

(No Model.)

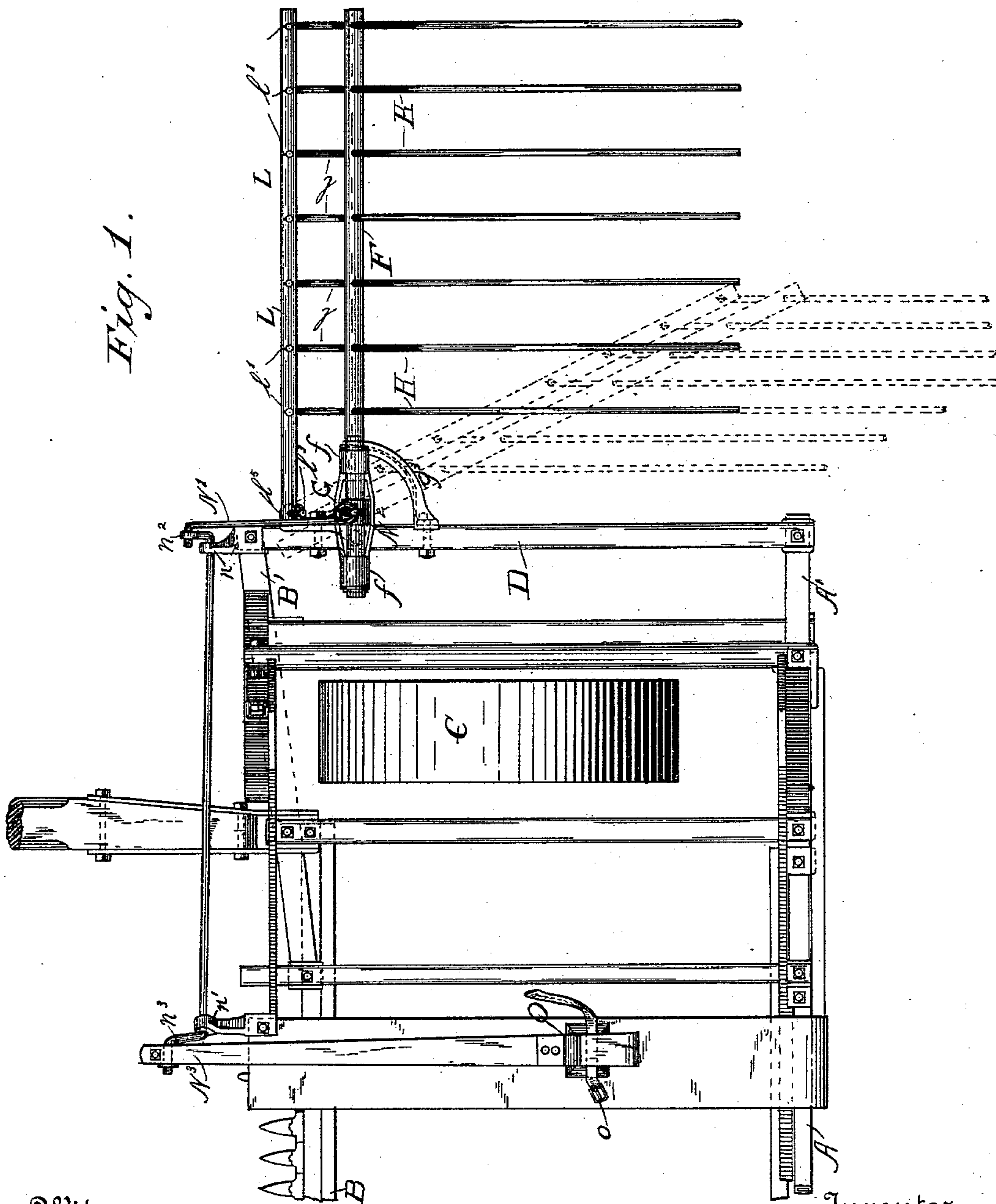
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E. M. KELLOGG.
SHEAF CARRIER.

No. 420,274.

Patented Jan. 28, 1890.

Fig. 1.



Witnesses

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Inventor

Edwin M. Kellogg

By his Attorneys

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Joseph G. Pinnney

(No Model.)

