

(No Model.)

J. MACPHAIL.
MOWER.

4 Sheets—Sheet 1.

No. 604,901.

Patented May 31, 1898.

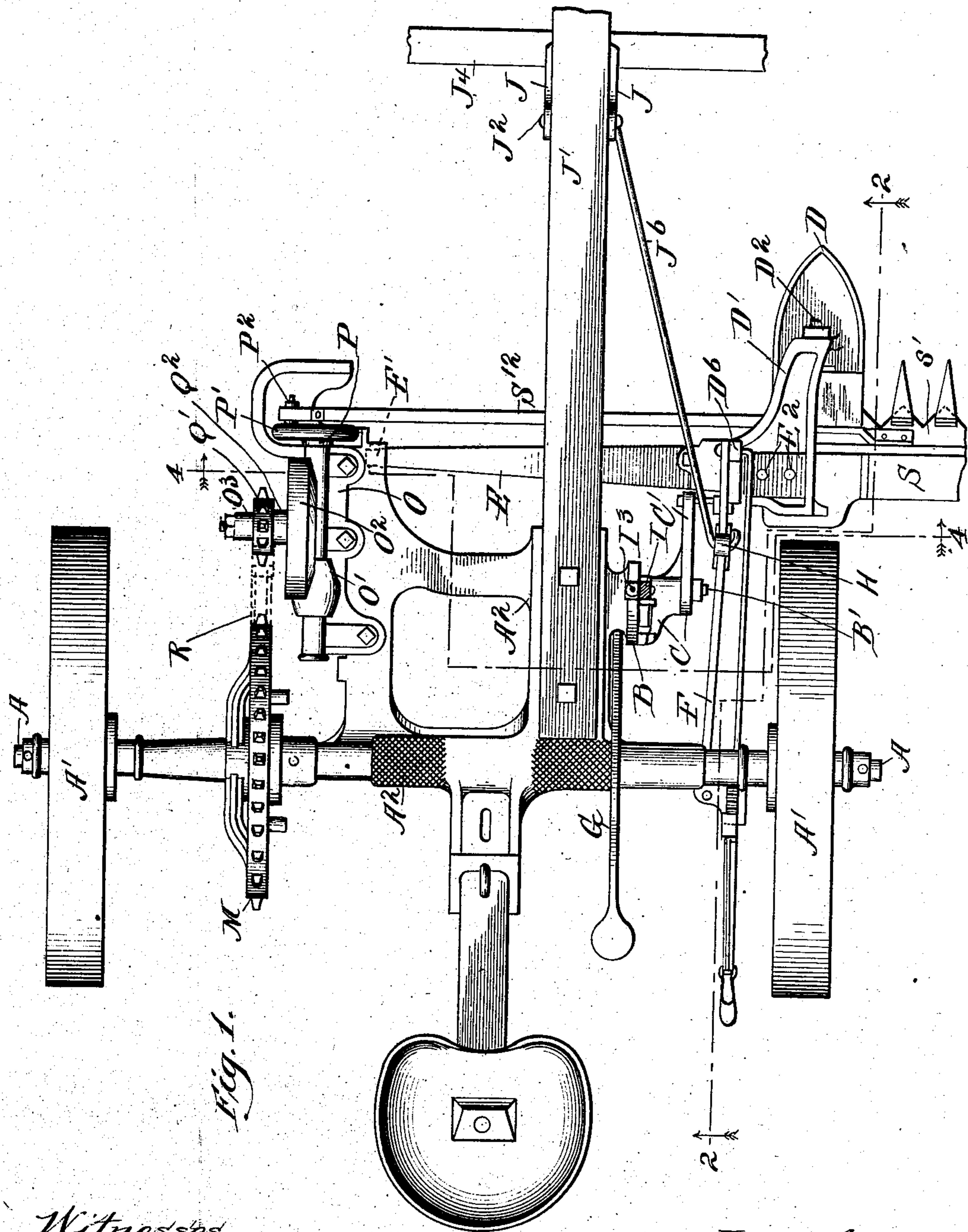


Fig. 1.

