

(No Model.)

2 Sheets—Sheet 1.

W. J. DEALTRY.
SEEDING MACHINE.

No. 543,573.

Patented July 30, 1895.

Fig. 1.

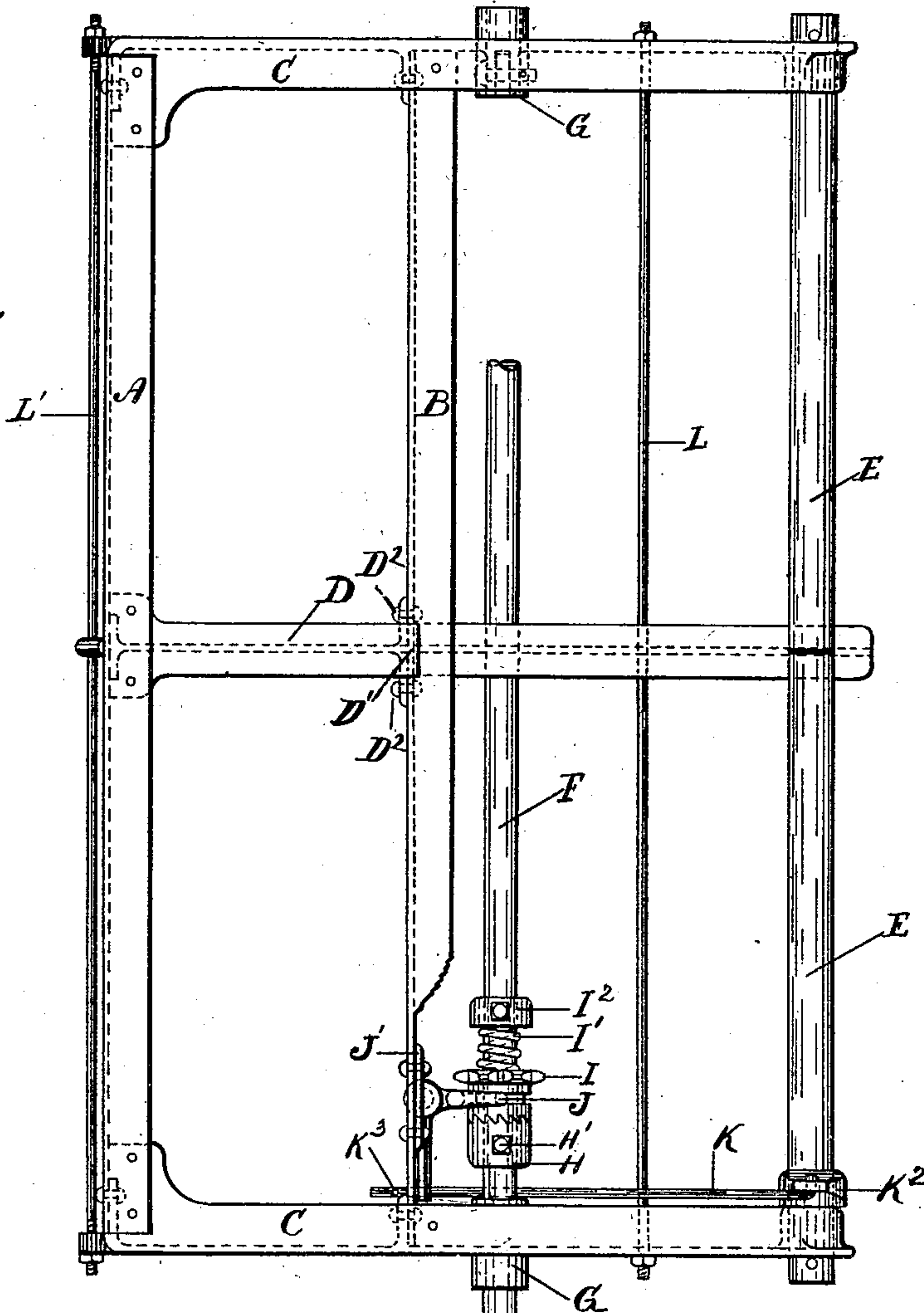


Fig. 2.

