

No. 629,118.

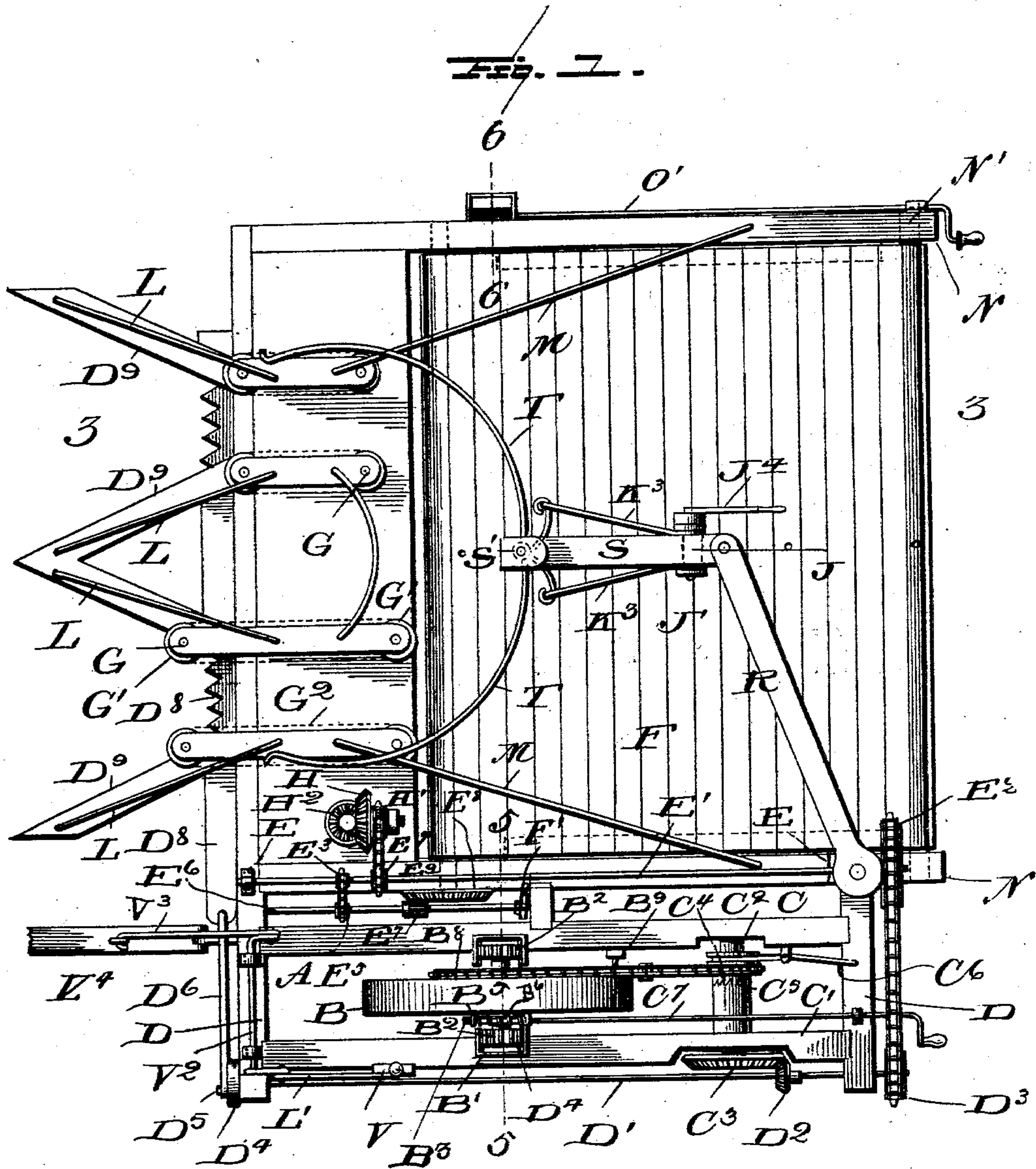
Patented July 18, 1899.

O. A. WOLF.
CORN HARVESTER AND SHOCKER.

(Application filed Mar. 18, 1899.)

(No Model.)