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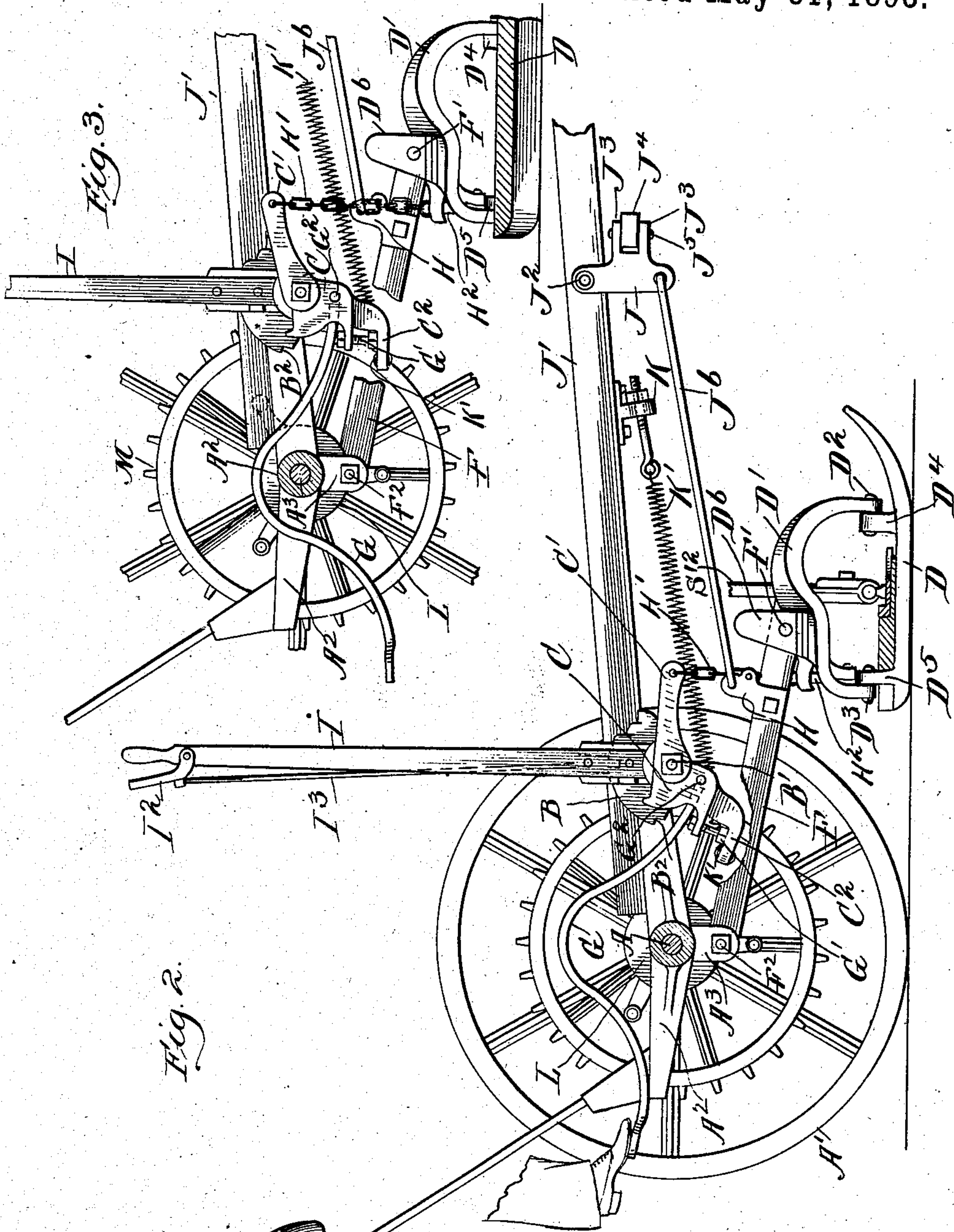
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4 Sheets—Sheet 2.

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No. 604,901.

