

(No Model.)

C. KESSLER.
HARROW ATTACHMENT.

No. 370,264.

Patented Sept. 20, 1887.

Fig. 1.

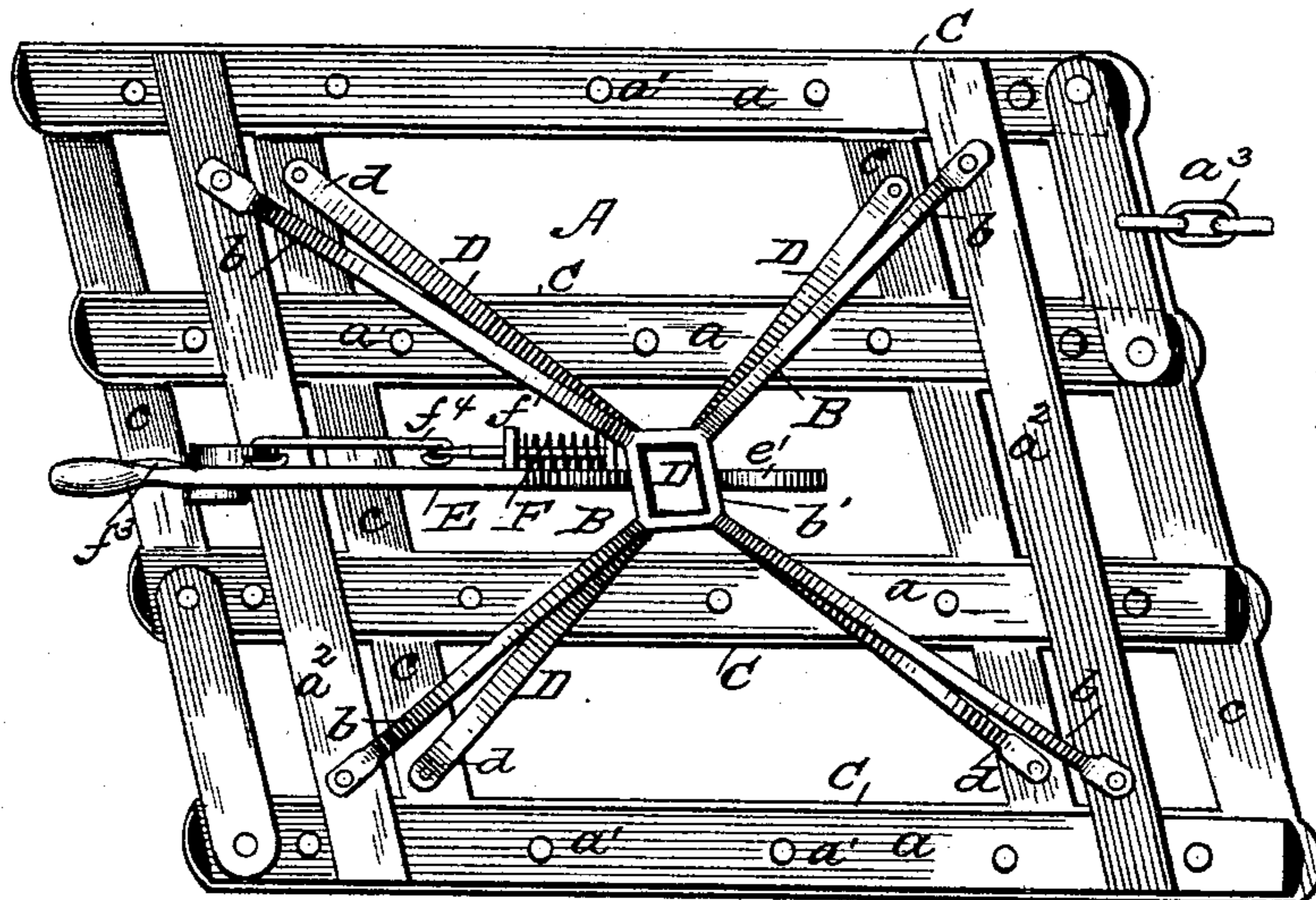


Fig. 2.

