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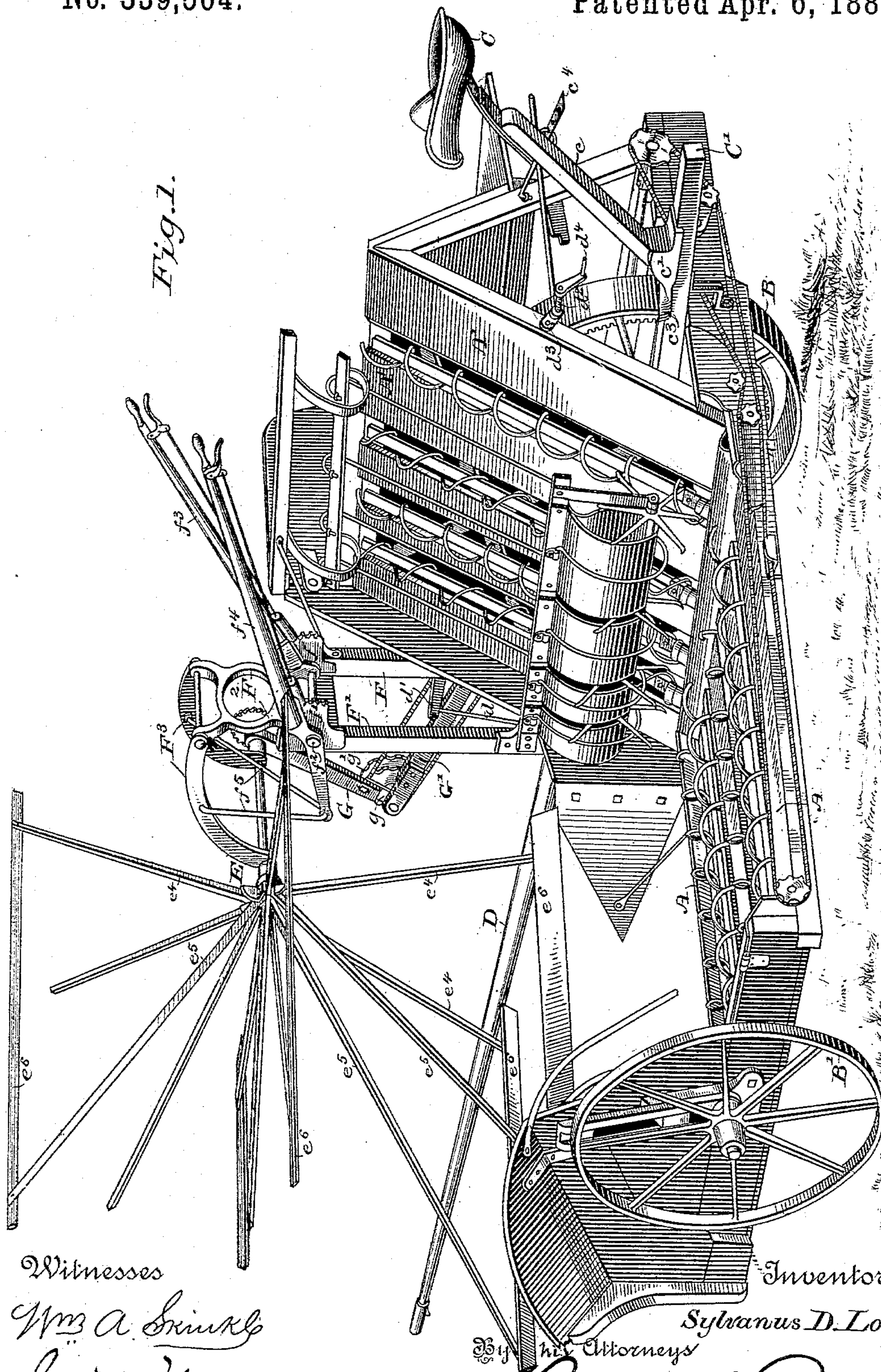
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S. D. LOCKE.
HARVESTER REEL.

No. 339,564.

Patented Apr. 6, 1886.

