. Serial No. 191,945. (No model.)

To all whom it may concern:

Be it known that I, GEORGE H. BONTE, a citizen of the United States, and a resident of the city of Cincinnati, Hamilton county, and State of Ohio, have invented certain new and useful Improvements in Roller-Tensions for Self-Binding Harvesters, of which the following is a specification.

My invention is intended for use in connection with that class of machines known as "self-binding harvesters." In these machines the twine usually passes directly from the twine-box to the needle of the binder. The twine, however, is apt to become kinky and to feed too fast to the needle, both interfering with the proper action of the binder.

To avoid these defects is the object of my invention.

In the accompanying drawings, Figure 1 is a side elevation of my improved tension. Fig. 2 is an elevation of the other side of the device. Fig. 3 is a top view, and Fig. 4 is an elevation, of the left-hand end of the device as it appears in Fig. 1.

The four standards B B C C rise from the base-plate A and support the rollers D on the axles *d*. The cylindrical surface of each roller is provided with one or more annular grooves *d'*. Preferably these grooves *d'* are three in number on each roller, as shown in the drawings. Each of the rollers D, on the face adjacent to the standard B, is provided with a cylindrical projection or drum D', concentric with the axis of the roller. The brake E is provided with two depressions to fit accurately the curved surfaces of the drums D', and rests on both of them, as shown. The cross-piece B', resting on the tops of the standards B, projects somewhat within the inner edge of these standards, and forms a support for the adjusting-screw F, which screws through this cross-piece and bears against the top of the yoke E. A cross-piece C' is preferably provided, connecting the tops of the standards C C. An arm C² extends horizontally from one of the standards C somewhat beyond the edge of the roller D. The arm C² is provided at its free end with an eyelet or guide G. The projection H is attached to the base-plate A, and carries an eye-

let or guide *h* of sufficient size to pass knots and lumps, such as are formed on common binding-twine. The eyes in the guides G and H are funnel-shaped, the diminishment in size being in the direction in which the twine is to move through the eyes.

The device may be attached to the binding-machine at any convenient place between the twine-box and the needle. Preferably it is attached to the twine-box itself. The end of the twine, as it comes from the twine-box is passed through the eyelet *h* and then passed around the rollers D, the twine resting in the grooves *d'*, as shown in the drawings. The twine is then passed through the eyelet G, whence it is led to the needle. The tension of the twine as fed to the needle is regulated by the screw F, which increases the tension as it is forced down against the brake E. Besides regulating the tension of the twine, the device straightens out all kinks which form in the twine and prevents their subsequent formation.

While the various features of my invention are preferably employed together, one or more of said features may be employed without the remainder, and in so far as applicable in connection with roller or other tensions than the one specifically herein set forth.

What I claim as new and of my invention, and desire to secure by Letters Patent, is—

1. In a tension device for self-binding harvesters, the grooved rollers, each having a hub or drum D', the independent brake-piece E, resting upon the said hubs, and at the point where it so rests being hollowed to receive the hub, and the set-screw F, engaging a stationary support and pressing against the brake-piece E at a point between the hubs, substantially as and for the purposes specified.

2. In a tension device for self-binding harvesters, the grooved rollers and hubs or drums D', and independent brake-piece resting against the said hubs, and at the point where it so rests being hollowed to receive the hub, and the set-screw F, engaging a stationary support and pressing against the brake-piece E at a point between the hubs, and delivery-guide G, having the funneled-shaped eye,

whose larger end is next to the rollers, substantially as and for the purposes specified.

3. In a tension device for self-binding harvesters, the grooved rollers and hubs or drums
5 D', and brake-piece E, in contact with said hubs, and hollowed to receive the latter, and the set-screw F, provided with stationary support, and between said rollers resting on the

brake-piece E, and inlet and outlet guides, having funneled eyes, substantially as and for the purposes specified. 10

GEORGE H. BONTE.

Witnesses:

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