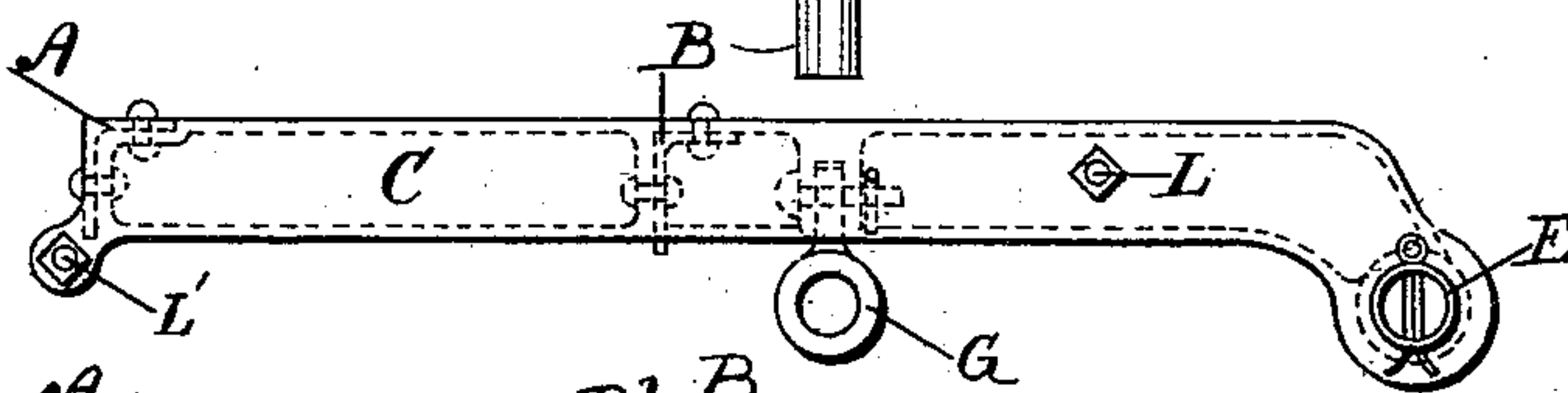
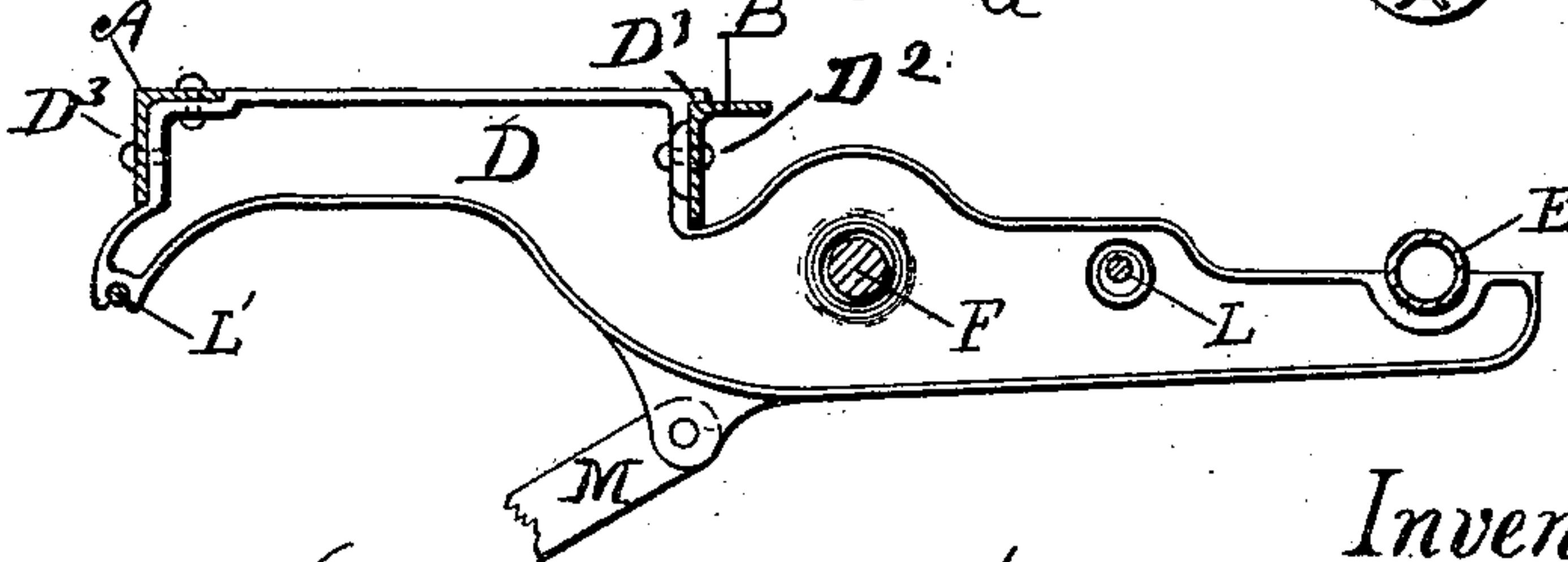