3 Sheets—Sheet 1.



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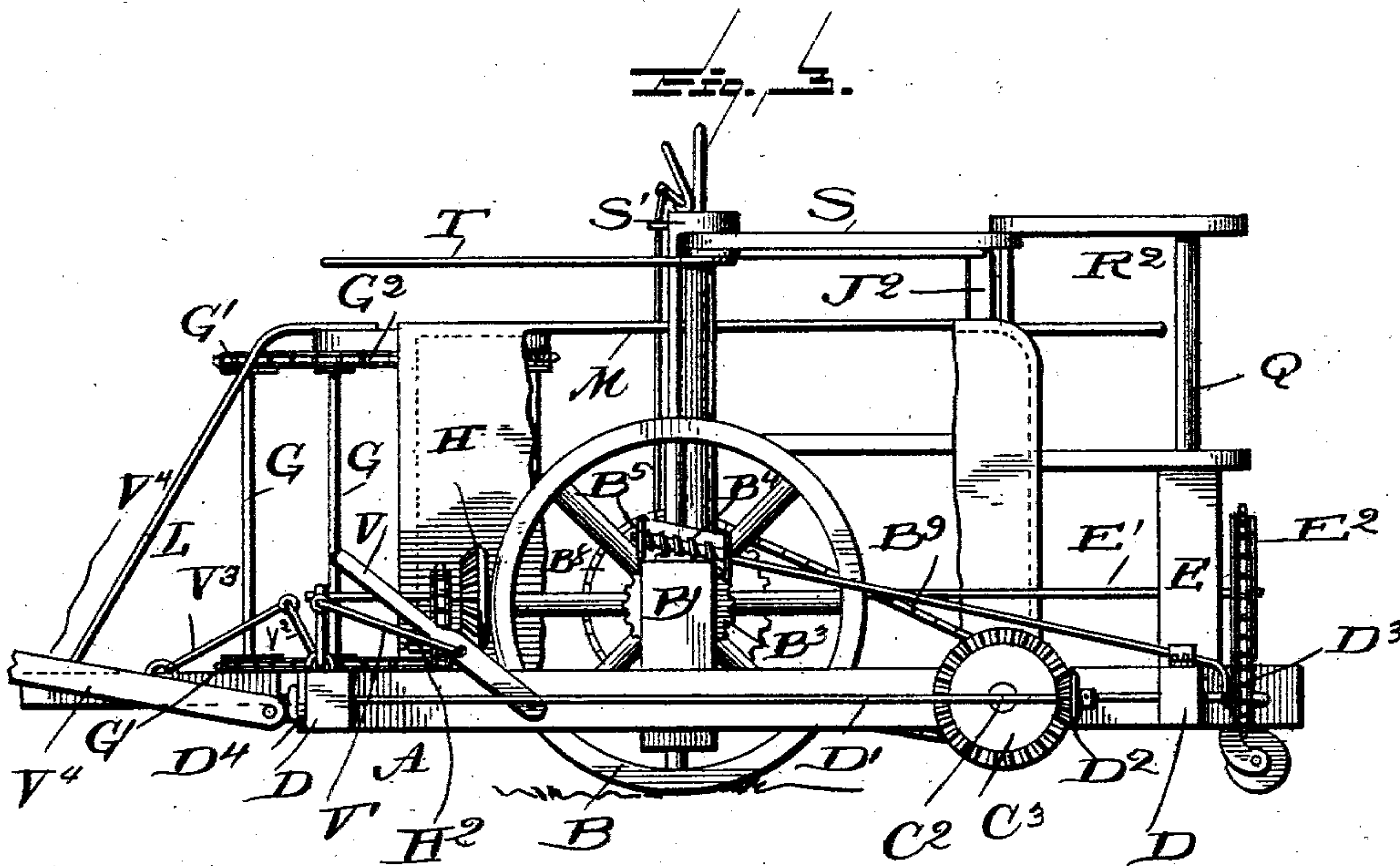