Fig. 1.



Witnesses

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By his Attorneys

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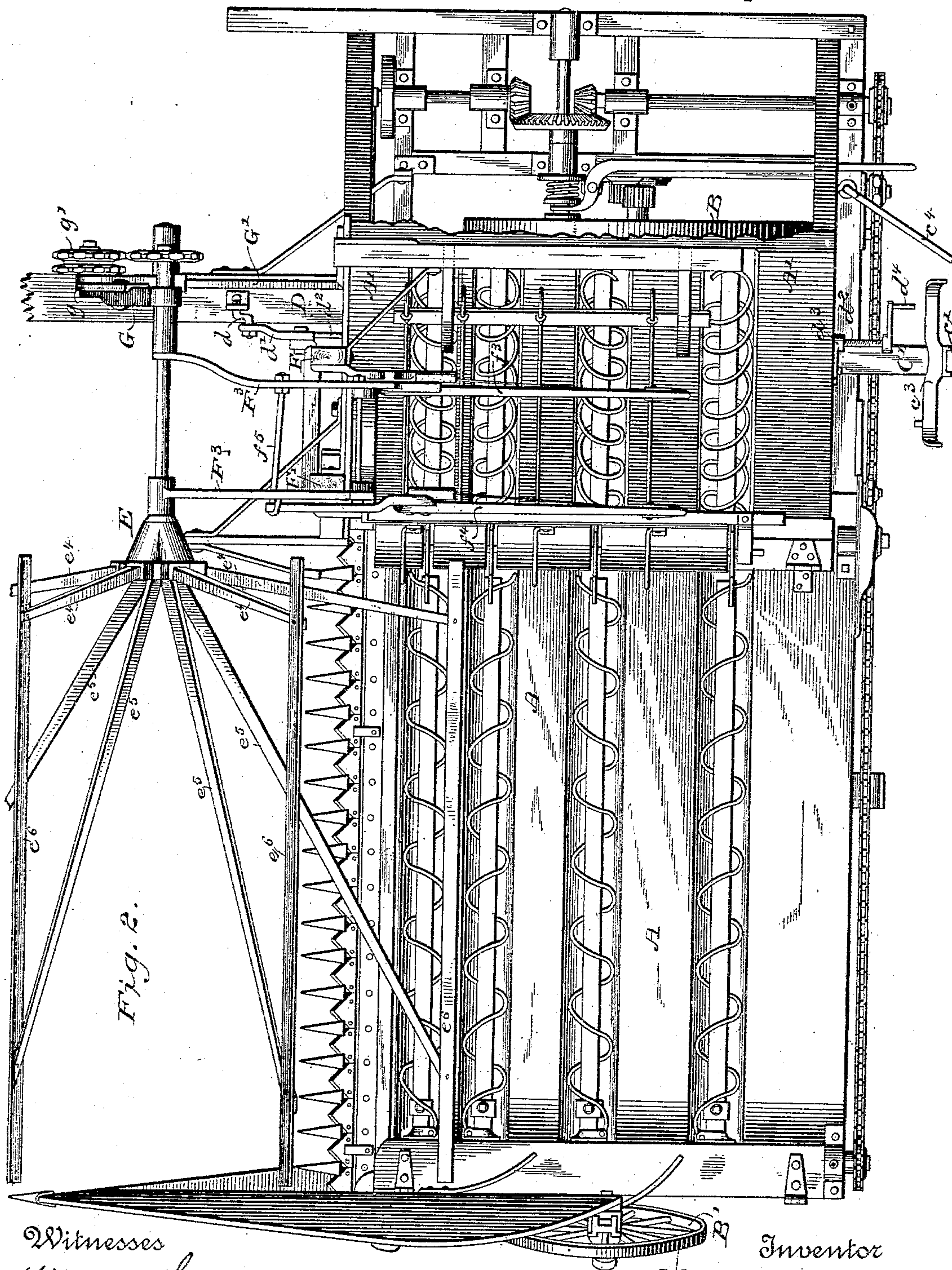
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HARVESTER REEL.

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Patented Apr. 6, 1886.