3 Sheets—Sheet 2.

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Fig. 3

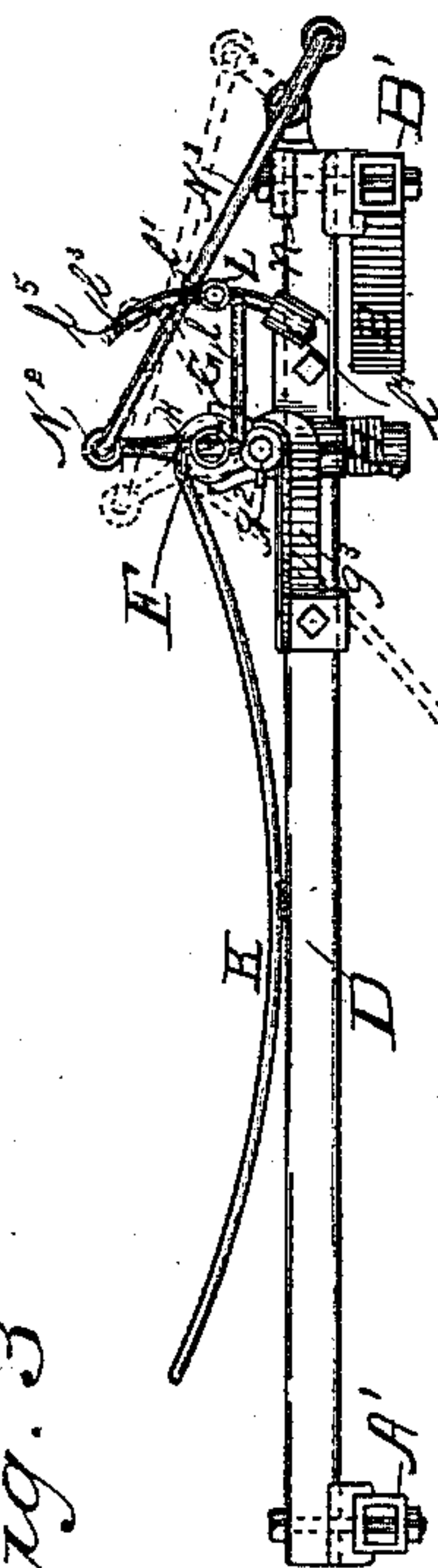
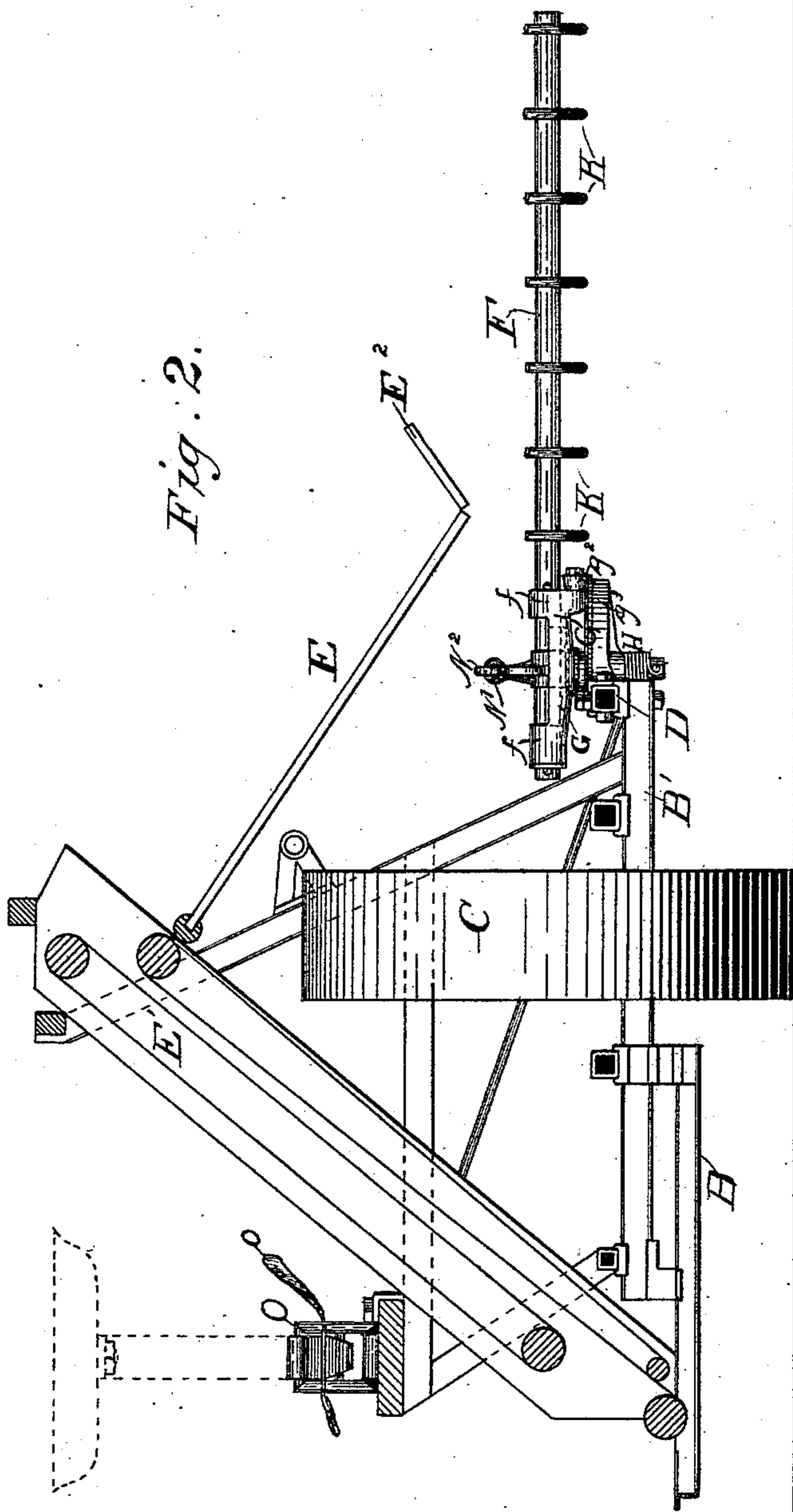