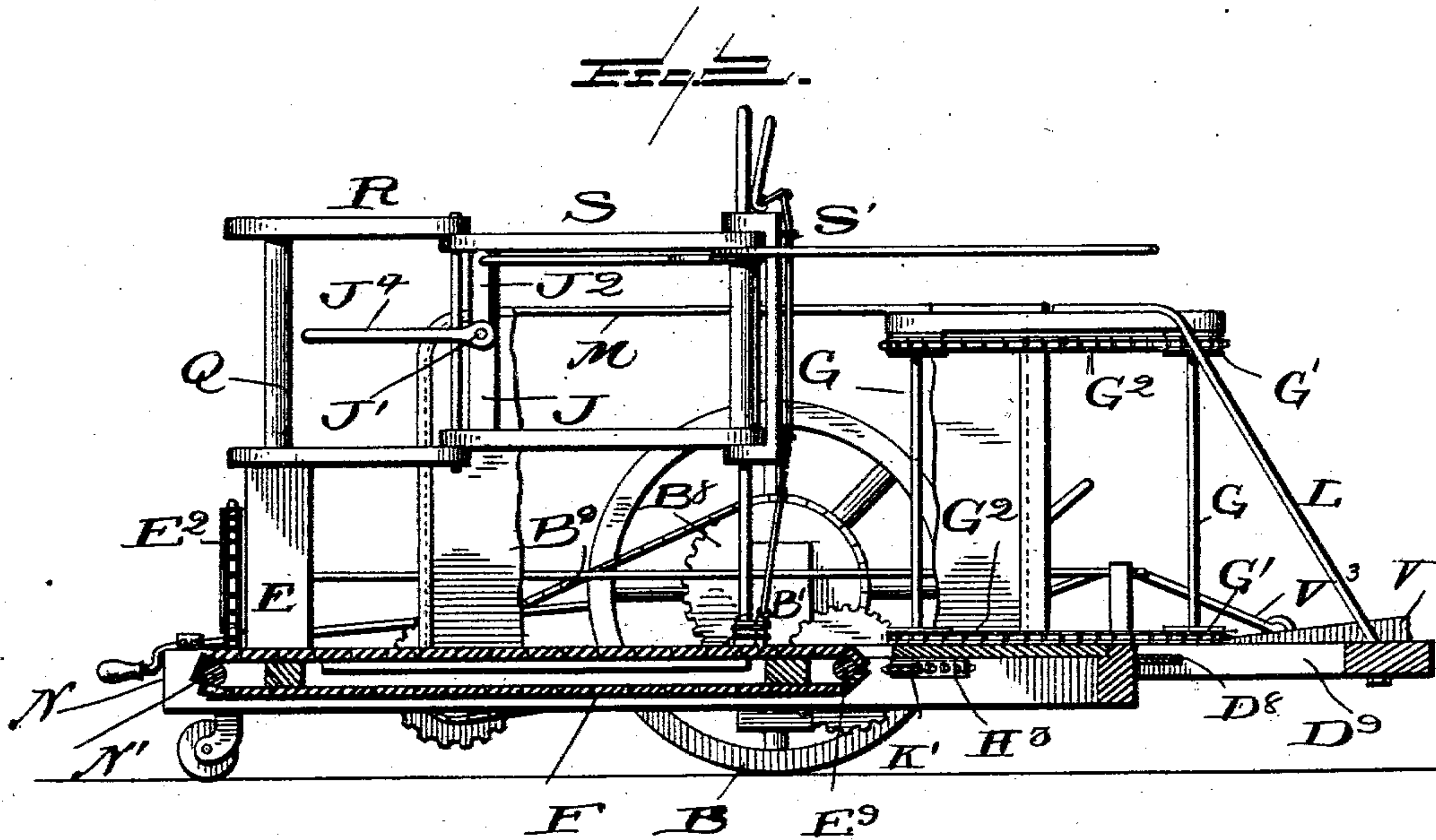
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3 Sheets—Sheet 2.