Fig. 3.



Witnesses.

George Friedman.
Harvey G. Edwards.

Inventor.

William J. Dealtry
by Steve Allen Atty

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2 Sheets—Sheet 2.

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Fig 4-

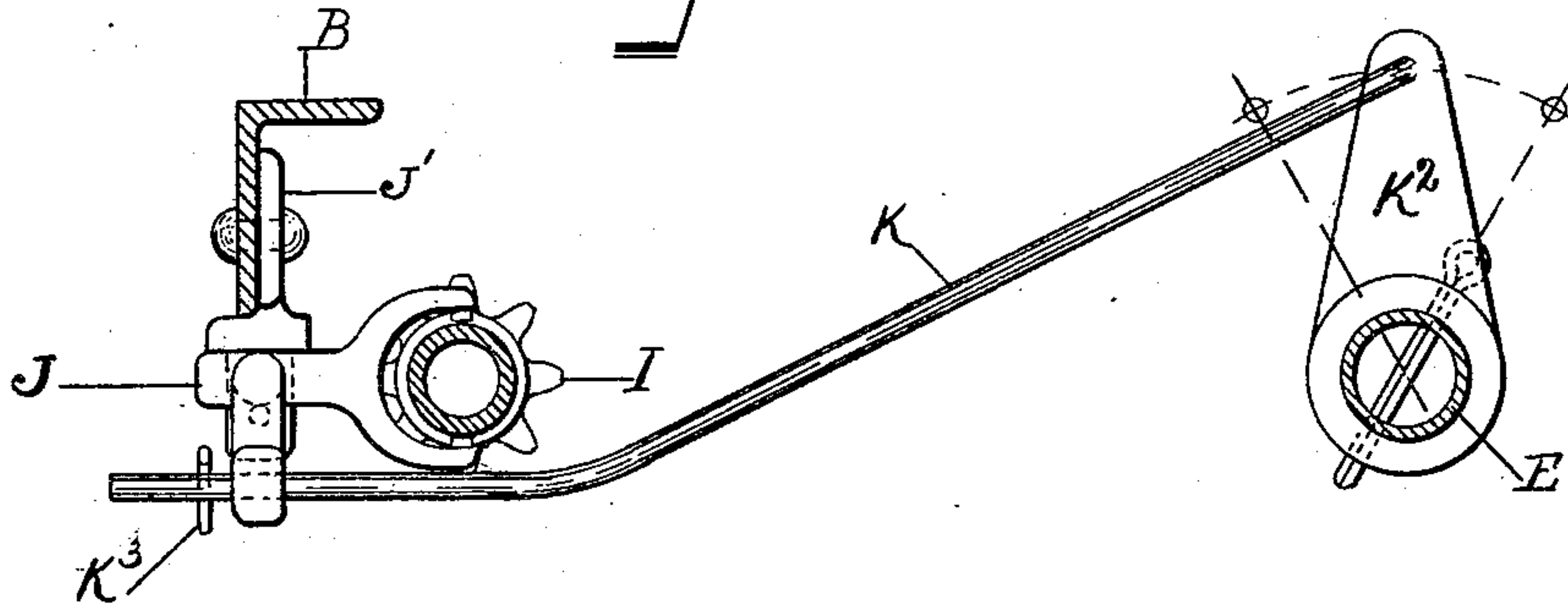


Fig 5-

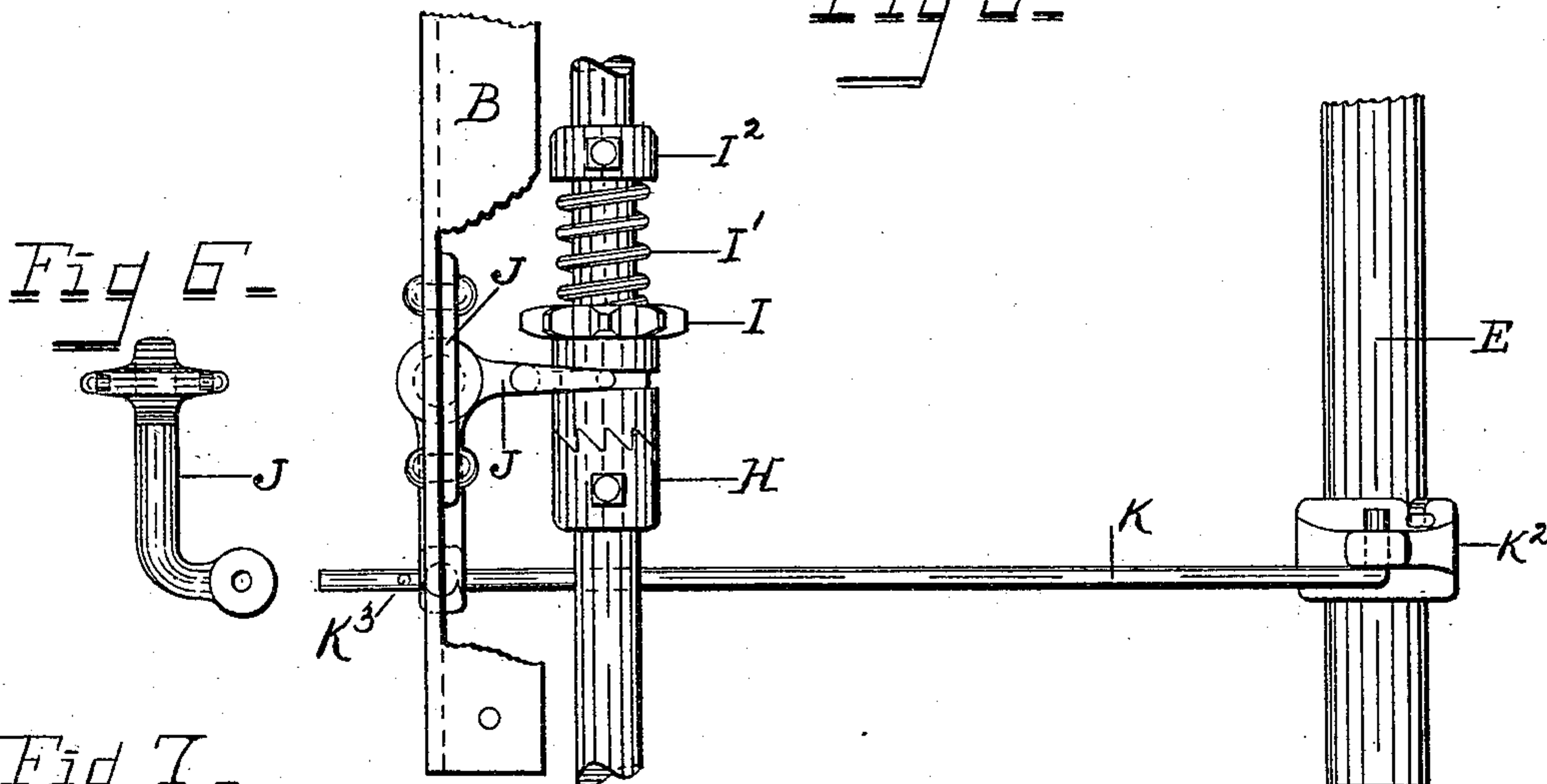


Fig 6-