Fig. 2.



Witnesses

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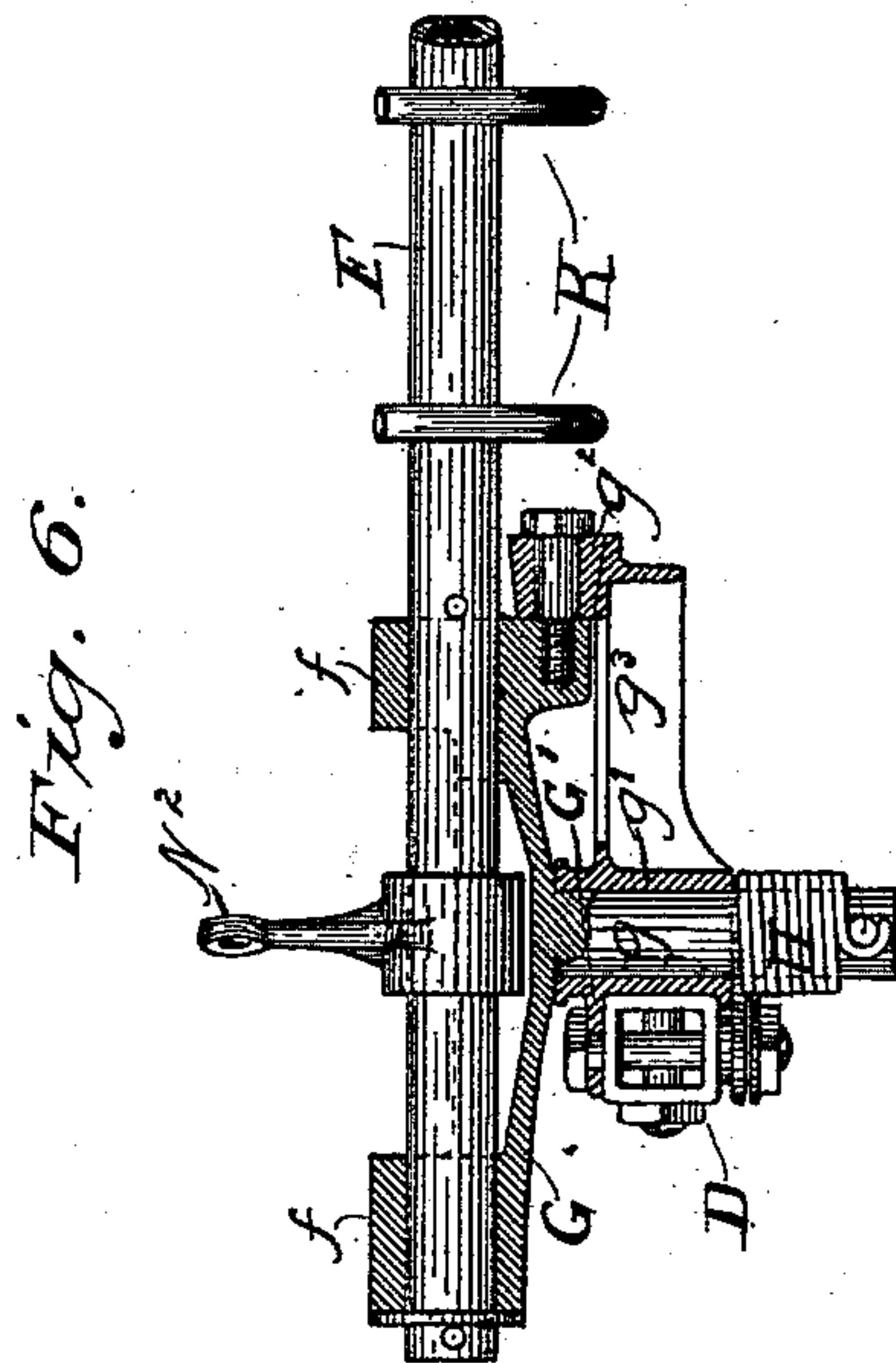