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3 Sheets—Sheet 3.

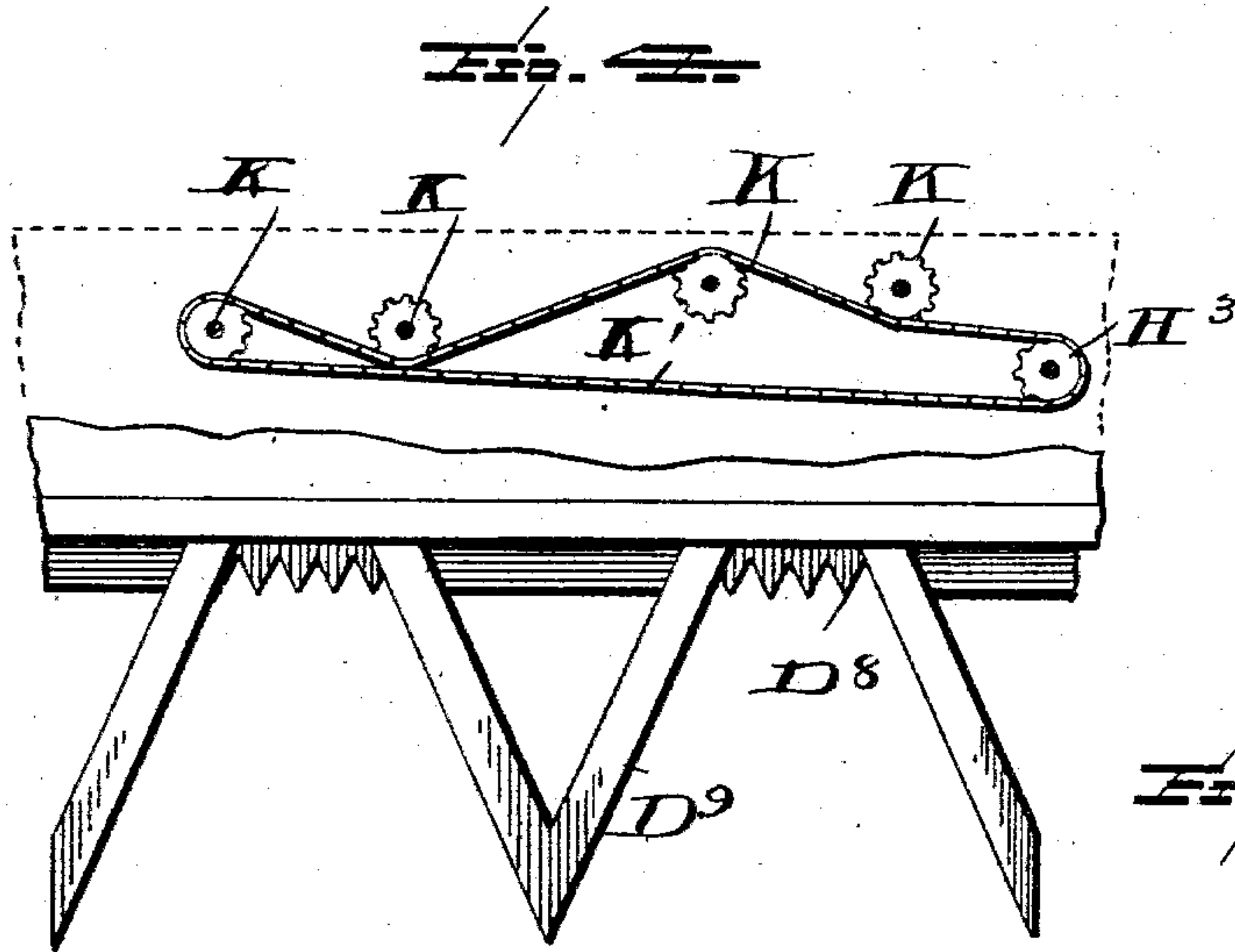


Fig. 1.