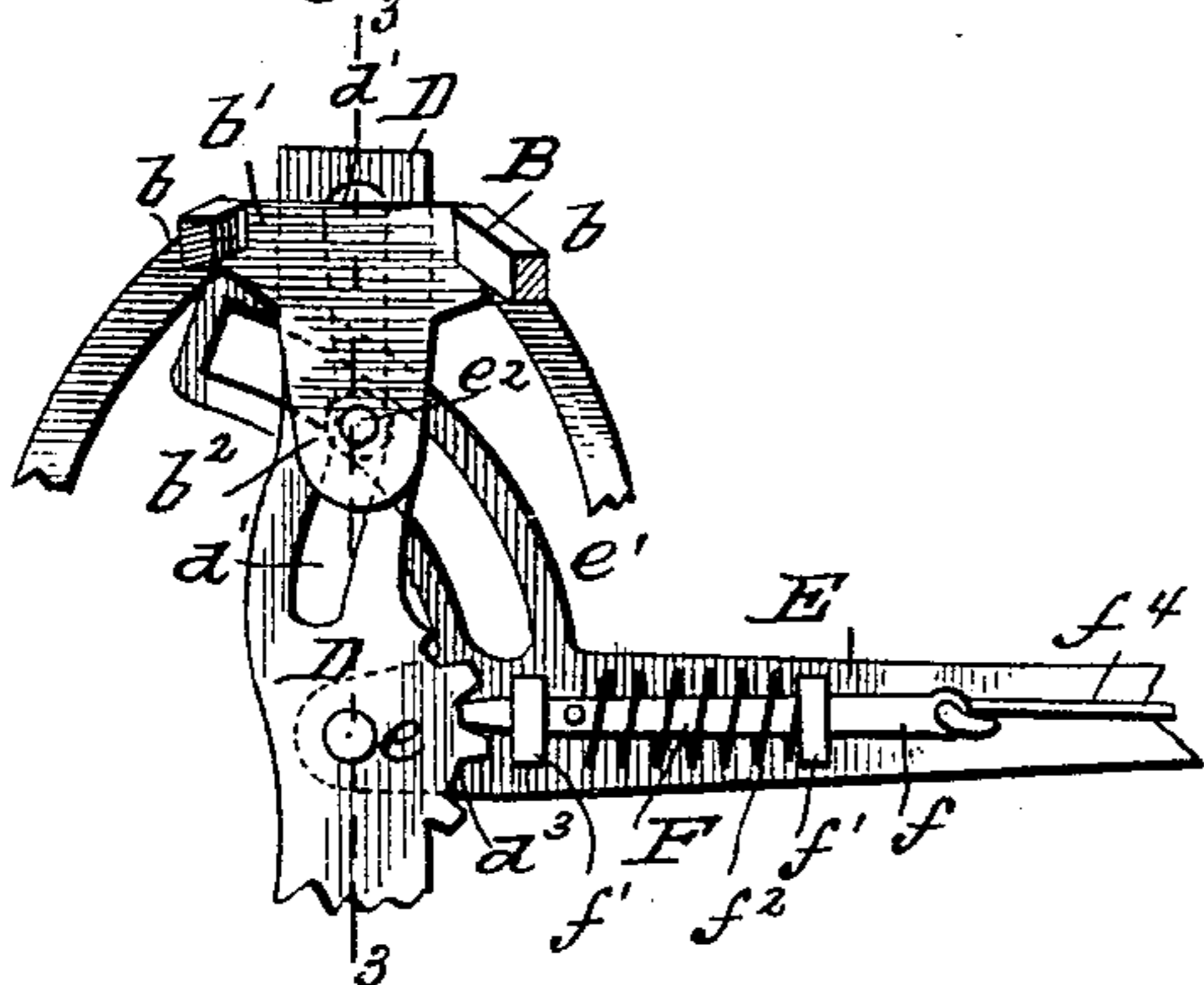


Fig. 3.