Witnesses

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(No Model.)

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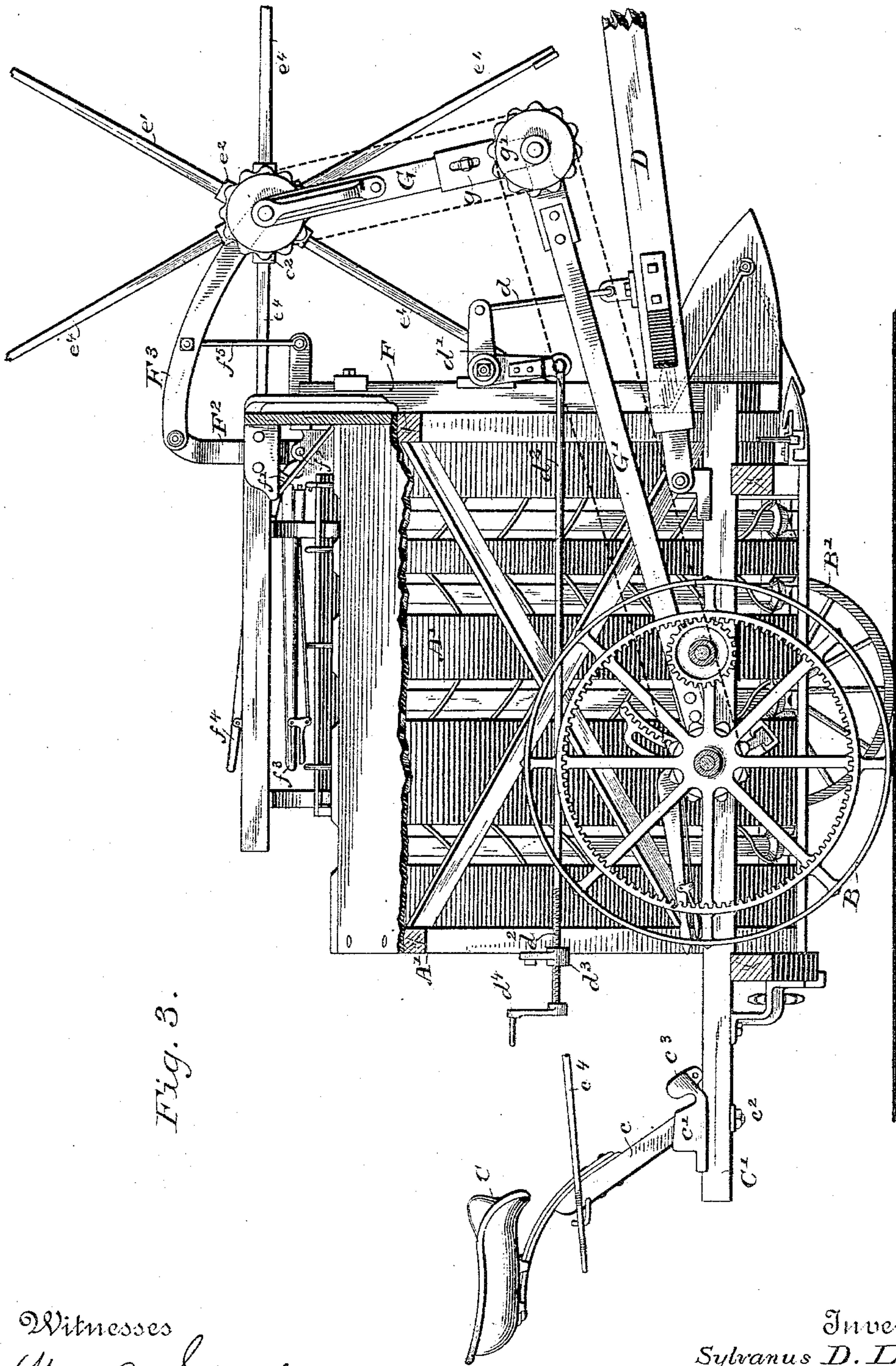


Fig. 3.

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(No Model.)

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Fig. 4.

