

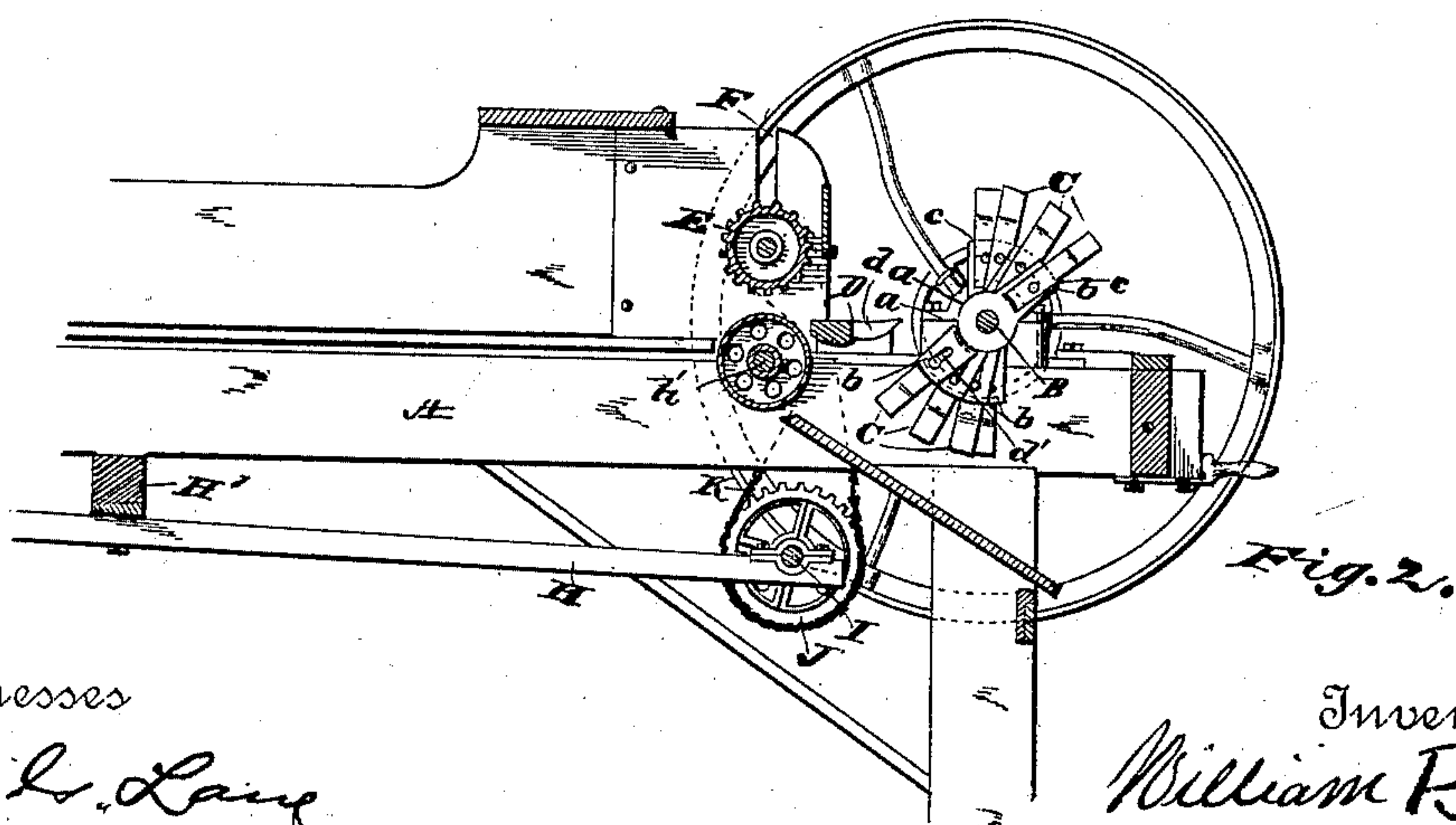
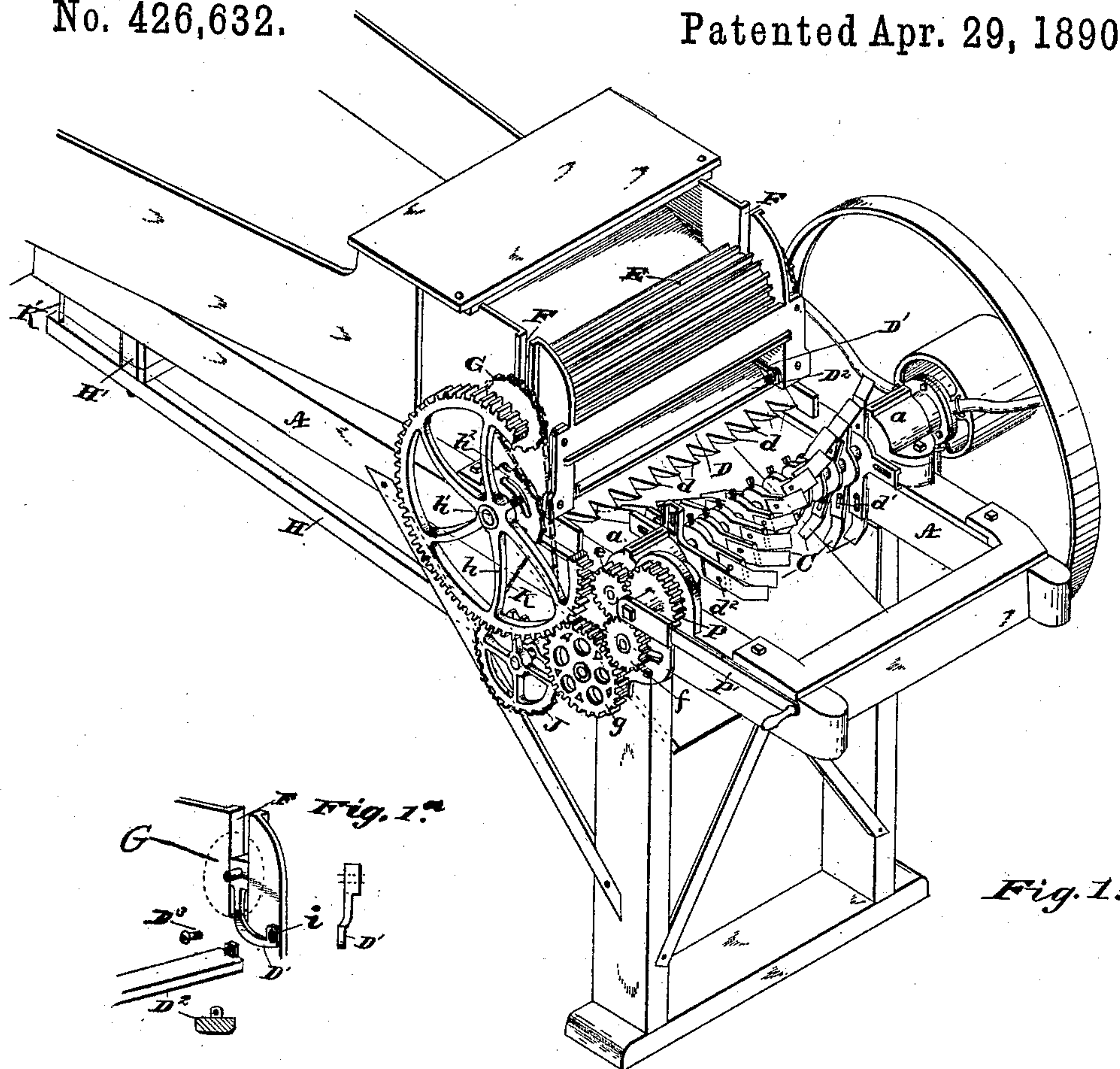
(No Model.)