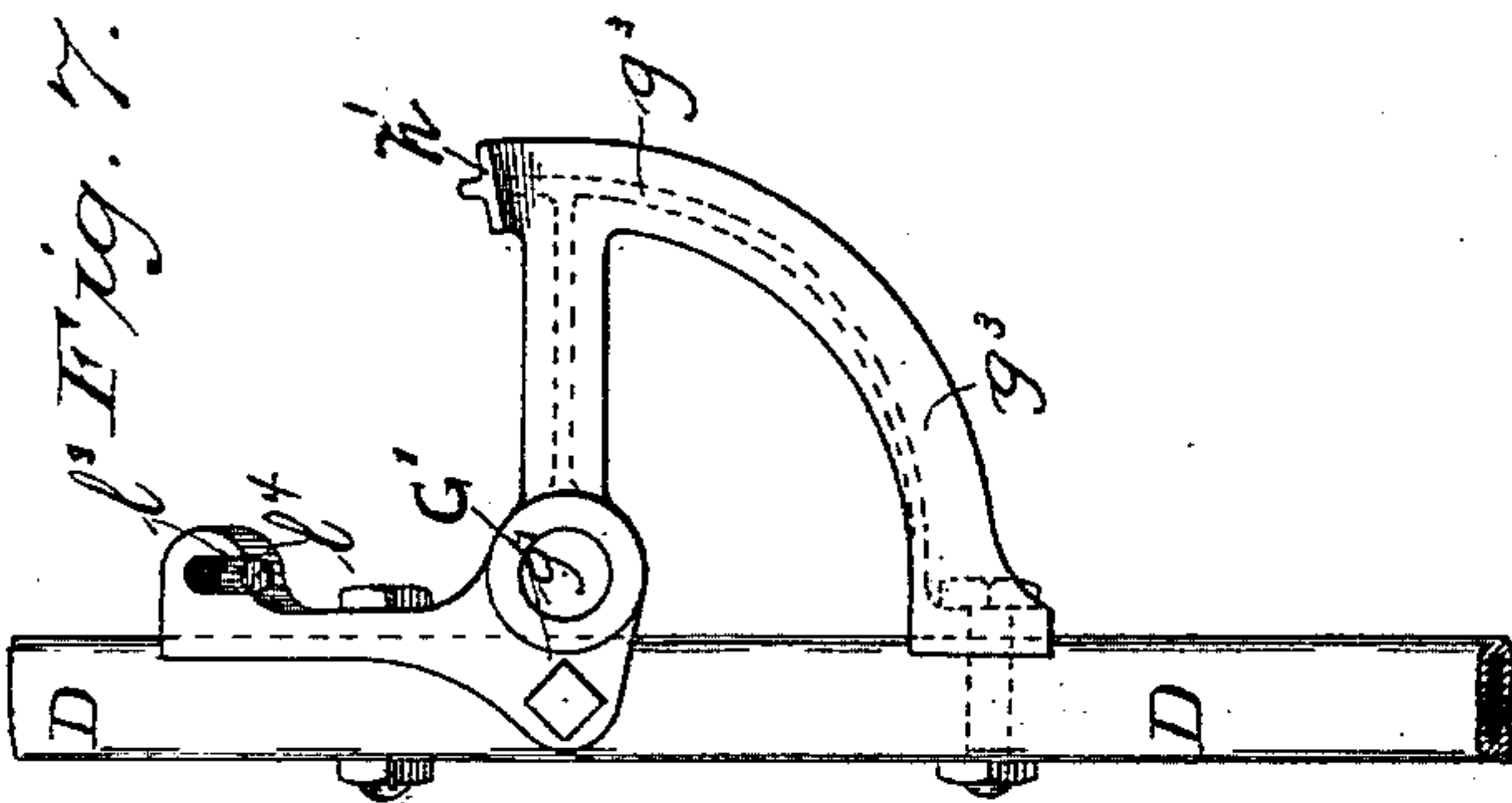
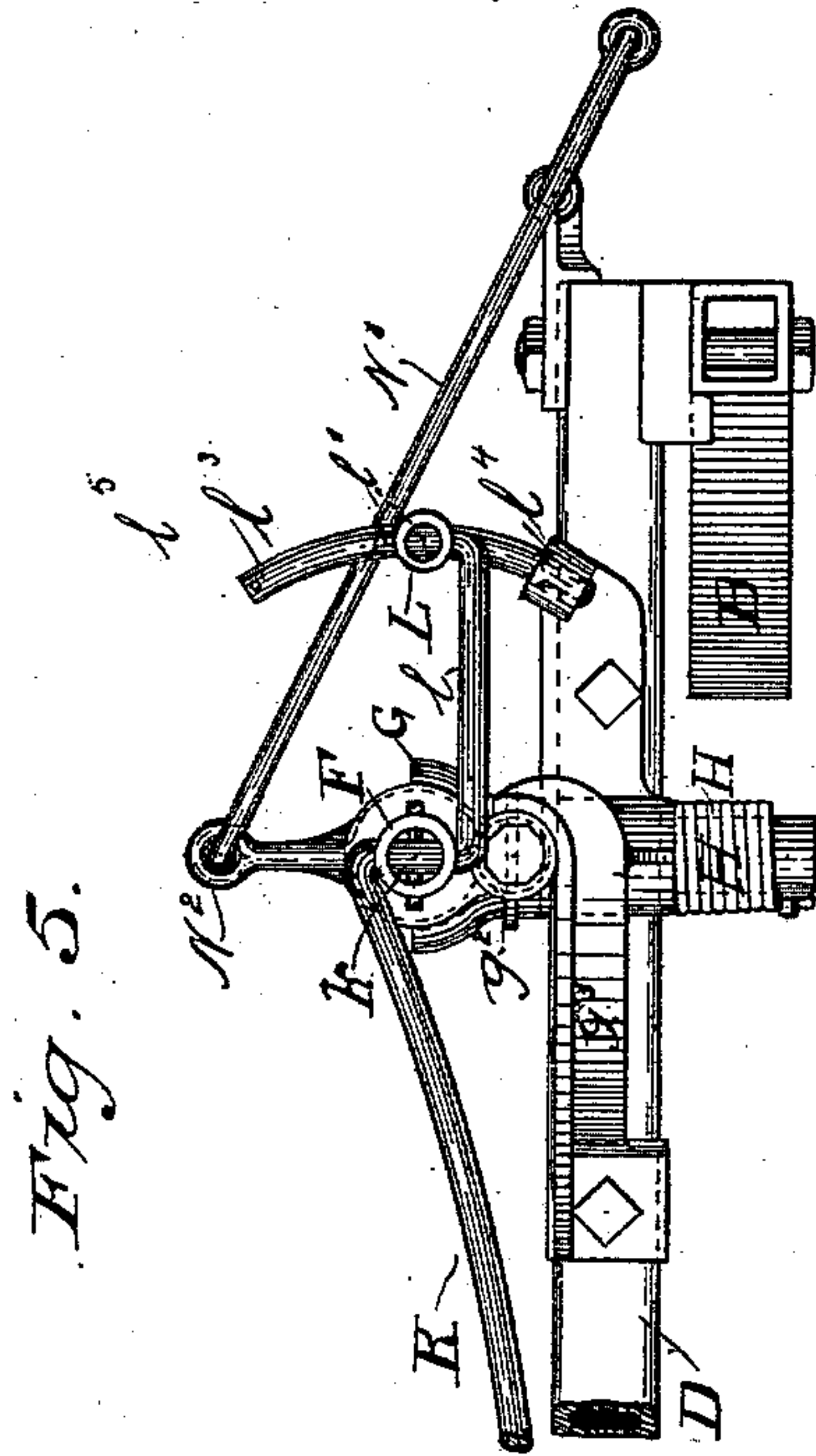