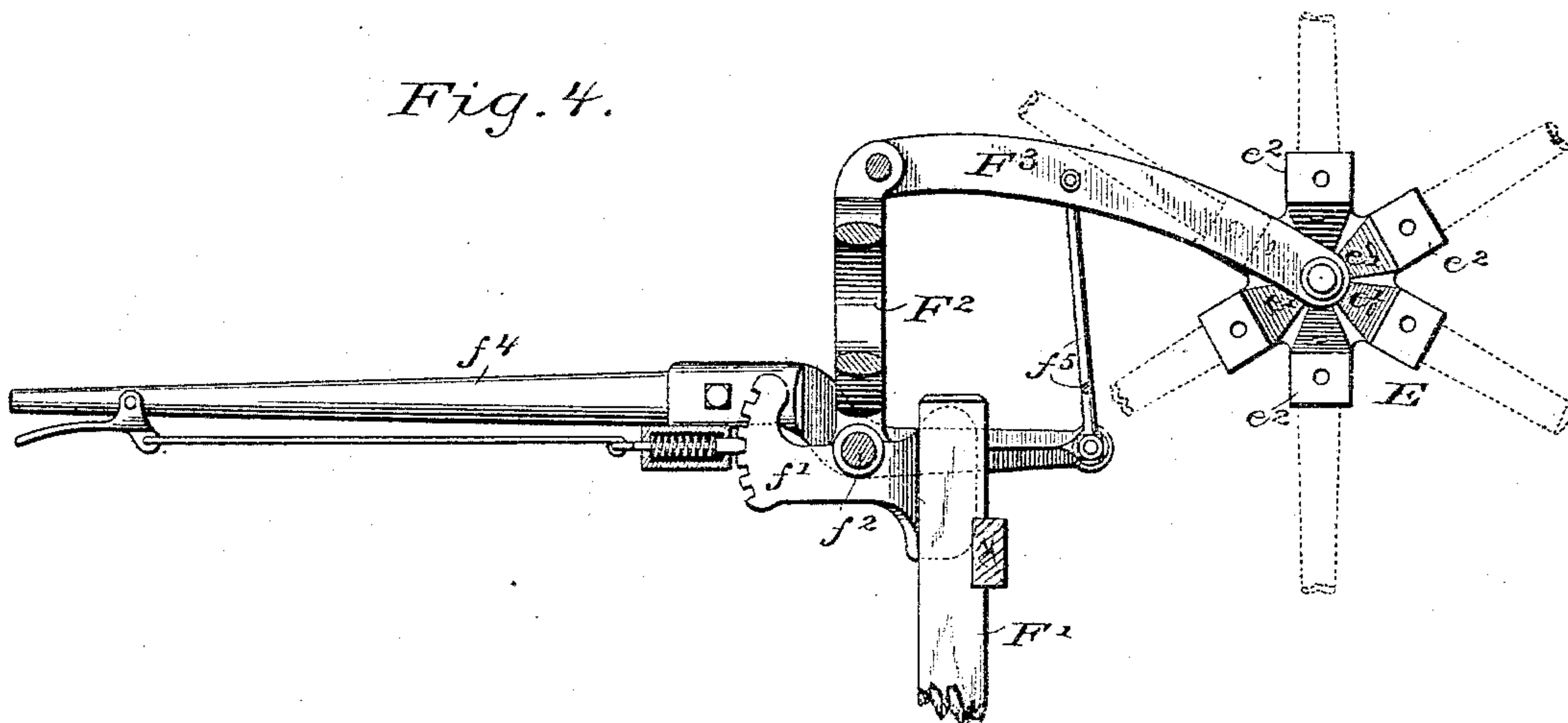


Fig. 5.