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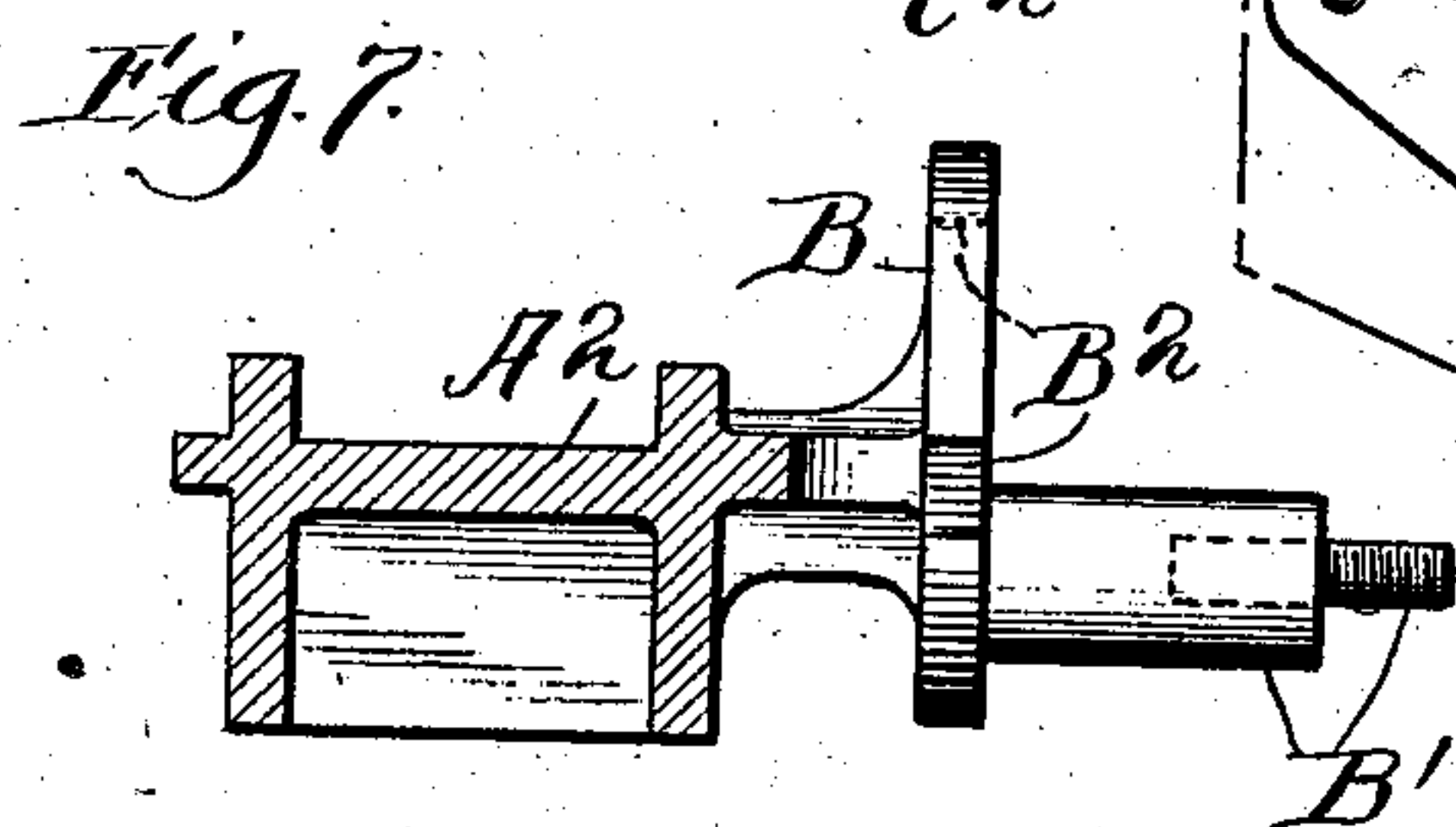
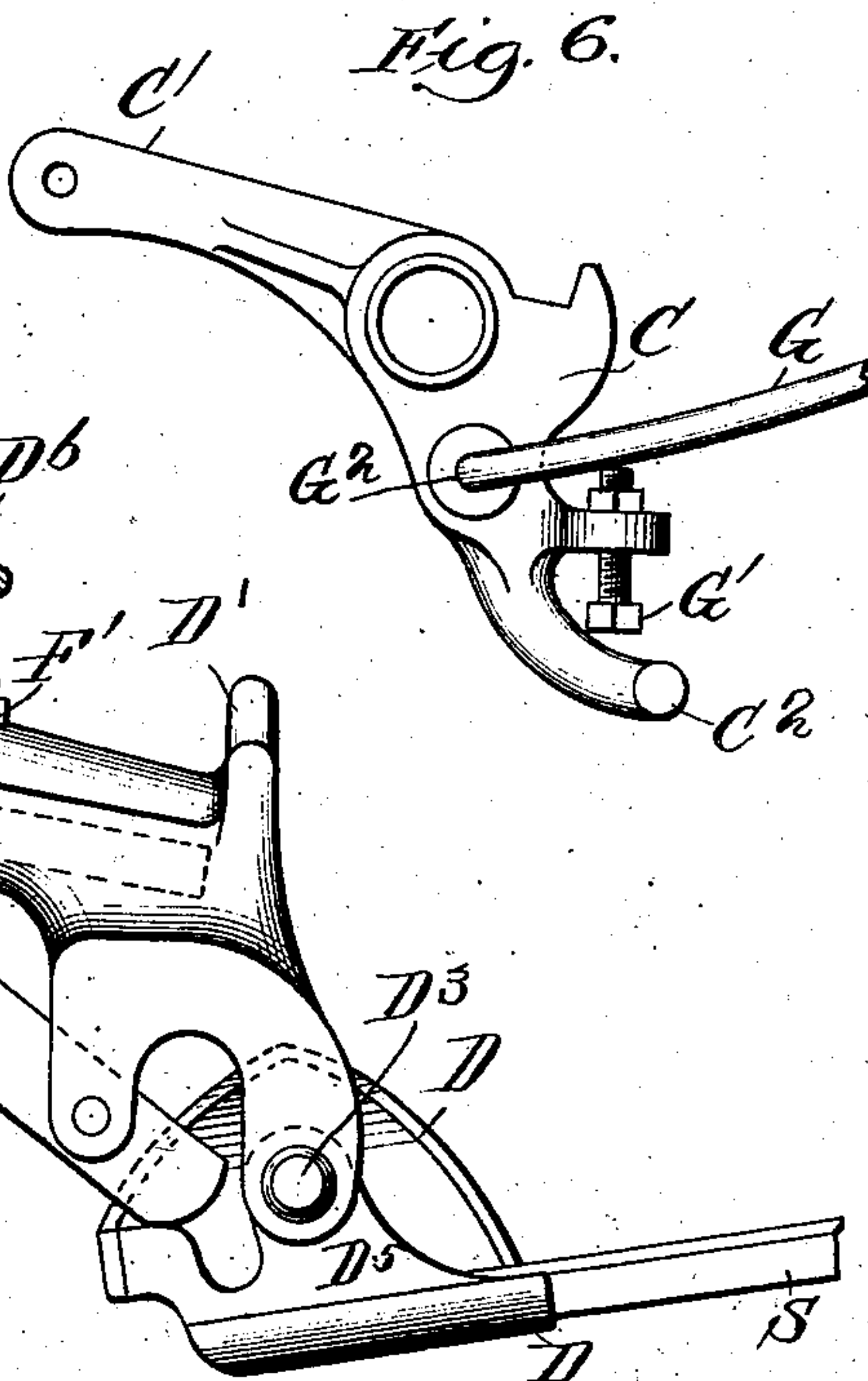