2 Sheets—Sheet 1.

W. BETZ.
FODDER CUTTER.

No. 426,632.

Patented Apr. 29, 1890.



Witnesses

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Edible

Inventor _____

William Betz
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Attorneys

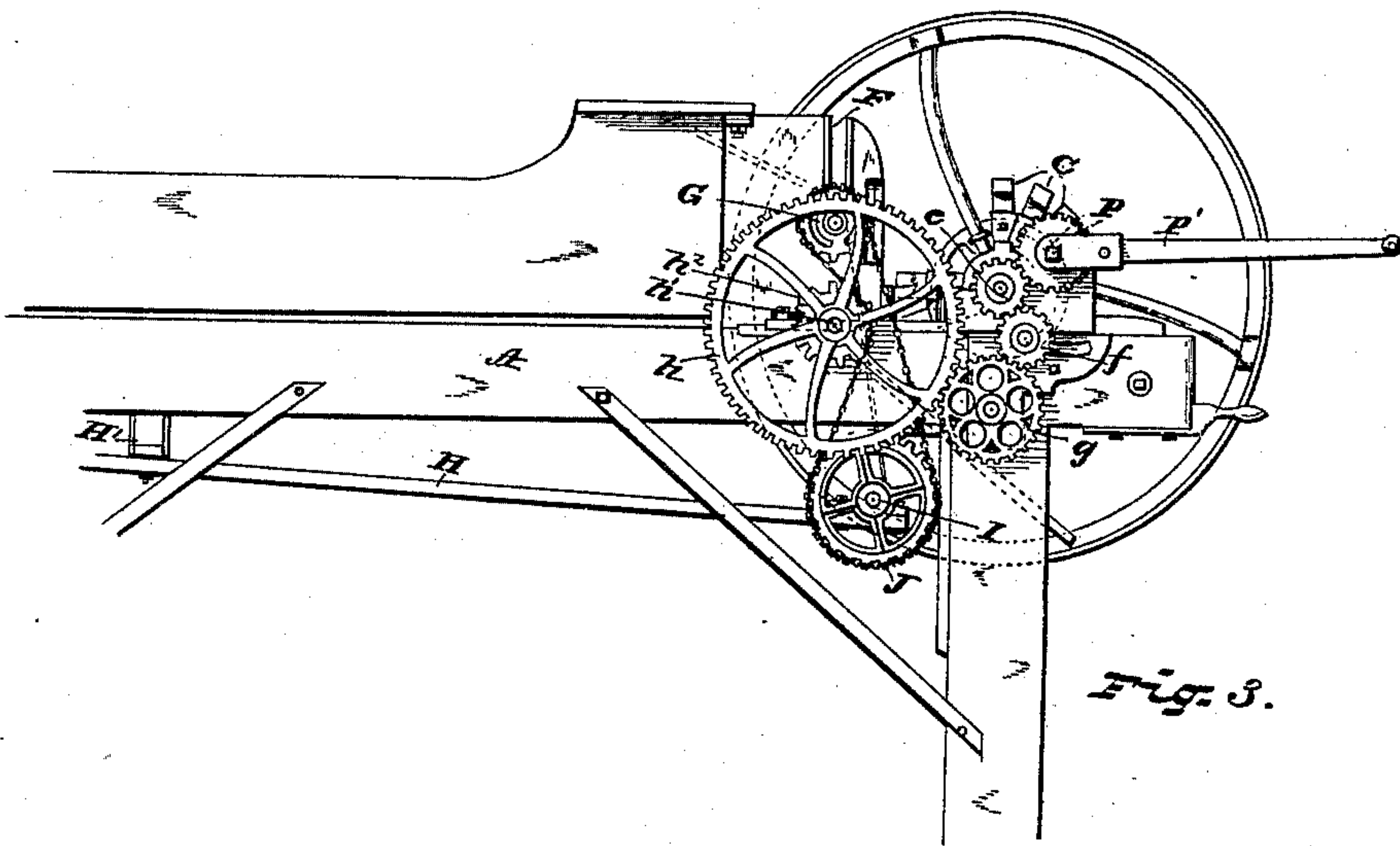
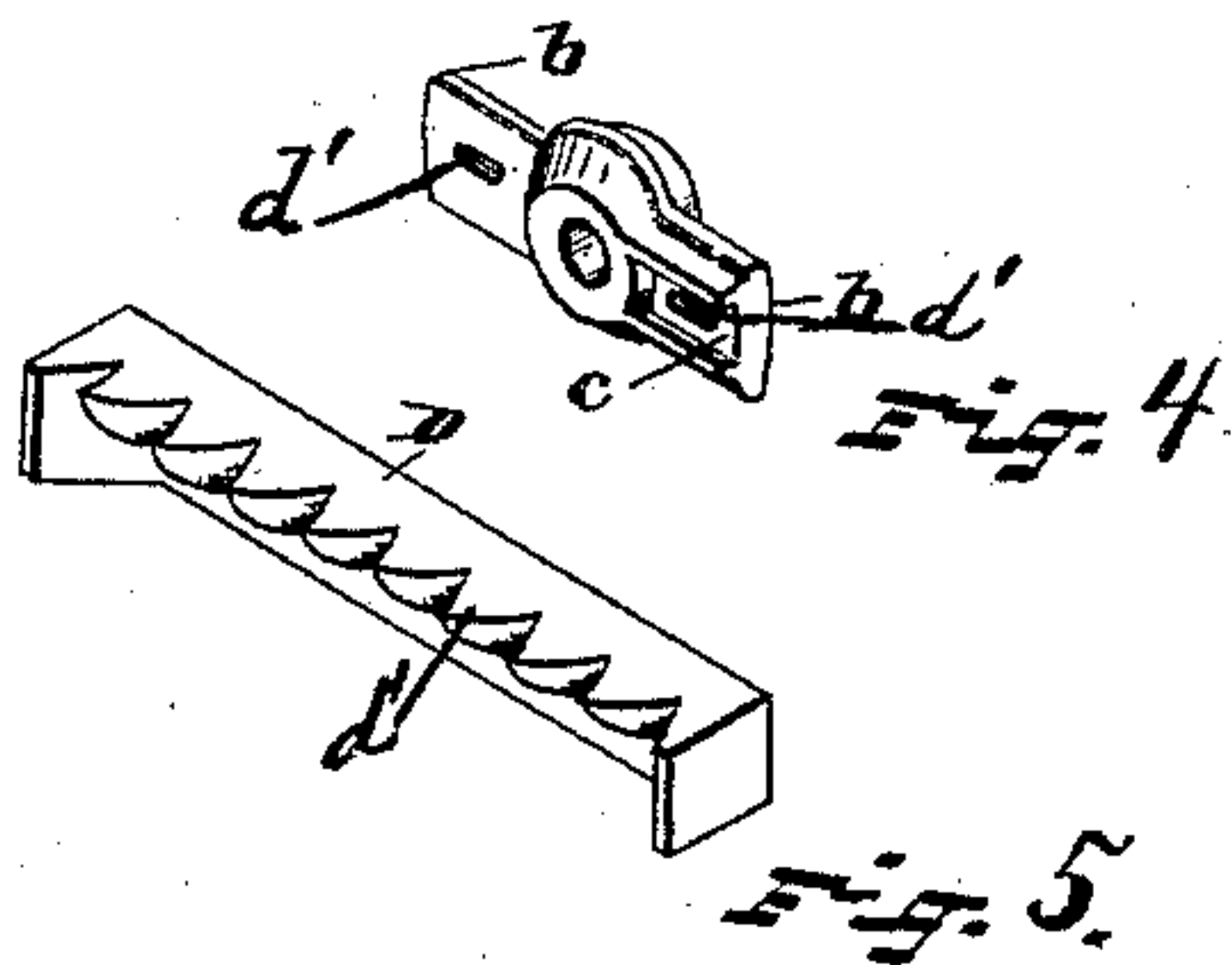
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Witnesses
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UNITED STATES PATENT OFFICE.