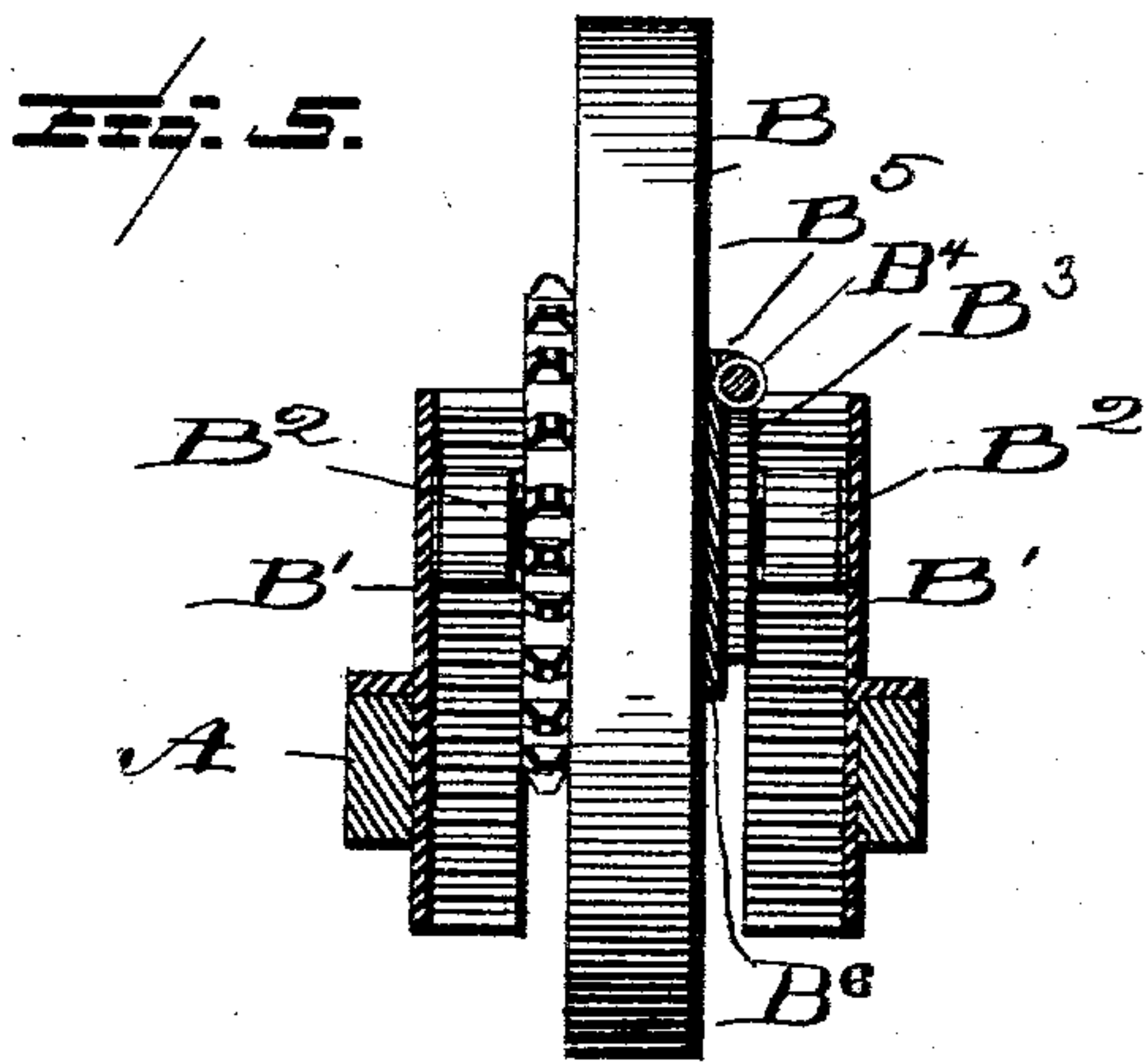


Fig. 5.

Fig. 6.