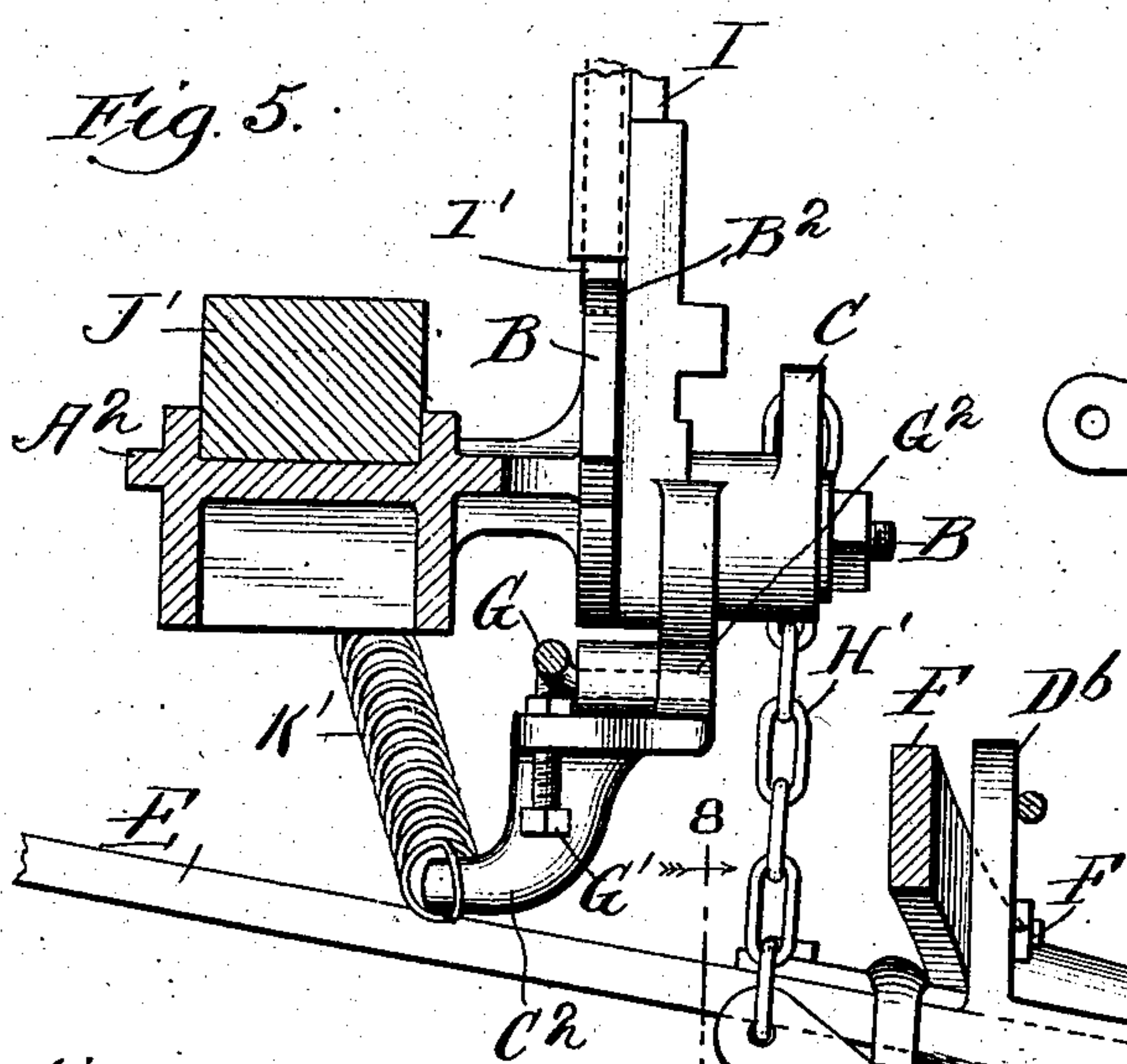
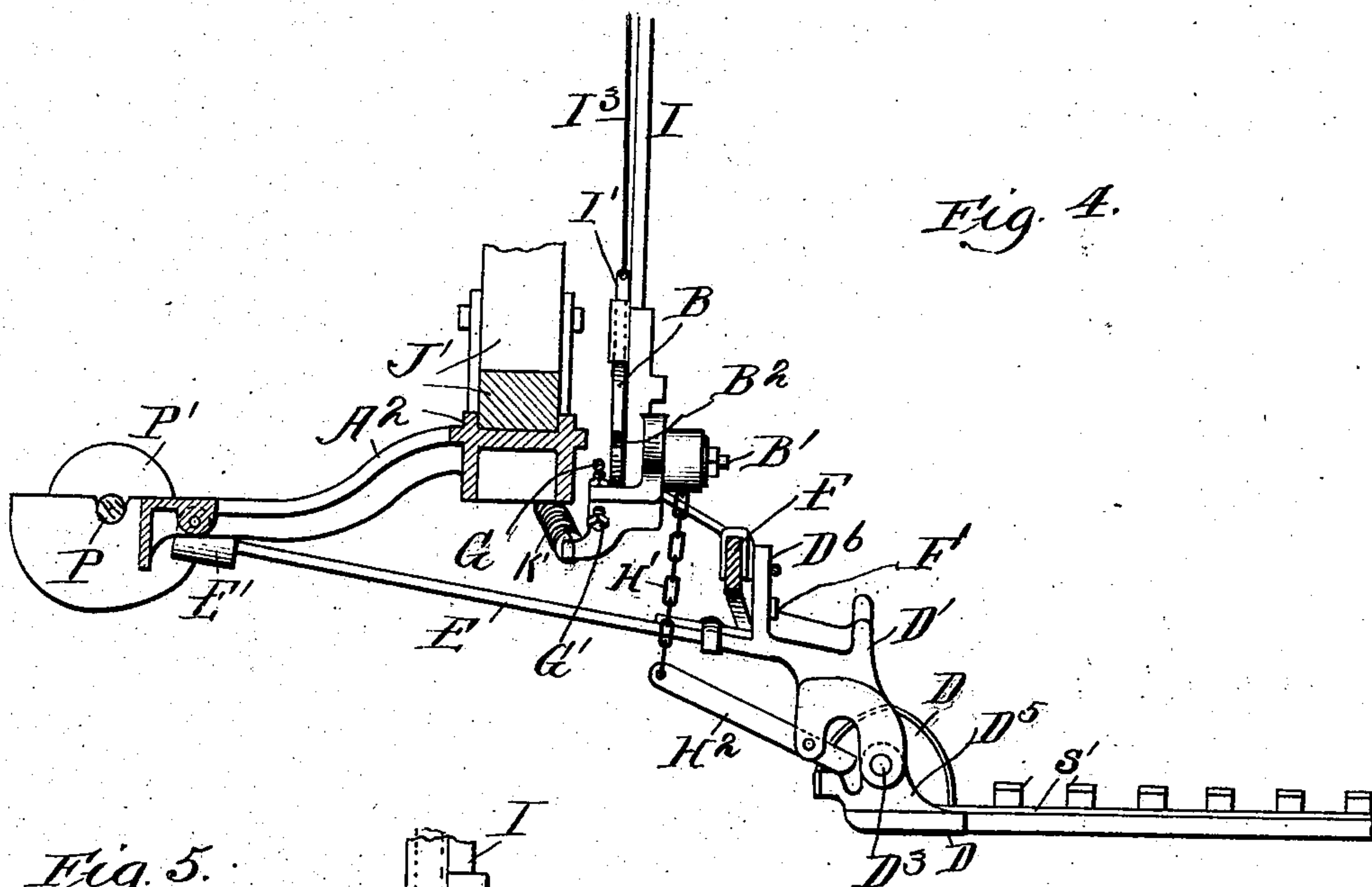
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4 Sheets—Sheet 3.