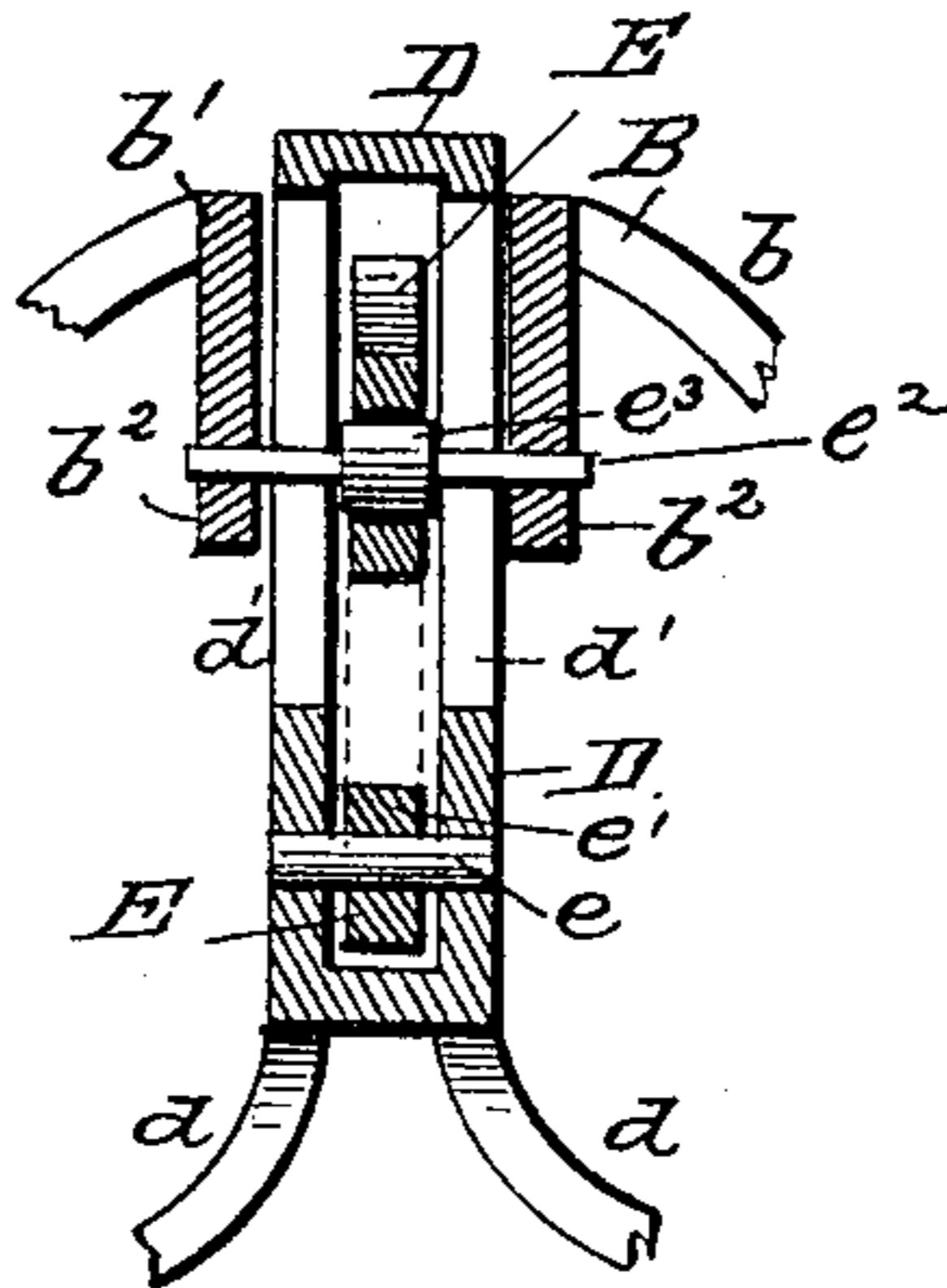


Fig. 4.