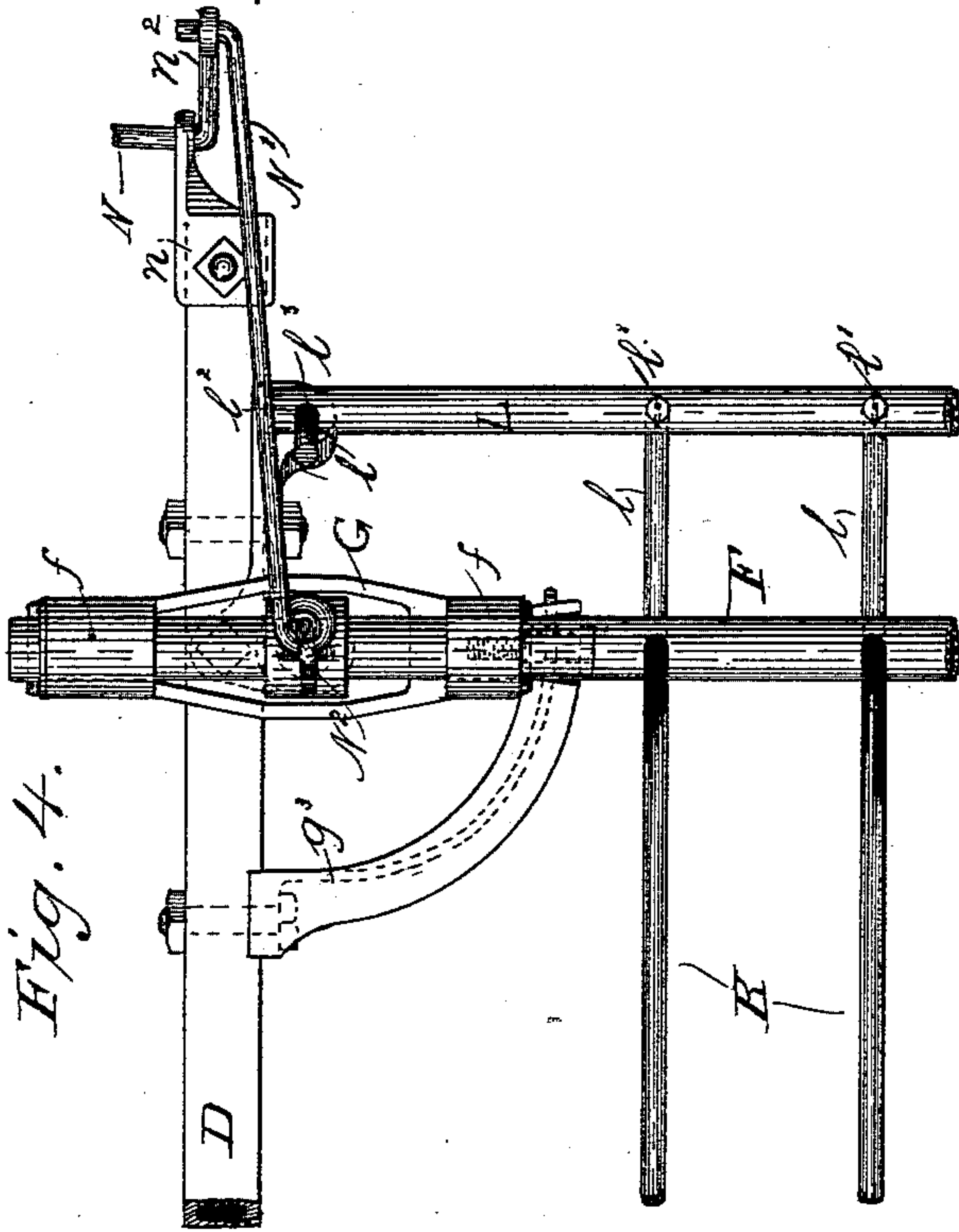
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UNITED STATES PATENT OFFICE.