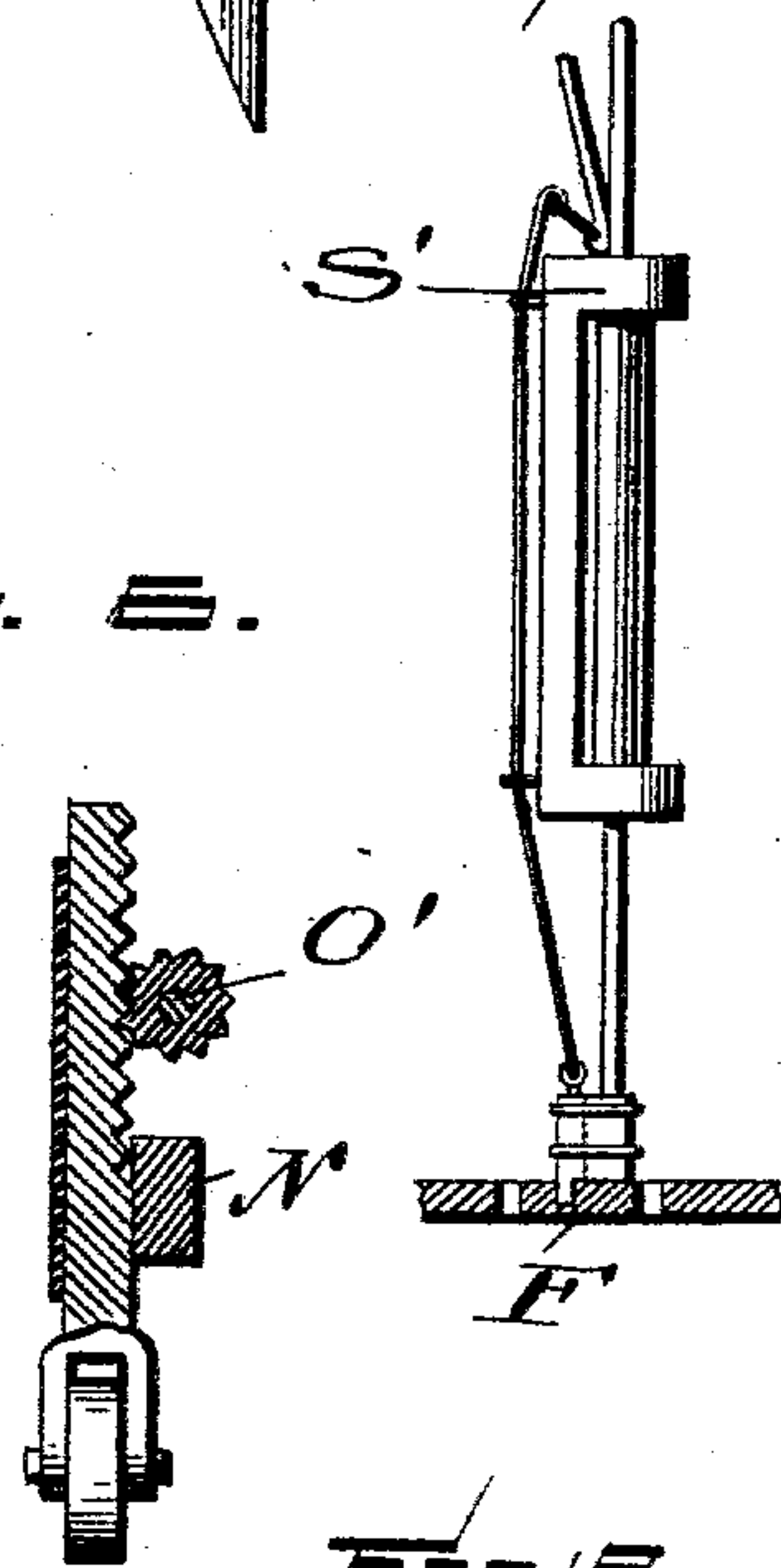


Fig. 6.

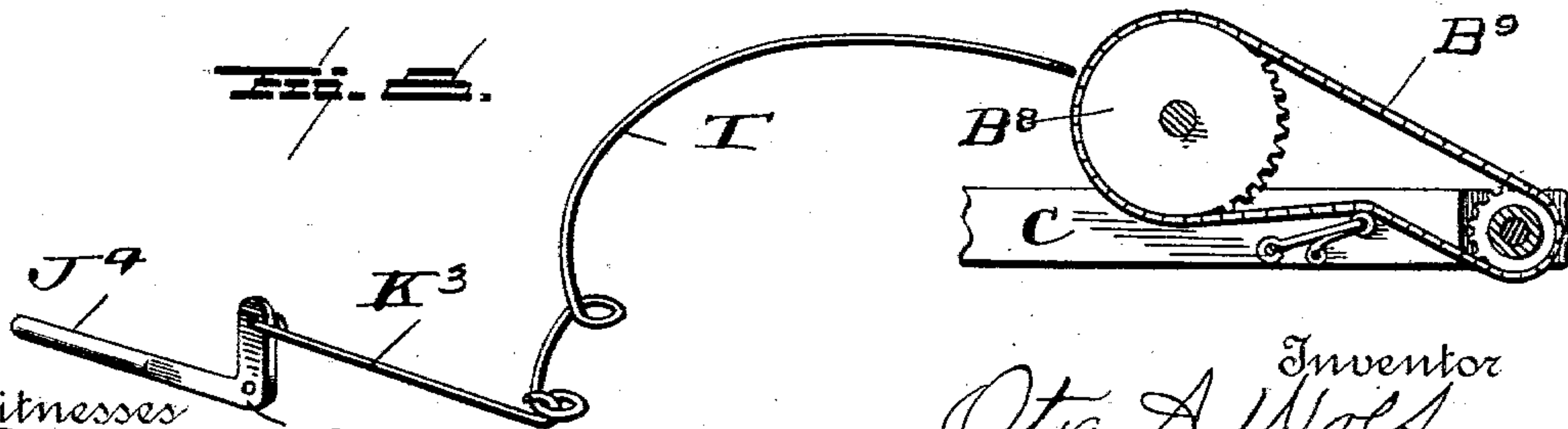


Fig. 7.

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UNITED STATES PATENT OFFICE.

OTA A. WOLF, OF ROCKFORD, OHIO.

CORN HARVESTER AND SHOCKER.

SPECIFICATION forming part of Letters Patent No. 629,118, dated July 18, 1899.

Application filed March 18, 1899. Serial No. 709,671. (No model.)

To all whom it may concern:

Be it known that I, OTA A. WOLF, a citizen of the United States, residing at Rockford, in the county of Mercer and State of Ohio, have
5 invented certain new and useful Improvements in Corn Harvesters and Shockers; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which
10 it appertains to make and use the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form a part of this specification.

15 This invention relates to new and useful improvements in corn cutters and shockers; and it consists in the provision of means whereby the stalks of corn which are cut are conveyed in vertical or upright positions to receiving
20 clamping-arms, which are gradually carried back upon an endless apron, and after a sufficient quantity of corn has been collected between the clamping-arms means is provided for compressing the shock and swinging the
25 same after it has been tied back and depositing the shock in the rear of the machine.

