

(No Model.)

O. WASHBURNE.
RIB FOR COTTON GINS.

No. 390,321.

Patented Oct. 2, 1888.

Fig. 1

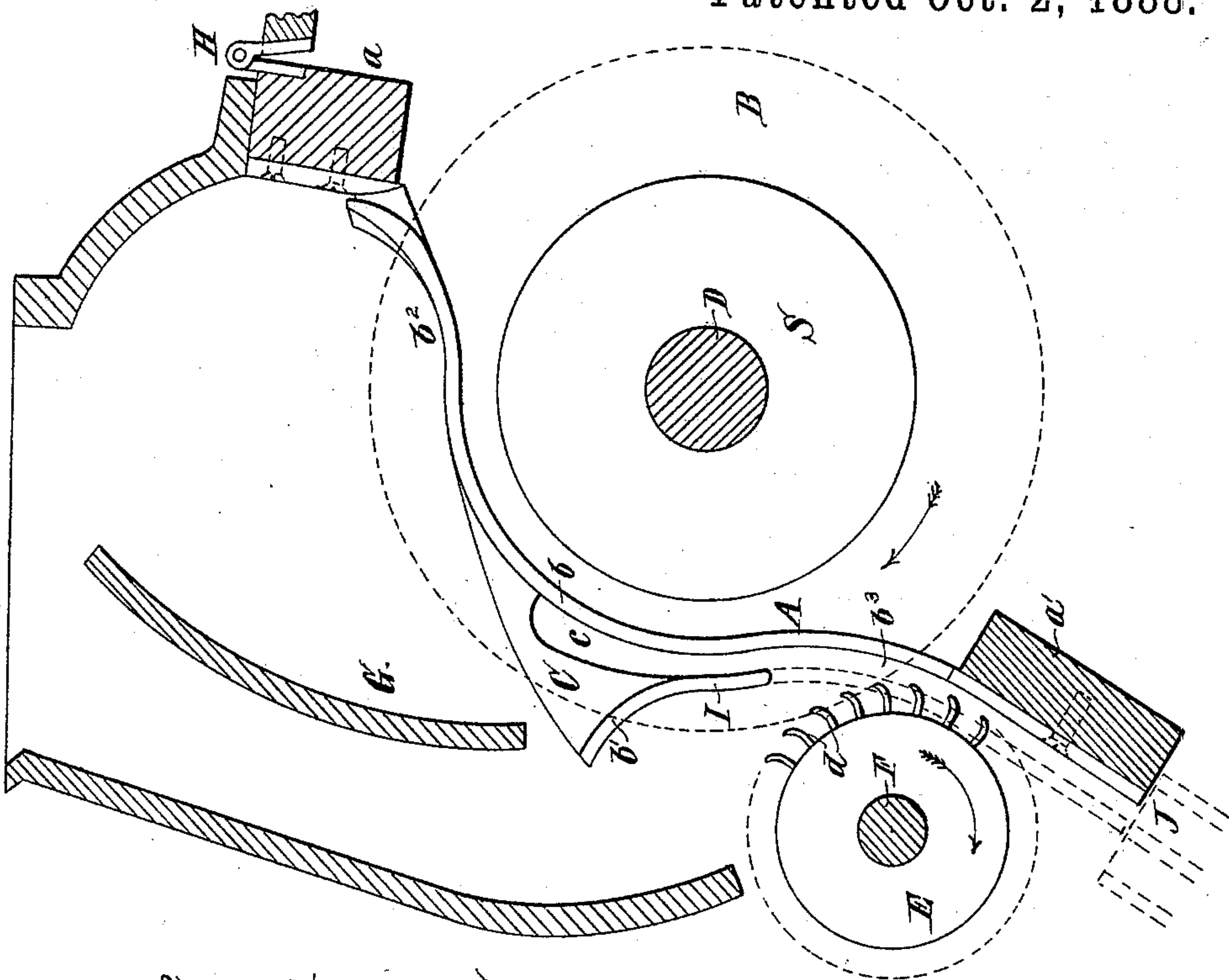


Fig. 2

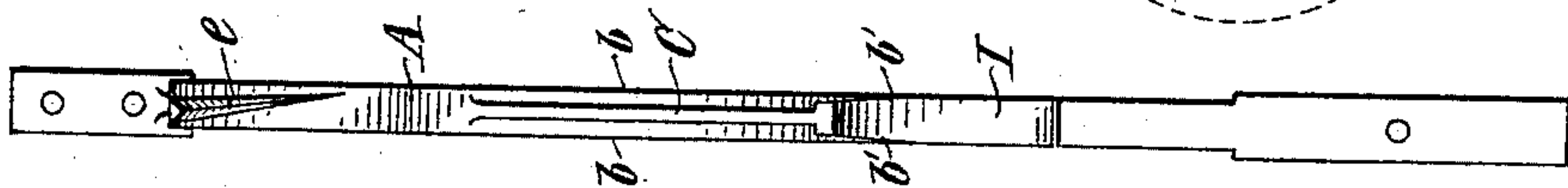
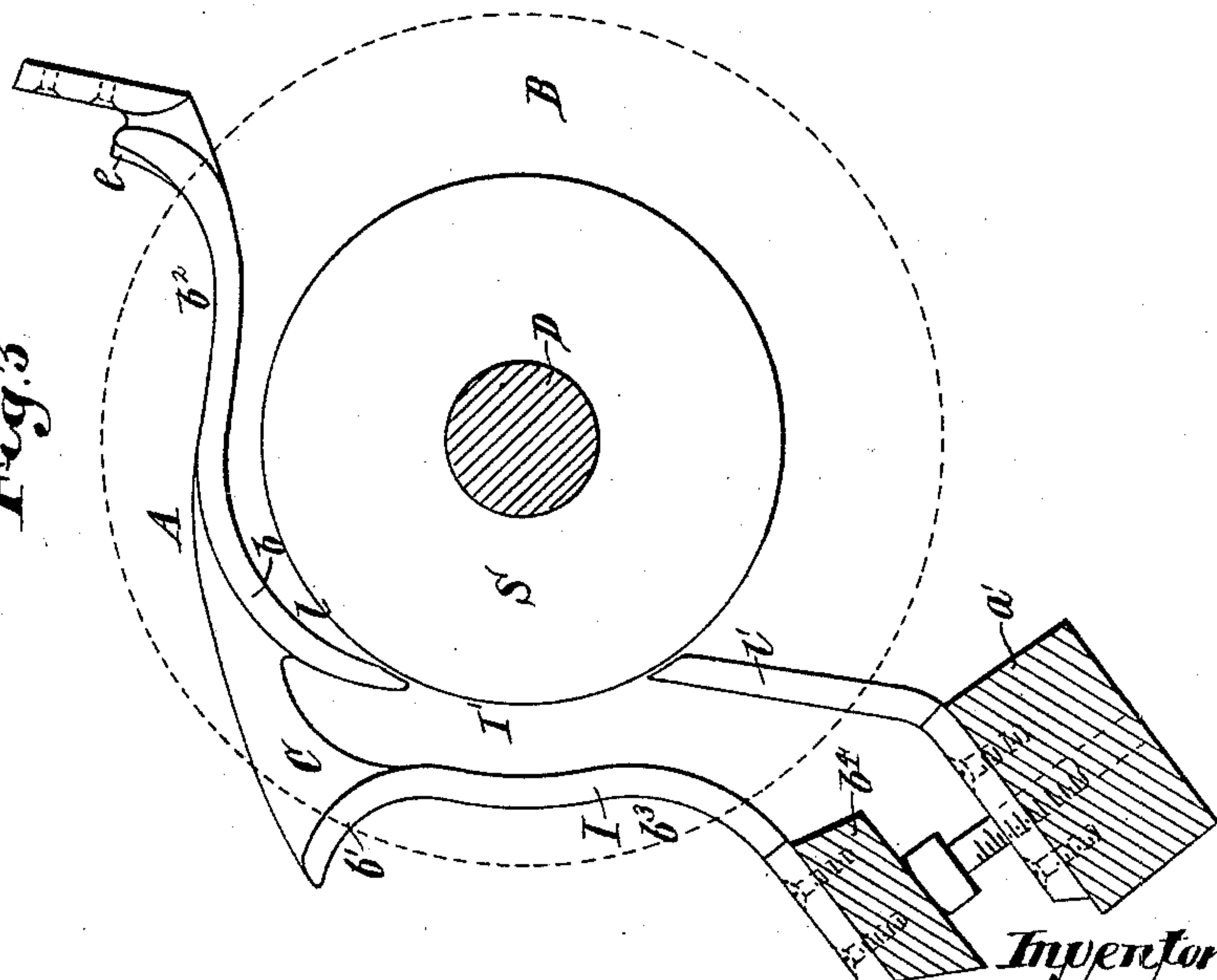


Fig. 3



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RIB FOR COTTON-GINS.

SPECIFICATION forming part of Letters Patent No. 390,321, dated October 2, 1888.

Application filed January 7, 1887. Serial No. 223,695. (No model.)

To all whom it may concern:

Be it known that I, OSCAR WASHBURNE, of Sing Sing, in the State of New York, have invented a certain new and useful Improvement in Ribs for Cotton-Gins, of which the following is a specification.

My improvement relates to the ribs employed in cotton-gins between which the gin-saws rotate.

I will describe in detail ribs embodying my improvement, and then point out the novel features in claims.

In the accompanying drawings, Figure 1 is a transverse section of a roll-box of a cotton-gin and certain of its appurtenances, showing a side view of a rib embodying my improvement. Fig. 2 is a face view of the rib shown in Fig. 1; and Fig. 3 is a transverse section of the saw-shaft and a portion of the roll-box, showing a rib of modified form.