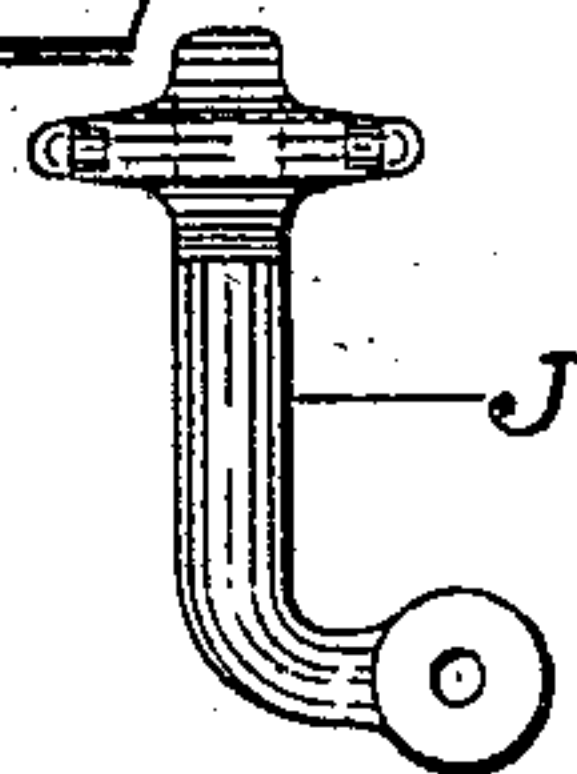
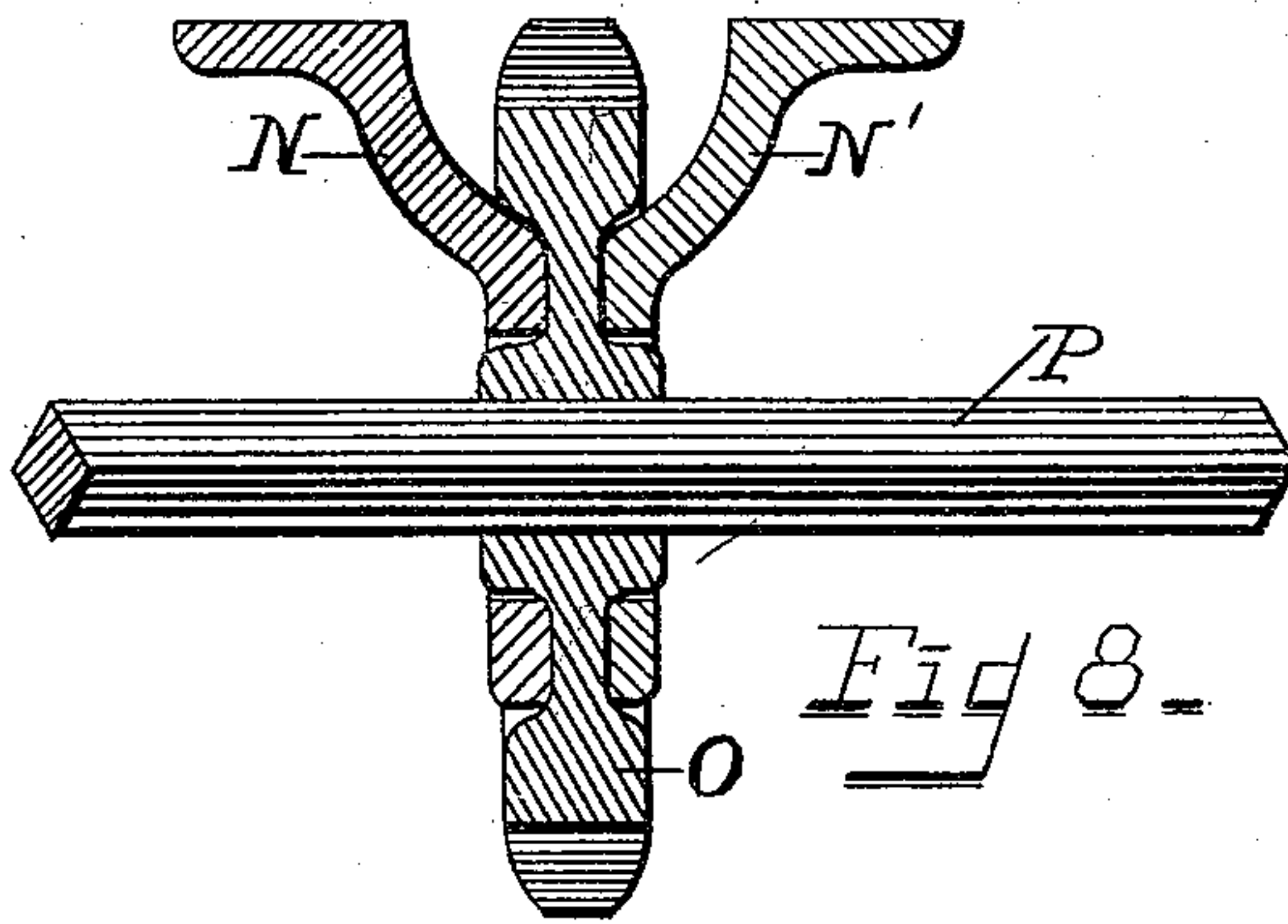
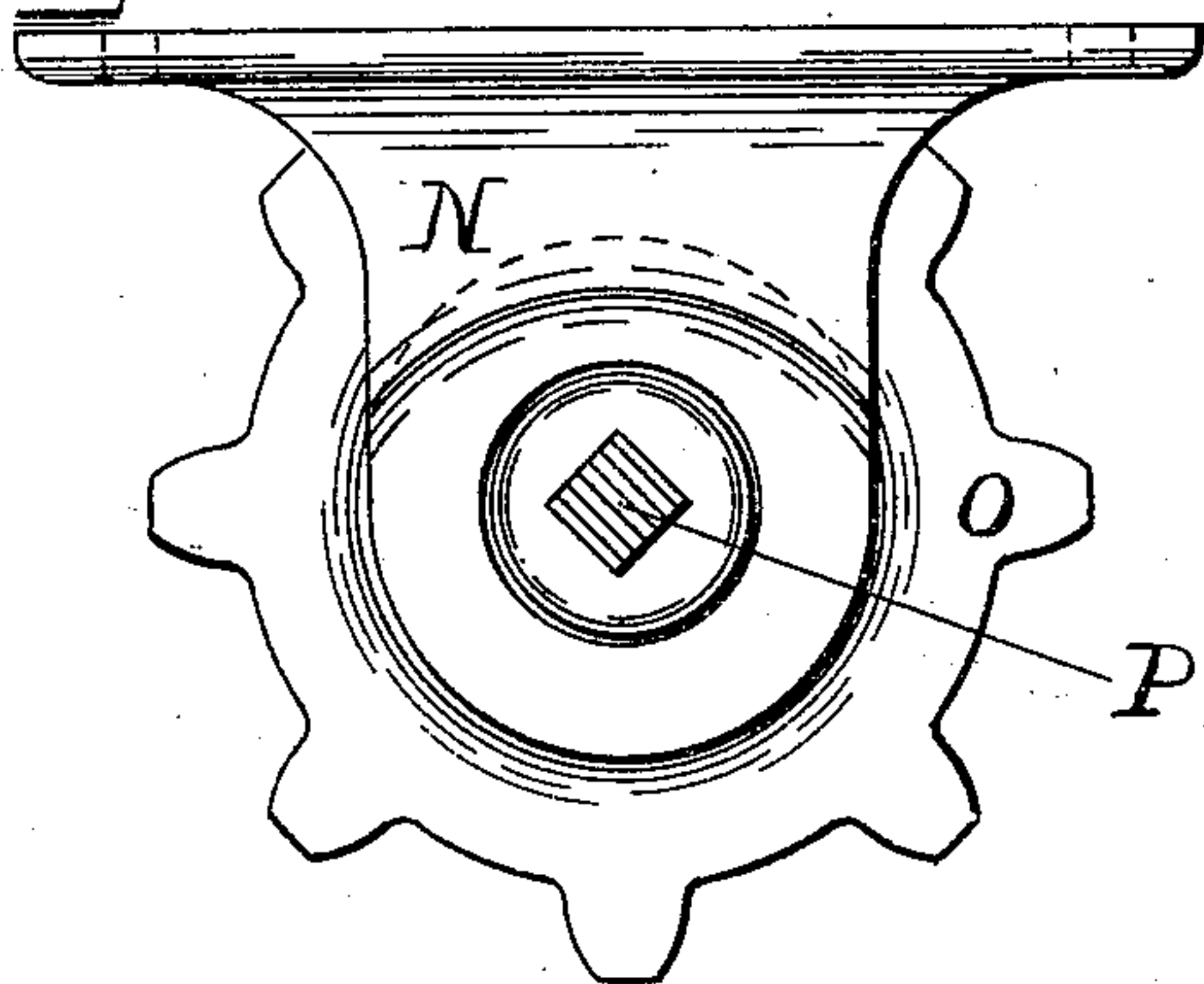