To these ends and to such others as the invention may pertain the same consists, further, in the novel construction, combination,
30 and adaptation of parts, as will be hereinafter more fully described and then specifically defined in the appended claims.

My invention is clearly illustrated in the accompanying drawings, which, with the letters of reference marked thereon, form a part
35 of this application, and in which drawings similar letters of reference indicate like parts throughout the several views, in which—

Figure 1 is a plan view showing the general
40 construction of my machine. Fig. 2 is a sectional view on line 3 3 of Fig. 1. Fig. 3 is a side elevation. Fig. 4 is a bottom plan view of the front portion of the machine. Fig. 5
45 is a detail view, in front elevation, of the main driving-wheel and means for raising and lowering the frame. Fig. 6 is a detail view of the
caster-wheel and means for raising and lowering the frame over same. Fig. 7 is a detail
view showing the manner of holding the outer
50 end of the swinging rack to the slotted endless apron. Fig. 8 is a detail view of one of the clamping-arms and lever connected there-

to. Fig. 9 is detail view showing a belt-tightener for the endless driving-chain.

Reference now being had to the details of
55 the drawings by letter, A designates the general frame of the machine, which is mounted on caster-wheels and the main driving-wheel B, which latter has geared mechanism for driving the machine. The bearings of said
60 driving-wheel B are mounted in the vertical boxes B', which have rack-bars on their inner faces, with the teeth of which bars the pinion-wheels B² are designed to mesh, said pinion-wheels being adapted to mesh with the teeth
65 of the rack-bars, and the outer of said pinion-wheels is connected to or integral with a geared wheel B³, which is mounted on the shaft carrying the driving-wheel and has meshing with its teeth a worm B⁴, which is
70 mounted in bracket-arms B⁵ of the plate B⁶, which is carried on the main operating-shaft. Connected to said worm is the rod C⁷, having a crank-handle at its outer end, whereby as
75 said worm is rotated the shaft carrying the main driving-wheel may be raised or lowered.

Mounted between the cross-bars C and C' of the frame is a shaft C², which has a geared wheel C³ keyed thereto, with teeth on its outer
80 face. This shaft C² carries loosely mounted thereon a clutch member C⁴, the teeth on the edge of which clutch are designed to mesh with the teeth C⁵ on the enlarged portion of the shaft C².

Mounted on the main driving-shaft is a
85 sprocket-wheel B⁸, over which a sprocket-chain B⁹ passes, which also passes over the sprocket-wheel which is integral with the clutch member C⁴. A suitable lever C⁶ is employed to operate said clutch when it is de-
90 sired to throw the same into mesh or out of mesh with the shaft C².

Journaled in the outer ends of the beams D of the machine is a shaft D', carrying a pinion-wheel D², which is designed to mesh
95 with the teeth on the face of the geared wheel C³, and at one end of the said shaft is keyed a sprocket-wheel D³, and at its opposite end is an eccentric D⁴, carrying a wrist-pin D⁵, which is connected to the pitman D⁶, con-
100 nected to one end of the reciprocating knife D⁸, which works back and forth in the recessed ends of the guides D⁹.

Mounted in the uprights E on the frame is

a shaft E', which has keyed to one end a sprocket-wheel E², which has chain connection with the sprocket-wheel D³. Keyed on this shaft E' are the sprocket-wheels E³ and E⁴, the former of which has sprocket-chain connection with a sprocket-wheel E⁵, keyed to the shaft E⁶, which is journaled in the frame of the machine. E⁷ is a geared wheel carried by said shaft E⁶ and has geared connection with the wheel E⁸, which has teeth on its outer face. This wheel E⁸ is keyed to the shaft E⁹, mounted in the frame of the machine and over which the endless slatted apron F passes. In order to throw the shaft E⁶ laterally, so that the geared wheel E⁷ will mesh with the teeth on the outer face of the wheel E⁸, a lever F' is provided, which is pivoted on a lug of the frame and is connected with said shaft E⁶ at its lower end, and by tilting this lever the said geared wheel E⁷ may be thrown into or out of mesh with the wheel E⁸, which operates the apron.

For operating the conveyers the upright rotating reels G are employed, which reels are journaled in the supporting-frames, as shown, and have sprocket-wheels G' near their upper and lower ends, over which chains G² pass and communicate motion from one reel to another. A geared wheel H, mounted on an upright portion of the frame, has on its stub-shaft a sprocket-wheel H', which is connected with the sprocket-wheel E⁴ by a sprocket-chain, and meshing with the beveled teeth on the wheel H is a pinion H², which is mounted on an upright stub-shaft having a sprocket-wheel H³ keyed to its lower end on the under side of the frame of the harvester. To the lower ends of the inner of the reels of the conveyer are keyed sprocket-wheels K, with which engage the endless sprocket-chain K', whereby motion is imparted to the reels from the main driving mechanism, as will be understood.