WILLIAM BETZ, OF CANTON, OHIO, ASSIGNOR OF TWO-THIRDS TO ANTON HAMMERLY, OF SAME PLACE, AND JACOB WISE, OF NEMISILA, OHIO.

FODDER-CUTTER.

SPECIFICATION forming part of Letters Patent No. 426,632, dated April 29, 1890.

Application filed April 19, 1889. Serial No. 307,757. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM BETZ, a citizen of the United States, residing at Canton, in the county of Stark and State of Ohio, have
5 invented certain new and useful Improvements in Fodder-Cutters; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being
10 had to the annexed drawings, making a part of this specification, and to the letters of reference marked thereon, in which—

Figure 1 is an isometrical view. Fig. 1^a is a view of the presser-foot. Fig. 2 is a side view showing parts in section and parts re-
15 moved. Fig. 3 is a side elevation. Fig. 4 is a detached view of one of the fodder-cutter knife-arms. Fig. 5 is a detached view of the fodder-cutter bar.

The present invention has relation to fodder-cutters; and it consists in the different parts and combinations of parts hereinafter described, and particularly pointed out in the
20 claims.

Similar letters of reference indicate corresponding parts in all the figures of the drawings.

In the accompanying drawings, A represents the side bars, which are located substantially as illustrated in the drawings, and
30 are held in the desired position by means of suitable cross-bars. These side bars are supported at the required height by means of suitable legs properly framed and braced to the side bars A. The cutter-shaft B is located
35 as illustrated in the drawings, and is journaled on the side bars A by means of the boxes *a*. To the shaft B are securely attached the arms *b*, said arms being located spirally to the shaft. The arms *b* are provided with
40 the grooves *c*, which are for the purpose of receiving the shanks of the knives C. These grooves *c* are located upon opposite sides of the arms *b*, for the purpose hereinafter stated. The knives C are substantially of the form
45 shown, and, as shown, are bent at their cutting ends at an angle to their shanks. To each arm *b* two knives C are attached, as illustrated in the drawings. The angle portions of these knives C are bent or turned in oppo-

site directions, thereby providing a right and
50 left cutting-knife upon each arm *b*, and for the purpose of bringing the knives C in proper cutting positions.