Fig 7-



WITNESSES:

George Friedman
Harvey Gates Edwards

INVENTOR

William J. Dealtry
BY
Steu & Allen
ATTORNEYS

UNITED STATES PATENT OFFICE.

WILLIAM J. DEALTRY, OF LOUISVILLE, KENTUCKY, ASSIGNOR TO THE
BRENNAN & CO. SOUTHWESTERN AGRICULTURAL WORKS, OF SAME
PLACE.

SEEDING-MACHINE.

SPECIFICATION forming part of Letters Patent No. 543,573, dated July 30, 1895.

Application filed April 11, 1895. Serial No. 545,357. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM J. DEALTRY, a citizen of the United States, residing at Louisville, in the county of Jefferson and State of Kentucky, have invented certain new and useful Improvements in Seeding-Machines, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming
10 part of this specification.

My invention relates to improvements in seeding-machines; and it consists of certain novel constructions and arrangements of parts, to be hereinafter more particularly
15 pointed out and claimed.

The first part of my invention has for its object to provide a novel arrangement and construction of metal frame for this class of agricultural implements, and has particular
20 relation to the employment of a single metal center piece which acts as a support for the connecting parts and to brace and strengthen the frame. Heretofore such center pieces
25 have been constructed of several pieces of wood, with the various metal parts bolted thereto, and with this construction the wood is liable to warp and the joints work loose, and to obtain sufficient strength the center
30 pieces must necessarily be made heavy and cumbersome. It is to overcome this defect and to combine lightness with strength and durability that this part of my invention is directed.

A second part of novelty consists in the
35 particular construction of sprocket-wheel and hanger on the feed-shaft under the feed-box, whereby the least possible space is occupied between the feed and the adjacent hopper end. It is frequently desired, in certain sections of the country where the land is rich
40 and especially adapted to the raising of grain, to sow the seed in narrow rows of five or six inches apart. In seeding implements as heretofore constructed, where the feed-cups are
45 thus located close together, the ordinary construction of hanger and sprocket-wheel for driving the feed-shaft cannot be used, because the space taken up by these parts is too great, and consequently it has been cus-
50 tomary to drive the feed-shaft in such ma-

chines by heavy and expensive train of gearing connecting the feed-shaft with the axle. This train of gearing is much more complicated and liable to breakage than the sprocket-wheel arrangement, and it is the purpose of
55 this part of my invention to utilize the sprocket-wheel method of driving the feed-shaft by means of a novel construction and arrangement of hanger and sprocket-wheel designed to occupy very little space.

The third part of my invention consists in a novel, simple, and cheap method for automatically throwing the feed into and out of gear simultaneously with the raising of the
60 drills of the seeding-machine.

In the drawings, Figure 1 is a plan view of the seeder-frame, with axle and shifting-clutch mechanism. Fig. 2 is a side view of same. Fig. 3 is a side view of the malleable-iron center piece. Fig. 4 is a sectional view
65 of the shifting mechanism. Fig. 5 is a plan view of same, with a portion of the frame broken away. Fig. 6 is a front view of the clutch-shifting device. Fig. 7 is a side view of the sprocket and hangers on the feed-shaft
70 under the seed-hopper. Fig. 8 is a longitudinal section of same.

In the drawings, A is a front portion of the metal frame of the machine, preferably made of angle iron or steel, to which the drag-bars
80 to secure the shoes or hoes are attached.

CC are the ends or sides of the frame, preferably made of malleable iron and securely bolted to the frame A, and B is a cross-piece connecting the end pieces, also preferably
85 made of angle iron or steel.

D is a malleable-iron center piece and is used principally in seeding-machines of large size and acts as a support for the connecting parts. At the point where the cross-piece B
90 intersects the center piece a lip or shoulder D' is formed thereon, which shoulder extends over the cross-piece B, as shown in Fig. 3, and relieves the bolts or rivets D² from any excessive strain.

D³ is a pin which is cast integral with the center piece D and is inserted through a hole in the front piece A and then riveted thereto, while two additional rivets or bolts on top
95 unite the parts firmly together. As has been
100

already stated, I believe this malleable-iron center piece, with its lip projecting over the cross-piece and with the pin cast on the front end thereof, is a novel construction and arrangement, and it takes the place of the older forms of wooden center piece which have heretofore been made in several pieces, which, as has already been stated, are liable to warp and loosen the joints.