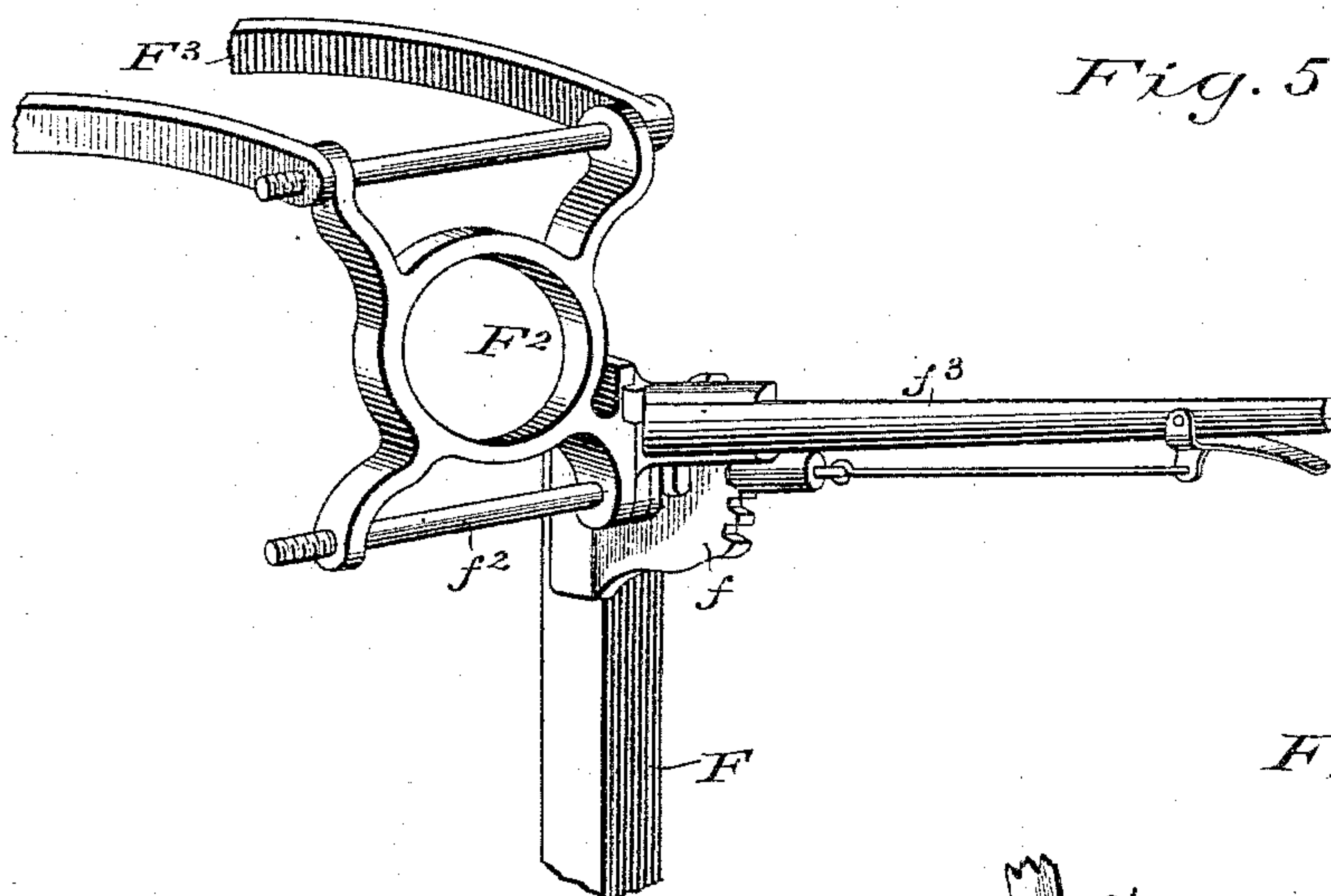