The cutter-bar D is located substantially as shown in Fig. 1, and is provided with the
55 V-shaped teeth. For the purpose of causing the knives C to cut easily, the teeth *d* are bent or curved up, as illustrated in Fig. 5, thereby producing a shear cut as the knives C pass between the teeth *d*. The knives C
60 and the cutter-bar D are designed and calculated to cut cornstalks and like material. For the purpose of adjusting the knives C to or from the cutter-bar D, the slots *d'* are provided, said knives being securely held at the
65 desired point of adjustment by means of the clamping-bolts *d''*. To the shaft B is securely attached the pinion *e*, which is for the purpose of communicating rotary motion to the
70 idler *f*. The idler *f* is for the purpose of communicating rotary motion to the idler *g*, which communicates rotary motion to the wheel *h*, which wheel is securely attached to the shaft *h'*, upon which shaft the lower feed-roller is attached. Upon the shaft *h'* are lo-
75 cated and securely attached the sprocket-wheels *h''*, said sprocket-wheels being located substantially as illustrated in the drawings, and, as shown, these sprocket-wheels *h''* are located in line with the sprocket-wheels G
80 and J.

The top or upper feed-roller E is located substantially as illustrated, and is so arranged that it can move up and down in the slot F, its shaft being free to slide up and down in
85 said slot. The shaft of the feed-roller E is provided with the sprocket-wheels G, which are for the purpose hereinafter described.

The spring-bars H are attached to the cross-bar H' or its equivalent in any convenient
90 and well-known manner. (But one of the spring-bars is shown in the drawings.) To the free ends of the spring-bars H is journaled the shaft I, and to this shaft are securely attached the sprocket-wheels J.
95

The drive-chains K are located substantially as shown, and, as shown, they engage the sprocket-wheels *h''*, thereby communicating

motion to the top or upper feed-roller E by means of the drive-chains K, engaging with the sprocket-wheels h^2 .

It will be seen that as the upper feed-roller 5 moves up and down it will cause the sprocket-wheels J to move with said feed-roller E, the drive-chains K being held tight by means of the weight of the shaft I and the sprocket-wheels J and the reaction of the spring-bars 10 H. For the purpose of regulating the tension of the spring-bars H screw-threaded bolts K' are provided. (But one of the bolts K' is shown in the drawings.) The wheel P and crank P' are attached and located as shown 15 when it is desired to turn the machine proper by hand. For the purpose of preventing the fodder from springing or jumping the presser-foot D² is provided, which is attached to the arms D', which arms are attached at their top 20 or upper ends to the shaft of the feed-roll E. The presser-foot D² is attached at the bottom or lower ends of the arms D, which arms are bent or curved outward or forward, so as to bring the presser-foot forward of the feed- 25 rollers.

The screw D³ is for the purpose of attaching the presser-foot D² to the arms D', and for the purpose of adjusting the presser-foot up and down the slot z is provided. This presser- 30 foot is located in front of the bar D, as shown in Fig. 1, and extends to within a short distance

of the teeth d . If it is desired, a small roller may be properly journaled to the arms D', which takes the place of the presser-foot D².

By providing the cutter-bar D, having the 35 V-shaped teeth and the right and left knives adapted to cut upon both sides of the V-shaped teeth, the lateral strain is entirely removed by reason of the shear cut acting in both di- 40 rections.

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

1. The cutter-bar D, provided with the V-shaped teeth d , the shaft B, having located 45 spirally thereon the arms b , and the outwardly-extending and oppositely-diverging knives C, substantially as and for the purpose specified.

2. The spring-bars H, having journaled to the free ends thereof the shaft I, provided 50 with the sprocket-wheels J, the drive-chains K, adapted to engage the sprocket-wheels J, h^2 , and G, and the sprocket-wheels h^2 and G, substantially as and for the purpose specified.

In testimony that I claim the above I have 55 hereunto subscribed my name in the presence of two witnesses.

WILLIAM BETZ.

Witnesses:

J. V. TAYLOR,
F. W. BOND.