Mounted on the guide members D⁹ in front of the reaper are the upright and backwardly-inclined rods L, which are provided to guide the stalks of corn as they are cut between the upright conveyers. In order to prevent the stalks of corn tipping over the sides of the reaper, the guide-rods M are provided, which are connected at their forward ends to the upright parts of the frame supporting the reels and have their rear ends secured to the frame of the harvester. Mounted in the rear ends of the beams N of the frame is a shaft N', over which the apron turns.

On the side of the harvester opposite from that carrying the driving-shaft is a caster-wheel, which is vertically adjustable by means of the crank-shaft O', whereby the harvester may be raised or lowered.

Mounted on the post Q, which rises from the standard E on the frame, is a swinging rack R, which is preferably of rectangular shape and suitably braced, as shown, by means of rods. To the outer projecting ends of said rack is piv-

oted a second swinging rack S, which carries at its outer end a vertical rod S', the lower end of which is provided with a catch connected by a rod which is actuated by a hand-operated lever at the upper end of post S'. Mounted on said post S', which carries a catch at its lower end, are the shock-compressing arms T, which are bent, preferably, in the shape shown and have loops at their inner ends and are crossed, as shown, when the arms are open. Mounted on a block J between the longitudinal portions of the bracket S is a shaft J', to which cranks J² are keyed, carrying links K³ at their upper ends, which are connected to the loops in the ends of said shock-compressing arms T. Keyed to the outer end of said shaft J' is an operating-lever J⁴, and a ratchet-wheel and pawl may be provided to hold the shaft at a particular position, whereby the shock-compressing arms may be held in an open or closed relation.

In order to raise or lower the tongue which is connected to the harvester, I have provided a lever V, which is connected by a link V' to the bent rod V², which is journaled in eyes on the frame of the harvester and has linked connection V³ with the tongue V⁴.

The operation of my invention is as follows: The spaces between the guards are directed so that the rows of corn will come against the cutting edges, and as the stalks are cut they are conveyed in an upright position between the upright reels and deposited on the apron and between the compressing-arms. As the harvester advances and the stalks are cut the apron, through its low-gear connection, will slightly travel back, carrying with it the post S', which is supported by the outer swinging rack S, and when a sufficient quantity of stalks have been gathered between the compressing-arms the operator throws the mechanism out of gear and stops the machine. By operating the handle J⁴ the shock-compressing arms are brought together and the shock held until the same is tied up, after which the swinging racks are swung around, the clamping-arms released, and the shock falls to the ground, and the arms are swung around and opened adjacent to the vertical conveyers and the operation is repeated.

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

1. A corn harvester and shocker, comprising the conveyers, an endless apron and means for operating the same, and a swinging rack having shock-compressing arms for receiving the stalks of corn and which travel with the endless apron as the stalks accumulate between the arms, and means for compressing the shock, as shown and described.

2. A corn harvester and shocker, comprising in combination with the frame, the vertical conveyers, the knife-cutter and endless apron and means for operating the same, a

5 swinging rack mounted on the frame of the harvester and having shock-compressing arms which are designed to be held in an open relation adjacent to said conveyers, the free end of said rack having a post provided with a catch designed to hold the same to the apron, and to travel rearward with the same, as shown and described.

10 3. A corn harvester and shocker, comprising in combination with the frame, the conveyers, the cutting-knife, endless apron and means for operating the same as set forth, racks pivoted together, one of which swings on a post of the frame, a pair of shock-compressing arms on a post carried at the end of
15 the outer of said racks, the lower end of said post having a catch designed to engage with and be carried along by said apron, and the cranks and link connections with said shock-

compressing arms, and a lever for operating said arms as shown and described. 20

4. A corn harvester and shocker, comprising in combination with the main frame, the cutting mechanism, the conveyers and endless apron as described, and geared mechanism for throwing the same into and out of gear, a swinging rack mounted on the frame, a second rack pivoted to the swinging end of the first-named rack, the shock-compressing arms carried on a post at the outer end of said second rack, means for operating the shock-compressing arms. 25 30

In testimony whereof I affix my signature in presence of two witnesses.

OTA A. WOLF.

Witnesses:

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