Similar letters of reference designate corresponding parts in all the figures.

I have only shown such portions of a cotton-gin as are essential to an understanding of my improvement.

A designates a rib, of which any desired number may be used in the gin. It is made of metal. This rib is secured near its upper end, by screws or otherwise, to a cross-bar, *a*, forming a portion of the frame of the roll-box. It is for a distance below the point where it is secured to the portion *a* approximately ogee-shaped in the direction of its length. Below the ogee-shaped portion it is curved downwardly and then outwardly in such manner that its lower portion will extend beyond the periphery of a saw, B. What may be termed a "web," C, is formed upon the face of the rib. This web has a gradually-increasing projection, beginning at about midway in the length of the ogee-shaped portion of the rib and terminating at a point about midway in the length of the main portion or body of the rib. It is not so wide as the balance of the rib, as shown more clearly in Fig. 2. By thus reducing the web in width flanges *b* are formed along the edges of the ogee portion of the rib. Other flanges, *b'*, are formed, as shown, along the front edge of the web and extend from the point of farthest projection of the web backwardly and downwardly in a curved line. The flanges *b'* prevent hulls and trash from be-

ing carried upwardly and over by the saws of the gin. By so forming the rib what constitutes recesses or cavities *b²b³* are formed therein.

In the example of my improvement shown in Figs. 1 and 2 the rib A has an opening, *c*, formed in the web C by cutting away a portion of the web. The seeds from the ginned cotton pass downwardly at the sides of the web C and onto the main body portion of the rib behind the opening *c*. They are thus guided by the body of the rib until they pass out at the lower end thereof. They may pass out through a chute, J, (shown in dotted outline,) if desired. As shown in full lines, the flanges *b'* unite to form an apron, I, which terminates at a point a little below the web C; but this apron may extend as far as the lower end of the rib, as shown in dotted lines, or even farther, whereby the hulls and trash and the seeds may be kept separate.

In the example of my improvement illustrated in Fig. 3 I have shown the body of the rib cut away, as at I', forming two portions, *l*. The free ends of these portions extend close to the block S. The falling seeds are guided outwardly by the portions *l'* of the rib in manner similar to that shown in Figs. 1 and 2. The apron I is here shown as continuous, and is connected at its lower end to a cross-bar, *b⁴*.

Both forms of rib shown may, if desired, be provided with inclined ribs or grooves *e*. The ribs or grooves upon one half of the gin-ribs should be inclined in a reverse direction to those upon the other half, whereby the cotton will be caused to move from the ends toward the center of the roll-box. If inclined ribs are employed on the gin-ribs, they will preferably extend between the saws, so as to assist in lifting the cotton from the saw-teeth. These ribs or grooves are formed at the upper extremities of the ribs and extend beyond the gin-saws. The lower end of the rib is secured to a cross-bar, *a'*, comprising a portion of the frame of the roll-box.

In both examples of my improvement shown the apron I is connected to the web C near one of its ends only.

Saws B are mounted upon a shaft, D, journaled in the frame of the gin, as usual. Blocks S on the shaft D separate the saws.

E designates a huller-roller mounted on a

shaft, F, and extending widthwise of the machine parallel with the saws. The exterior surface of the roller is provided with teeth *d*, which may be of any desired construction, and
5 are secured to the roller in any suitable manner. This roller rotates within the lower portion of the recess or cavity *b*³ of the ribs, and its teeth *d* are so arranged upon the roller that the saws B will pass between them. It rotates
10 in a direction contrary to that in which the saws rotate and at a less speed than they.

Cotton is delivered to the roll-box of the gin, and is guided by means of an apron or inner breast, G, extending between the end plates of
15 the roll-box, downwardly upon the roller E. The teeth *d* carry the cotton against the saws and break up the hulls and trash. When the cotton is carried upward by the saws, the hulls and trash are knocked backward by the flanges
20 *b'* on the web C and drop down below the roller E. The saws take the unginmed cotton upwardly behind the apron or inner breast, G, where the usual roll is formed and the cotton is ginned.

25 The roll-box is hinged, as at H, to the frame

of the gin, and may therefore be swung upwardly and away from the saws, if for any purpose it is deemed necessary. When swung up, it of course carries with it the ribs A and the roller E.

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

1. A rib for a cotton-gin, comprising a main body portion, a web, C, having a cut-away portion, *c*, flanges, as *b*, flanges *b'*, and an apron, I, connected to the web C, near one of its ends only, the lower part of the main body portion acting as a guide for the cotton-seeds, substantially as specified. 30 35

2. The combination, with the roll-box of a cotton-gin, of gin-saws and gin-ribs extending between the saws, each rib being provided at its upper extremity and on its upper side with an inclined rib or groove extending beyond the saws, substantially as specified. 40

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