No. 604,901

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4 Sheets—Sheet 4.

No. 604,901.

Patented May 31, 1898.

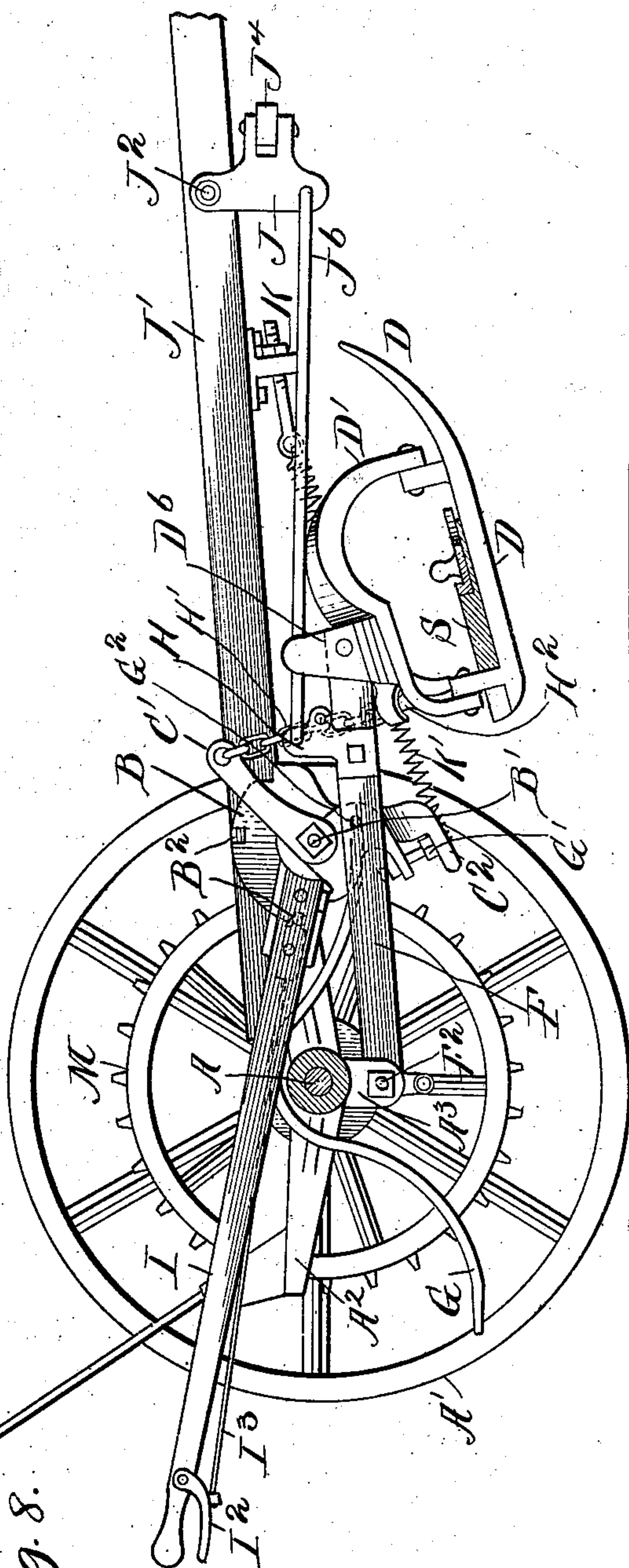


Fig. 8.

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UNITED STATES PATENT OFFICE.

JAMES MACPHAIL, OF BLUE ISLAND, ILLINOIS.

MOWER.

SPECIFICATION forming part of Letters Patent No. 604,901, dated May 31, 1898.

Application filed August 7, 1896. Serial No. 602,104. (No model.)

To all whom it may concern:

Be it known that I, JAMES MACPHAIL, a citizen of the United States, residing at Blue Island, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Mowers, of which the following is a specification.

The object of my invention is to make the finger-bar raising and lowering devices operative by hand or foot, and operating independently of or simultaneously with each other; and my invention consists of certain new and useful features of construction and combinations of parts hereinafter fully described, and specifically pointed out in the claim.

Referring to the accompanying drawings, which form a part of this specification, Figure 1 is a plan view of a mower embodying my invention. Fig. 2 is a section on the line 2 2 in Fig. 1. Fig. 3 is a like section showing the foot lifting-lever of the machine depressed. Fig. 4 is a detail section on the line 4 4 in Fig. 1. Fig. 5 is a section on the same line as the last, showing the finger-bar and shoe of the machine tilted. Fig. 6 is a side elevation of a finger-bar-lifting device. Fig. 7 is a detail elevation showing a rack and the spindle-bearing of the finger-bar-lifting device. Fig. 8 is a side elevation of the machine, showing the hand and foot lifting-levers depressed and the finger-bar elevated thereby.

Like letters of reference indicate corresponding parts throughout the several views.

A A' A² are respectively the axle, wheels, and main frame of the mower.

B is a rack mounted on the main frame A² of the machine and having a spindle B' projecting therefrom and detent-notches B² therein.

C is a finger-bar-lifting device provided with an upwardly and forwardly projecting arm C', a downwardly and backwardly projecting arm C², and mounted on the spindle B', so that it may be freely oscillated thereon.

D is the inner shoe of the mower.