E is the hollow rocker-bar extending across the rear of the frame and supported on the end pieces C C and center piece D. To this rocker-bar are attached the arms connecting the same in the usual way with the shoes or hoes, and the bar is rocked back and forth by means of the usual ratchet-lever and arch placed either at the ends or at the center. These parts are not shown in the drawings, as they are of the usual and well-known construction.

F is the axle for the carrying-wheels of the machine, extending across under the frame and working in the journal-boxes G G, which are supported in the ends or sides of the frame C C. Mounted on this axle, preferably at one end, is the clutch-collar H, secured rigidly thereto by the set-screw H'.

I is the combination sprocket-wheel and clutch-collar mounted loosely on the axle, and when the machine is in operation it is held in clutch with the collar H by the coiled spring I', which is secured in position on the axle by the set-collar I².

J is a forked shifter-crank pivoted by means of a stud-bracket to the cross-piece B, the forked end of which engages with a groove in the sprocket clutch-collar I. The other or outer end of this shifter is provided with an opening through which passes the connecting-rod K, which is secured to the rocker-bar E by means of the rocker-arm K². A cotter-pin K³ is secured to the other end of this connecting-rod K, so that when the rocker-bar is rocked backward to raise the shoes or drills the cotter-pin engages with the end of the shifter, thus turning the same and throwing the sprocket clutch-collar out of engagement with the fixed clutch H on the axle. When the rocker-bar E is thrown forward, the connecting-rod slips through the opening in the end of the shifter and the coiled spring I' throws the sprocket-clutch again in connection with the axle.

A sprocket chain (not shown) connects the sprocket I with a sprocket-wheel O, mounted on the feed-shaft P and supported in the hangers N N' secured to the bottom of the seed-box.

As has already been stated, as ordinarily constructed the feed-shaft sprocket-wheel and hangers therefor take up too much space to allow the seed-cups to be placed closely together. To remedy this defect the web of the sprocket-wheel O is recessed on both sides, as shown in Fig. 8, to a depth corresponding to the thickness of the lower ends of the sup-

porting-hangers, so that the hangers are flush with the outer edge of the sprocket-hub and occupy no additional space on the feed-shaft P.

L L' are stay-rods extending the full length of the machine and secured to the outside ends of the frame by nuts, these rods acting as supports and preventing any tendency to sag in the frame, while M is the rear end of the hitch-bar that supports the doubletrees and is fastened to the center piece D.

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

1. In a seeding machine, the combination, with a metallic frame therefor, of a metallic center piece having a lip or shoulder formed thereon, and cross piece connecting the frame ends and secured to said center piece under and against said overhanging lip, substantially as shown and described.

2. In a seeding machine, the combination, with a metallic frame therefor, of a metallic center piece having a lip or shoulder formed thereon, and a pin integral therewith at its forward end, with cross piece connecting the frame ends and secured to said center piece under and against said overhanging lip, and front piece with hole therein for the reception and riveting thereto of said pin, substantially as shown and described.

3. In a seeding machine, the combination, with a sprocket clutch mechanism for communicating motion to the seeding devices, of a shifting crank pivoted to the frame in engagement with said clutch mechanism, a rocker bar for elevating the shoes or hoes of the machine and a rod connecting said rocker bar and shifting crank, whereby upon the elevation of the shoes the sprocket clutch will be disconnected, substantially as shown and described.

4. In a seeding machine, the combination, with the axle, of a spring controlled sprocket clutch in connection with a rigid clutch on said axle, a shifting crank pivoted to the frame in engagement with said sprocket clutch, hole in the outer end of said crank with rod sliding therein in one direction, and pin on said rod contacting with said shifter when the rod is shifted in the other direction, rocker bar for elevating and depressing the drill shoes, and rock arm thereon to which said rod is connected, whereby the elevation of the shoes will disconnect said clutch mechanism, substantially as shown and described.

5. In a seeding machine a sprocket wheel for driving the feed shaft with annular recesses in its web on both sides and a hanger for supporting same fitting within said annular recesses so as to be flush with the hub thereof substantially as shown and described.

WILLIAM J. DEALTRY.

Witnesses:

W. O. MARSTRAND,
L. W. HOMIRE.