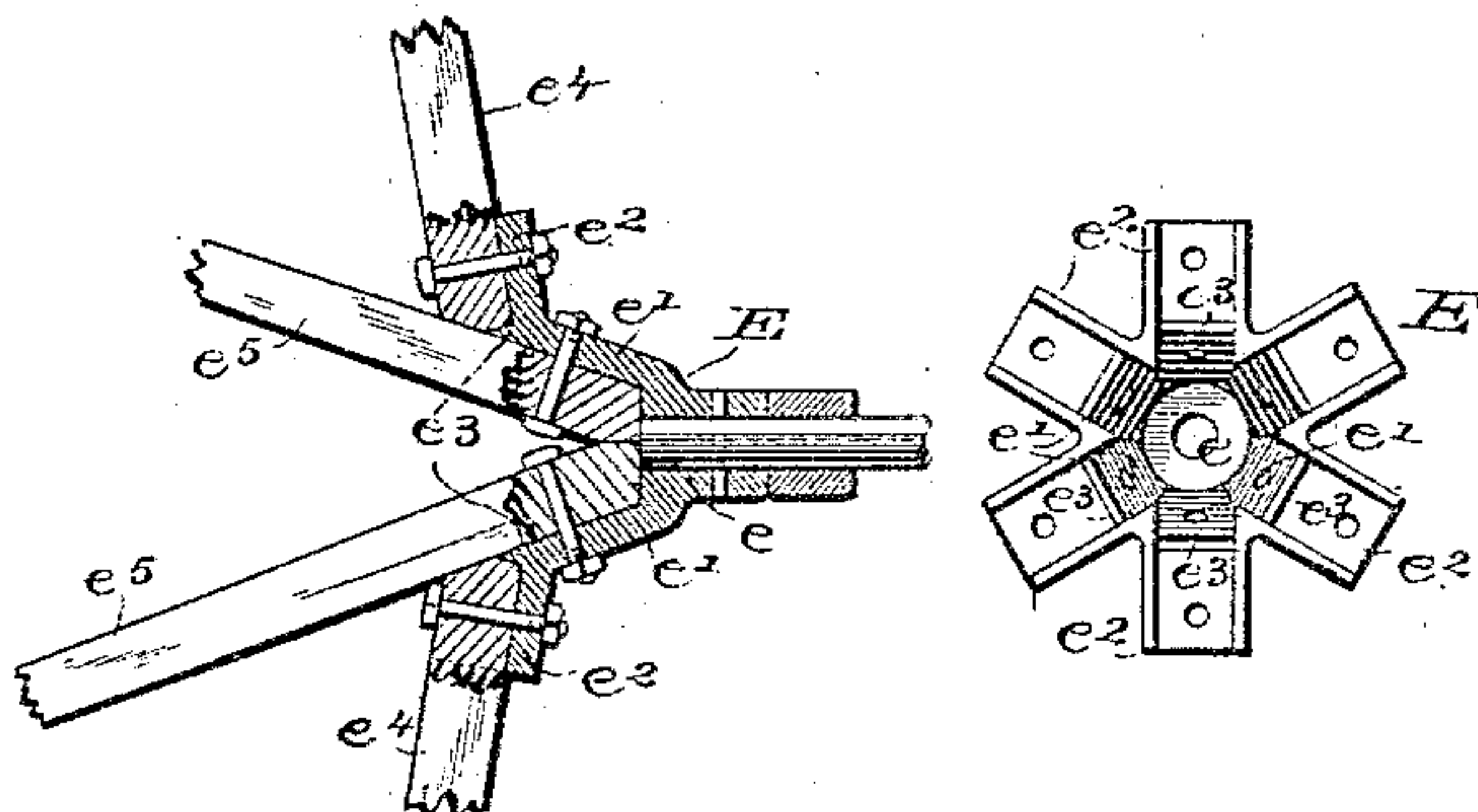