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SHEAF-CARRIER.

SPECIFICATION forming part of Letters Patent No. 420,274, dated January 28, 1890.

Application filed May 14, 1889. Serial No. 310,738. (No model.)

To all whom it may concern:

Be it known that I, EDWIN M. KELLOGG, a citizen of the United States, residing at Delavan, in the county of Walworth and State of Wisconsin, have invented certain new and useful Improvements in Sheaf-Carriers, of which the following is a specification.

The object of this invention is to construct a slatted carrier in such manner that it may be tilted directly upon an axis transverse to the line of advance of the machine or parallel with the line of reception of the sheaf, but may yield and fold in, each individual finger by itself, upon meeting any obstruction or for the purpose of passing through a gate, and to this end a rocking supporting-bar is mounted upon the fore part of the harvester-frame, projecting therefrom at right angles to the line of advance of the machine, and to this bar are secured a series of fingers or teeth having individual pivots thereon that permit them to fold parallel with the bar. A second bar, preferably in front of the rocking bar, lies parallel therewith, and is connected with said teeth by keepers—one for each tooth or for a heel-extension thereof—and is also connected with the harvester-frame by a rod or guide which permits its vertical play and stops it against endwise displacement, thus insuring a sort of parallel movement to the two bars and to the teeth whenever said bars are by any means swung rearward on their pivotal connections with the frame, shutting the teeth in alongside of the rocking bar. A spring holds the rocking bar in its normal position at right angles to the line of advance of the machine, and a lever-connection, with controlling devices operated by the driver, enables said bar to be held against rocking on its longitudinal axis or released that the carrier-fingers may fall and dump the load.