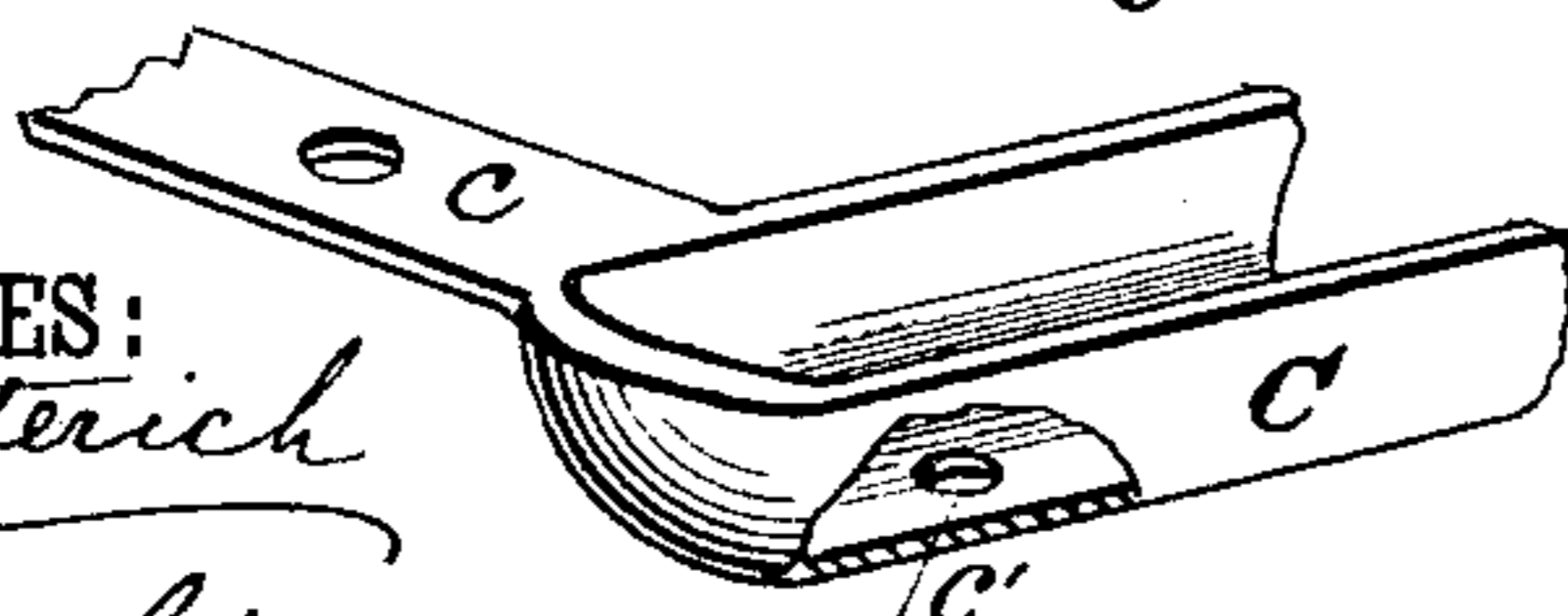
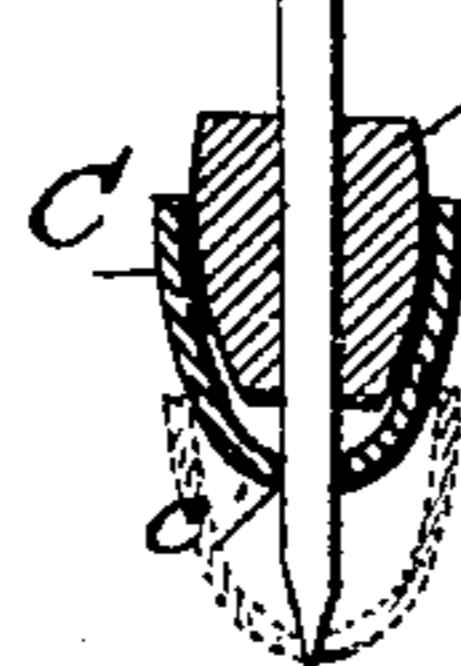


Fig. 5.



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CALVIN KESSLER, OF PENDLETON, OREGON.

HARROW ATTACHMENT.

SPECIFICATION forming part of Letters Patent No. 370,264, dated September 20, 1887.

Application filed May 28, 1887. Serial No. 239,701. (No model.)

To all whom it may concern:

Be it known that I, CALVIN KESSLER, of Pendleton, in the county of Umatilla and State of Oregon, have invented a new and useful Improvement in Harrow Attachments, of which the following is a specification.

The object of my invention is to provide an attachment for harrows by means of which the teeth can be cleaned without stopping, and which will serve as runners for transporting the harrow from place to place.

The invention consists of a series of U-shaped perforated bars adapted to be raised and lowered upon the tooth-bars.

The invention also consists in the means for raising and lowering the said bars.

The invention further consists in the peculiar construction and arrangement of parts, as hereinafter fully described, and pointed out in the claims.