Fig. 6.



Witnesses

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UNITED STATES PATENT OFFICE.

SYLVANUS D. LOCKE, OF HOOSICK FALLS, NEW YORK.

HARVESTER-REEL.

SPECIFICATION forming part of Letters Patent No. 339,564, dated April 6, 1886.

Application filed January 23, 1886. Serial No. 190,047. (No model.)

To all whom it may concern:

Be it known that I, SYLVANUS D. LOCKE, of Hoosick Falls, in the county of Rensselaer and State of New York, have invented certain new and useful Improvements in Harvester-Reels, of which the following is a specification.

My invention is applicable to various types of harvesting-machines, but is primarily intended for use in that class in which the grain, after being cut or laid upon the platform, is carried sidewise by raking apparatus up over an elevator, as in the well-known Marsh type, and delivered to a binding-table, or to an automatic binder, or dropped upon the ground; and for the purpose of properly illustrating the various features I have represented them in connection with a machine of such construction, without, however, intending to be thereby limited to such specific form.

In the drawings, Figure 1 is a perspective view of a machine of the type referred to embodying my improvements. Fig. 2 is a top plan view; Fig. 3, an elevation from the stubble side of the machine, with the grain-chute broken away and certain other parts in section; Fig. 4, a side elevation, with parts broken away, of the mechanism for the up and down adjustment of the reel; Fig. 5, a perspective view of the mechanism for the in and out adjustment of the reel, and Fig. 6 sectional and front views of the casting which supports the reel-beaters.

The machine consists, primarily, of a platform, A, at the forward edge of which is arranged a sickle bar or cutter, and upon which the grain falls as cut thereby, an elevator-frame, A', rising from the platform to a point above the main drive-wheel, and thence extending down on the opposite side, two supporting-wheels, B and B', the former of which carries the principal weight of the machine, and serves as the driving-wheel, from which motion is transmitted to the operating parts of the machine, and the latter being the grain-wheel, and a strong frame supporting the apparatus on the axle of the drive-wheel.

For the purpose of varying the height of cut, the machine is vertically adjustable upon the axle of the main or drive wheel, as is

usual in machines of this class, the outer supporting-wheel being likewise adjustable, in order to maintain the platform in a horizontal position.

The mechanism which I prefer to use for raising and lowering the machine is represented in Fig. 3, the axle being furnished with pinions meshing into segmental racks, a lever being provided for rotating the pinions, and suitable detents being employed for holding the pinions against rotation after adjustment, as in Letters Patent granted to me bearing date January 11, 1881, and numbered 236,503, to which reference is made for a more full description.

The seat C is, for the purposes of the present description, shown as mounted upon the rearwardly-projecting beam C', which runs longitudinally beneath the elevator-frame, the standard c of said seat being seated in a casting, c', which is adjustable forward and backward upon the beam, and is held at any desired adjustment by means of a bolt, c², passing through the step or casting and through one of a series of holes in the beam. The step is formed with an inclined socket to receive the seat-standard, and with a foot-rest, c³, to receive the feet of the driver. The standard may be bolted in the socket; but ordinarily its leverage will be sufficient to confine it therein; and for the purpose of staying it when so confined, and to permit its ready removal and adjustment, a rod, c⁴, is provided, having its inner end bent to hook into an eye or staple on the frame of the machine, and having a series of perforations at its outer end to receive a hook or pin on the seat-standard, bent at such angle that after the rod has been applied thereto and hooked into its eye on the frame it cannot be removed without first releasing it from said eye.

The draft-tongue D is hinged or jointed to the sills of the elevator-frame, as usual, and is connected at a suitable distance from said joint by a link, d, with one arm of an elbow-lever, d', the other arm of which is coupled by a ball-and-socket or equivalent joint to the forward end of a rod or shaft, d², which is threaded at its rear end, passes through an internally-threaded arm, d³, and is provided

within reach of the driver's seat with a crank, d^4 , or a hand-wheel by which to turn it. The rotation of the rod or shaft causes it to move forward or backward, thereby rocking the elbow-lever upon its pivot and through it the tongue, according to the direction in which the rod or shaft turns.

The mechanisms relating to the support and adjustment of the draft-tongue and its co-operation with the seat are made the subject-matters of applications divided from a parent application filed March 16, 1881, Serial No. 28,409, upon which the present is based, and entitled, respectively, "Division B," relating especially to the seat, filed January 28, 1886, Serial No. 190,046, and "Division C," relating especially to the draft-tongue, filed on the same date, Serial No. 190,045, and to these respective divisions reference may be made for more extended and particular description of said devices, their constituent mechanism, and their purposes.