In the drawings, Figure 1 is a top plan view of a carrier constructed according to my invention, showing also part of the harvester-frame. Fig. 2 is a rear elevation thereof, showing grain deck or chute and elevator-frame, the latter in section; Fig. 3, an elevation of the carrier from the stubble side, explaining its operation in dumping; Figs. 4

and 5, enlarged details in top plan and stubble side elevation of the mechanism for supporting and operating the carrier; Fig. 6, a like detail in transverse section seen from the rear, and Fig. 7 a top plan view of the main bracket whereby said carrier is supported.

A represents the rear platform-sill and A' the rear elevator-sill, B the front platform-sill and finger-bar, and B' the front elevator-sill, of a harvester, these sills, except the front platform-sill, being herein shown as formed of square pipes, as are also the cross-girts of the elevator-frame, but this form being selected only as an exponent of any suitable construction.

C is the main wheel, and D the outer girt; E, the grain-deck receiving from the elevator E', and having at its foot or discharge end a delivery-board E², as usual in modern grain-binders. Automatic binding mechanism of any appropriate type will of course be located over and beneath this grain-deck; but it is not deemed necessary to show it in the drawings.

F is a supporting-bar for the carrier-fingers rocking in a horizontal bearing or bearings *f*, formed in a swiveling block G, which is preferably supported upon a bracket G', secured to the outer girt or one of the outer girts of the machine. Toward the front end thereof the swiveling block is connected with the bracket by a pendent pivot-pin *g*, which turns in a vertical sleeve *g'* on said bracket, so that the block may be swung about in a horizontal direction to permit the rocking supporting-bar to fold in toward parallelism with the girt. At its outer or stubble end the block carries a small anti-friction wheel *g*², traveling upon a segment-track *g*³, outsetting from and forming part of the supporting-bracket and arranged in a horizontal plane, thus giving two points of support to the rocking bar—the first that which is due to the connection of the pivot-pin with its sleeve, and the second that afforded by the segmental track; but it will be understood that this track is mainly for additional support and greater security, and may be modified or dispensed with under suitable circumstances.

A spring H, which may be coiled about the pivot-pin, connects the swiveling block and ultimately the rocking supporting-bar with the harvester-frame—that is to say, with the outer girt or with any other suitable part of said frame—and serves to hold said bar in its normal position projecting at right angles to the advance of the machine, where it is stayed by a stop h' at the front end of the segmental track against the stress of said spring.

To the rocking bar, which will be advisably of gas-pipe, is secured a series of rearwardly-projecting carrier-fingers K, each having an individual upstanding pivotal connection k with said bar, so that it may be folded in theretoward and brought practically parallel therewith. These pivotal connections are herein shown as formed by a vertical bend in the body of the fingers passing directly through the bar; but it is obvious that other means may be adopted.

In front of the rocking bar is another but lighter bar L, parallel therewith and connected to a heel-extension l from each finger by vertical pivot-pins l' , which may be integral with such heel-extension, as shown, so as to permit such extension to fold practically into line with this bar, which may be termed the “controlling-bar.” At the inner end said controlling-bar is bored or slotted, as at l^2 , so as to play vertically upon a curved rod or guide l^3 , fixed to the supporting-bracket on the end sill of the harvester-frame between the seat l^4 on the bracket and the stop l^5 at the top of the guide, the former marking the receiving position of the carrier and the latter the limit of the dumping movement. This rod or guide permits a hinge movement to the controlling-bar that it may be swung in alongside of the girt whenever the carrier meets an obstruction, but prevents endwise movement of said bar, so that as long as the rocking bar is in its normal position the carrier-fingers must remain parallel with each other at right angles to said rocking bar and parallel with the line of advance of the machine.

Now, supposing that the carrier meets a stump or other obstruction of such height that it cannot pass over it, the controlling-bar, and the rocking-bar as well, will be pushed back, swinging upon their pivotal connections with the machine, until they have closed in sufficiently toward the end to enable them to pass the obstruction. In this movement the action of the controlling-bar upon the heel-extensions of the carrier-fingers will cause them to hinge upon their pivotal connections with the rocking bar, and, still retaining their parallelism with each other, to close in or shut in toward said bar and each other to an extent determined by the proximity of the obstruction to the end girt. As soon, however, as this obstruction is passed the force of the spring will return the rocking supporting-bar to its normal position,

carrying with it the controlling-bar and the carrier-fingers, which will spread apart from each other until once again in receiving position, when further movement will be barred by the stop at the front end of the segment-track.