D' is a yoke jointed by pivots D² D³ to upwardly-projecting lugs D⁴ D⁵ on the shoe D.

D⁶ is a tilting-post rigidly connected with the upper portion of the yoke D'.

E is a coupling-bar having a universal connection by one end at E' with the main frame

A² and being fastened by means of bolts E³ at the other end to the yoke D'.

F is a push-bar pivoted by one end to the tilting post D⁶ at F' and by the other end at F² to the rigid downwardly-projecting lug A³ on the main frame A².

The coupling-bar E, yoke D', and push-bar F constitute what is commonly known as the "floating frame" of a mower.

G is a foot lifting-lever pivotally connected at G³ with the free end portion of the arm C² of the finger-bar-lifting device C and adapted to operate therethrough to raise the floating frame of the machine.

G' is a set-screw for adjusting the elevation of the foot-lever G.

H is a draft-rod bracket secured to the push-bar F.

H' is a link or any other suitable connection through the gag-lever H² between the free end of the arm C' of the finger-bar-lifting device C and the floating frame of the machine.

I is a hand lifting-lever rigidly connected with the finger-bar-lifting device C and mounted on the spindle B', which passes through a circular opening (not shown) in the lower end thereof.

I' is a detent adapted to engage with any of the notches B² in the rack B.

I² is a hand-latch pivoted to the upper end of the hand lifting-lever I.

I³ is a rod connecting the detent I' with the hand-latch I².

J is a clevis suspended from the machine-tongue J' by means of a pivot-joint J², so as to freely swing thereon.

J³ are jaws integral with the clevis J and carry an evener J⁴, which is jointed thereto by means of a bolt J⁵.

J⁶ is a draft-rod connecting the clevis J, through the bracket II, with the push-bar F.

K is a bracket secured to the tongue J' of the machine.

K' is an auxiliary spring extending from the free end portion of the arm C² of the lifting device C to the bracket K on the tongue J'.

M is a main sprocket-wheel.

O is a bracket bolted to the main frame A², having a crank-shaft box O', extending longitudinally therethrough, provided with a recessed circular shield O², having an axle O³,

projecting at right angles to crank-shaft box O' from the inside of the center of said shield. The parts O, O', O², and O³ are formed by casting them in a single piece.

5 P is a crank-shaft provided with a crank-wheel P', having a wrist-pin P² projecting therefrom and mounted in the crank-shaft box O'.

Q' is a sprocket mounted on the axle O³.

10 R is a drive-chain connecting the main sprocket-wheel M with the sprocket Q'.

S is a finger-bar secured to the shoe D.

S' is a sickle connected with the crank-wheel P' by means of a pitman S².

15 Whenever it is desired to temporarily raise the finger-bar for any purpose, the operator will press his foot on the foot lifting-lever G. If, however, it is desired to raise the finger-bar C to and secure it at its upper limit, the
20 operator will press the hand lifting-lever I downward to the position shown in Fig. 8, when the detent I', Fig. 5, will engage with the lowest notch B², Fig. 3, in the rack B. Obviously the levers G I may be used con-
25 jointly and simultaneously or separately, according as may be most desirable or advantageous to the operator.

I do not desire to claim herein the invention shown by combining the main frame A²
30 and bracket O, cast in one piece and bolted to

the frame A². The invention shown thereby is the subject-matter of a separate application, having Serial No. 602,105, filed August 7, 1896, and it has been hereinbefore described for the purpose of showing its operation in 35 connection and combination with other devices to form a complete mower.

I claim—

In a front-cut mower, in combination, the main axle, the main frame mounted thereon, 40 a rack mounted on the main frame and having a spindle projecting therefrom, the finger-bar-lifting device provided with an upwardly and forwardly projecting arm C' and a downwardly and backwardly projecting 45 arm C² and mounted on said spindle, the floating frame of the machine, a connection between the free end of the arm C' and the floating frame of the machine, and a foot lifting-lever pivotally connected with the free end 50 portion of the arm C² of the finger-bar-lifting device and adapted to operate therethrough to raise the floating frame and having its elevation adjustable by means of a set-screw, substantially as and for the purpose specified. 55

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Witnesses:

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