In the construction of harvester-reels considerable difficulty is experienced in making them sufficiently stiff and rigid, and maintaining them in such condition, especially in the case of overhung reels, which are sustained at one end only. In order to accomplish this object, and at the same time simplify their connection, I provide a reel head or casting, E, of the peculiar form shown in Fig. 6, consisting of a central hub or boss, e , having a series of flanged arms, e' , which project from said hub or boss at a comparatively slight inclination from its axis, and then bend more directly outward, forming extensions e^2 at a greater angle to said axis, a lip or shoulder, e^3 , being formed at the point of meeting of the two portions of each arm, against which the inner ends of the reel-bars e^4 abut. The head being thus formed, the reel-bars are applied to the outer reaches of its flanged arms and bolted thereto, and diagonal braces e^5 are applied to the inner reaches of said flanged arms and bolted to the same. When thus arranged, the braces and bars assist to support each other, while the bars are prevented by the shoulders e^3 from pressing with any considerable force against the braces or unduly straining their fastening-bolts. The beaters e^6 are applied to the outer ends of the bars and braces in the usual manner.

In the practical use of the machine it is found necessary or desirable to vary the position of the reel relatively to the cutter, according to the nature and condition of the grain, either to or from the cutter in a vertical direction, or to a position in advance or in rear of the same, or a resultant of the two movements, and I provide for these adjustments as follows:

F F' represent two uprights or standards at the front of the elevator, bearing near their tops, firmly bolted, two segmental racks, f and f' , between and through which extends a horizontal rod or shaft, f^2 . Upon the rod

is mounted a yoke, F^2 , having pivoted or jointed to its upper ends a frame or arms, F^3 , supporting the reel-shaft, as shown. The yoke is furnished with a hand-lever, f^3 , by which it may be rocked upon the rod or shaft f^2 , in order to throw its upper end outward or inward, and thereby throw the reel-shaft forward or draw it back, causing the reel to stand in advance or in rear of the cutter, or at any intermediate point. The lever has a locking-dog to engage with the rack f , for the purpose of holding the yoke in its adjusted position, which dog is connected by a rod or wire with a hand-piece alongside the hand-hold of the lever, that may be grasped and operated to disengage the dog in the act of seizing the lever.

For the purpose of varying the elevation of the reel, a second lever, f^4 , is pivoted upon the rod or shaft f^2 , with its forward end extending some distance in advance of the yoke, and is there connected by a link or rod, f^5 , with both of the reel-supporting arms F^3 , as more clearly shown in Fig. 1, so that by rocking the lever upon its pivot the link is moved up or down, carrying the arms with it, the arms swinging on the rod by which they are jointed to the yoke. This last lever is furnished with a locking-dog in the same manner as the other, to engage with the rack f' and hold the lever and reel when adjusted. The two levers extend backward, so as to bring their hand-holds within easy reach of the driver.

The reel-shaft is connected, by a bar, G, and adjustable plate g , with a radius-bar, G' , centered on the driving-wheel axle, and carrying at its outer end a double chain-wheel, g' , and motion is transmitted by means of a chain belt from a chain-wheel on the driving-axle to the wheel g' , and thence to a wheel on the reel-shaft. A single chain belt may, however, be used by making the usual provisions therefor.

I claim—

1. The head or casting E, having the arms e' e^2 and shoulders e^3 , as and for the purpose set forth.

2. The harvester-reel herein described, consisting of a head or casting, E, having arms e' e^2 and shoulders e^3 , the reel-bars e^4 , lying against and secured to the inner reach of said arms, the braces e^5 , lying against and secured to the outer reach and abutting against the shoulders, and the beaters secured to the extremities of the bars and braces.

3. The combination of the two standards or supporting-posts, a swinging yoke pivoted between them and provided with a hand-lever for rocking it upon its pivot, and with a locking device engaging with a segment on one of said posts, arms jointed to the moving end of said yoke and carrying the reel, and a lever adapted and arranged to raise and lower said arms, and also provided with a locking device engaging with another segment on one

of the pivot-posts, whereby the wheel may be raised or lowered, moved forward or backward, and held in any adjusted position.

4. In combination with the standards F F' and reel-adjusting devices, consisting of yoke F², arms F³, and hand-levers supported by said standards, racks *ff'*, secured one to each of

said standards to receive the locking-dogs of the adjusting devices.

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Witnesses:

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