As thus far described, it is evident that the carrier is free to tilt whenever a sufficient load is brought upon its fingers to overcome their balance, or in case that part of the fingers to the rear of the rocking bar is of sufficient weight to overcome the aggregate weight of the heel-extension and controlling-bar. In order to prevent this and bring the time of tilting or discharging under the control of the driver, a long bell-crank N is arranged in front of the elevator-frame, being supported at one end in a bearing n at the forward end of the outer girt and at the other end in a bearing n' , projecting from the seat-plank of the machine or from a suitable part of the frame. The lever-arm n^2 at that end adjacent to the carrier is connected by a link N' with an arm or standard N^2 , rising from the rocking bar vertically above its pivotal connection with the supporting-bracket; or in case this arm or standard is at a measurable distance from said pivotal point, then the link will be replaced by a flexible connection, so as not to obstruct the yielding movement to the rear, as above explained. The lever-arm n^3 at the other or inner end of the bell-crank receives one end of a foot-bar N^3 , extending rearwardly over the seat-plank and journaled upon a stirrup O, which swings in a bearing upon said seat-plank, so that when the bar is pushed to the front by the driver's foot it will hold the carrier-fingers in their receiving position, and when released will allow said fingers to drop to dispose of their load. A strap o is or may be applied to the rear end of the foot-bar, so that the foot which rests therein may be used to draw the bar back to aid the tilting or dumping movement in case this should be necessary.

It will be understood that the construction of my improved carrier may be somewhat varied in details, and I do not therefore intend to limit myself to the precise arrangement described herein and shown in the drawings; but

What I do claim is—

1. The combination, substantially as hereinbefore set forth, of the horizontal rocking bar, its bearing-block connected by a pendent pivotal pin to the machine, a series of carrying-fingers having independent pivotal connections with said rocking bar, and the controlling-bar parallel to said rocking bar, and also connected with said fingers by independent pivotal connections.

2. The combination, substantially as hereinbefore set forth, of the horizontal rocking bar, its bearing-block connected to the machine by a pendent pivotal pin, a series of rearwardly-extending fingers, each having a pivotal connection with said rocking bar, the

controlling-bar in front of said rocking bar and having independent pivotal connections with heel-extensions from said fingers, and the guide for the inner end of said controlling-bar.

5 3. The combination, substantially as here-
inbefore set forth, of the horizontal rocking
bar, its bearing-block connected to the ma-
chine by a pendent pivotal pin, a series of car-
10 rier-fingers independently connected to said
rocking bar by vertical pivots, the controlling-
bar, also independently connected to said fin-
gers by vertical pivots, the guide for said con-
trolling-bar, the standard for the rocking bar,
15 the link from said standard, and the lever
system whereby the driver may rock said bar
and hold it in position.

4. The combination, substantially as here-
inbefore set forth, of the horizontal rocking
20 bar, its bearing-block connected to the ma-
chine by a pendent pivotal connection, the
spring whereby said rocking bar is normally
retained in position at right angles to the ad-
vance of the machine, a series of carrier-fin-
25 gers having pivotal connections with said
rocking bar, the controlling-bar connected
with said carrier-fingers, and the guide for
said controlling-bar.

30 5. The combination, substantially as here-
inbefore set forth, of the supporting-bracket,
its vertical sleeve and segmental track, a stop

at the forward end of said track, a swiveling
bearing-block having a pendent pivotal pin
taking into said sleeve and at its outer end
resting upon said track, a spring whereby said 35
swiveling block is normally retained at the
forward end of said track, the rocking sup-
porting-bar mounted in said block, a series of
carrier-fingers pivoted to said supporting-bar,
the controlling-bar parallel with said support- 40
ing-bar and pivotally connected to said car-
rier-fingers, a guide for said controlling-bar,
and link-and-lever connections whereby said
supporting-bar may be rocked.

6. The combination, substantially as here- 45
inbefore set forth, of the supporting-bracket,
its vertical sleeve and segmental track, a swiv-
eling bearing-block having a pendent pivotal
pin taking into said sleeve and at its outer
end resting upon said track, the rocking sup- 50
porting-bar mounted in said block, a series of
carrier-fingers pivoted to said supporting-bar,
the controlling-bar parallel with said support-
ing-bar and pivotally connected to said car-
rier-fingers, a guide for said controlling-bar, 55
and link-and-lever connections whereby said
supporting-bar may be rocked.

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Witnesses:

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