Figure 1 is a plan view of a harrow having my improvement applied. Fig. 2 is a detail side elevation, partly in section, of the frame and the operating mechanism. Fig. 3 is a section on line 3 3 of Fig. 2. Figs. 4 and 5 are detail views.

Similar letters of reference indicate corresponding parts in the several figures.

Referring to the drawings by letter, A represents a harrow, which may be of any approved construction. The one shown in the drawings consists of the tooth-bars a , the teeth a' , and the cross-bars a^2 , and is provided with the draft attachment a^3 . To the cross-bars a^2 of the harrow is secured the frame B, consisting of the arms b , secured at their upper ends to an apertured plate b' , having downwardly-projecting lugs b^2 , the lower ends of the standards being apertured for securing them to the bars a^2 .

Carried a series of bars, U-shaped in cross-section and connected to each other by the bars c . The bars C are provided with perforations c' , corresponding in number to the number of teeth in the bars, and preferably have their ends closed, as shown.

To the inner cross-bars, c , is secured the standard D, which is preferably formed with the arms d , which are secured to the said cross-bars c in any suitable manner. The upper end of the standard D is provided with the

slots d' d^2 and works freely in the aperture of the plate b' of the frame B, so that the bars C can be raised or lowered as desired. E is a lever pivoted to the standard D at e , and provided with the curved and slotted arm e' , projecting through the slot d' of the standard D under the plate b' . A pin, e^2 , passes through the lugs b^2 , the slot d^2 of the standard D, and through the slot of the lever E, and is provided with the roller e^3 in the slot of the standard.

To the side of the lever is secured the spring-catch F, which engages with the teeth d^3 on the standard D, for locking the lever in position. The spring-catch consists of a bolt, f , working in lugs f' on the sides of lever E, and surrounded by a spring, f^2 , for forcing it forward into engagement with the teeth d^3 , and is disengaged therefrom by means of the handle f^3 , pivoted to the lever E and connected to the bolt by the link f^4 .

By the above-described construction it will be seen that by operating the lever E the bars C can be lowered to clean the teeth of grass or other rubbish, and then raised again without stopping, thereby saving much time and trouble. By lowering the bars, so that the teeth will not project through the apertures thereof, they are made to serve as runners to permit the harrow to be readily transported from place to place.

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

1. The combination, with a harrow, of U-shaped bars adapted to receive the tooth-bars and perforated for the passage of the teeth of the said bars, and means for raising and lowering said U-shaped bars, substantially as herein shown and described.

2. The combination, with a harrow, of a series of U-shaped bars having closed ends and connected together, the said bars being adapted to receive the tooth-bars and perforated for the passage of the teeth of the said bars, and means for raising and lowering the said U-shaped bars, substantially as herein shown and described.

3. The combination, with a harrow provided with the frame B, having a central aperture, of a series of U-shaped and perforated bars,

C, connected together, the standard D, secured to the said U-shaped bars and working in the aperture of the frame B, and means for raising and lowering and locking the said standard in position, and thereby the U-shaped bars, substantially as herein shown and described.

4. The combination, with a harrow provided with a frame having a central opening, of a series of U-shaped bars into which the tooth-bars fit, an upwardly-projecting standard secured to the bars and working in the opening of the frame carried by the harrow, and an operating-lever pivoted to the said standard and engaging a pin carried by the frame of the harrow, substantially as herein shown and described.

5. The combination, with a harrow and the frame B, mounted thereon and provided with the pin e^2 , of the U-shaped bars C, the slotted standard D, secured to the said bars and projecting through the opening in the said frame, the lever E, pivoted to the standard and provided with the curved and slotted arm e' , working in the slot of the standard, and a spring-

catch for locking the lever in position, substantially as described.

6. The combination, with a harrow provided with the frame B, having the downwardly-projecting lugs b^2 , of the bars C, the standard D, provided with the slots d' d^2 , the lever E, provided with the curved and slotted arm e' , the pin e^2 , the roller e^3 thereon, and the spring-catch F, substantially as herein shown and described.

7. An attachment for harrows consisting of the frame B, adapted to be secured to a harrow, the U-shaped bars C, the slotted standard D, secured to the said bars, and the lever E, having the curved and slotted arm e' , and provided with the spring-catch F, substantially as herein shown and described.

CALVIN KESSLER.

Witnesses:

GEORGE W. MATHEWS,

WILLIAM ^{his} + ESTES.
mark.