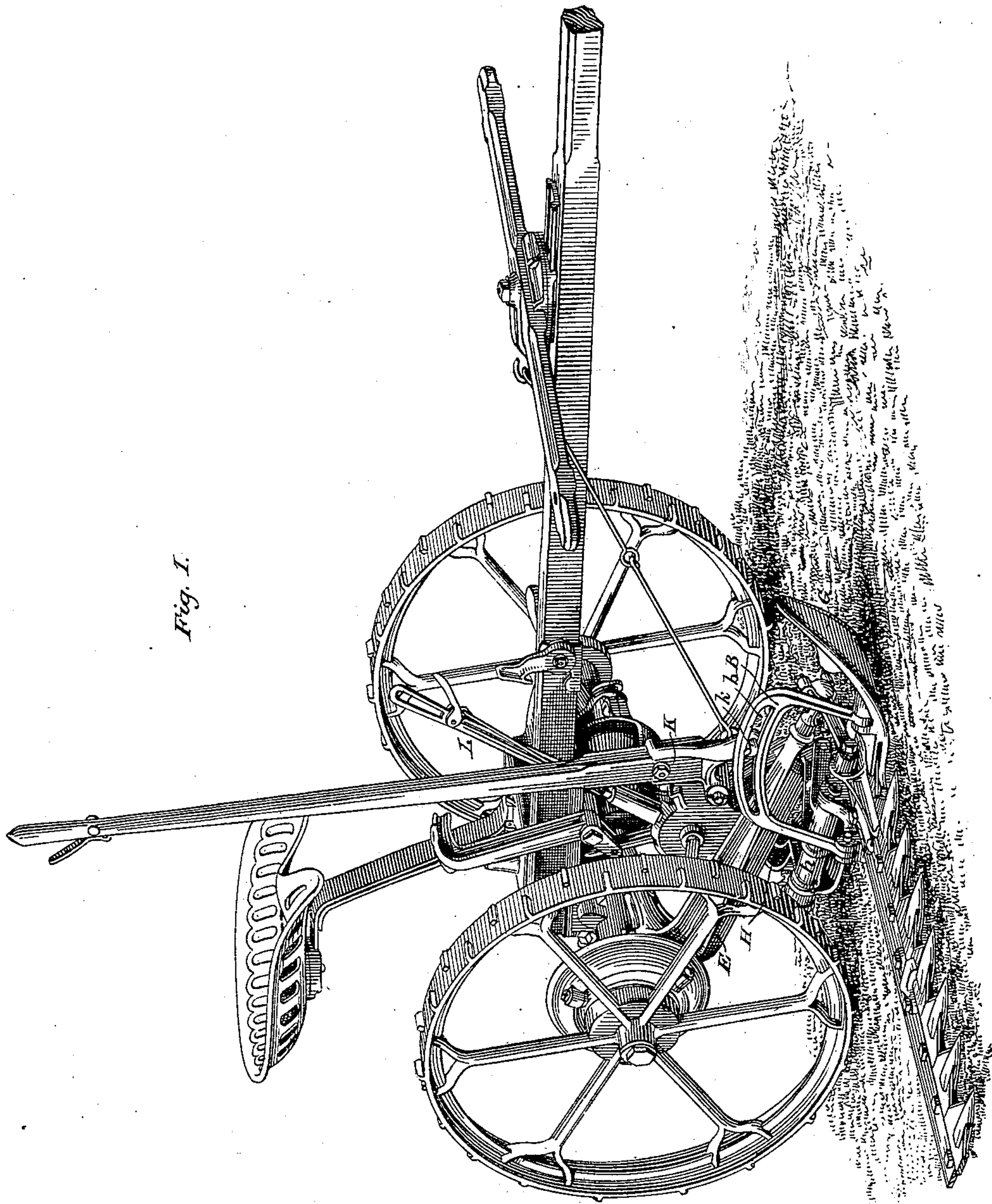


R. EICKEMEYER.
Harvesting Machine.

No. 236,564.

Patented Jan. 11, 1881.



Attest:

C. Clarence Poole
W. F. Chase

Inventor:

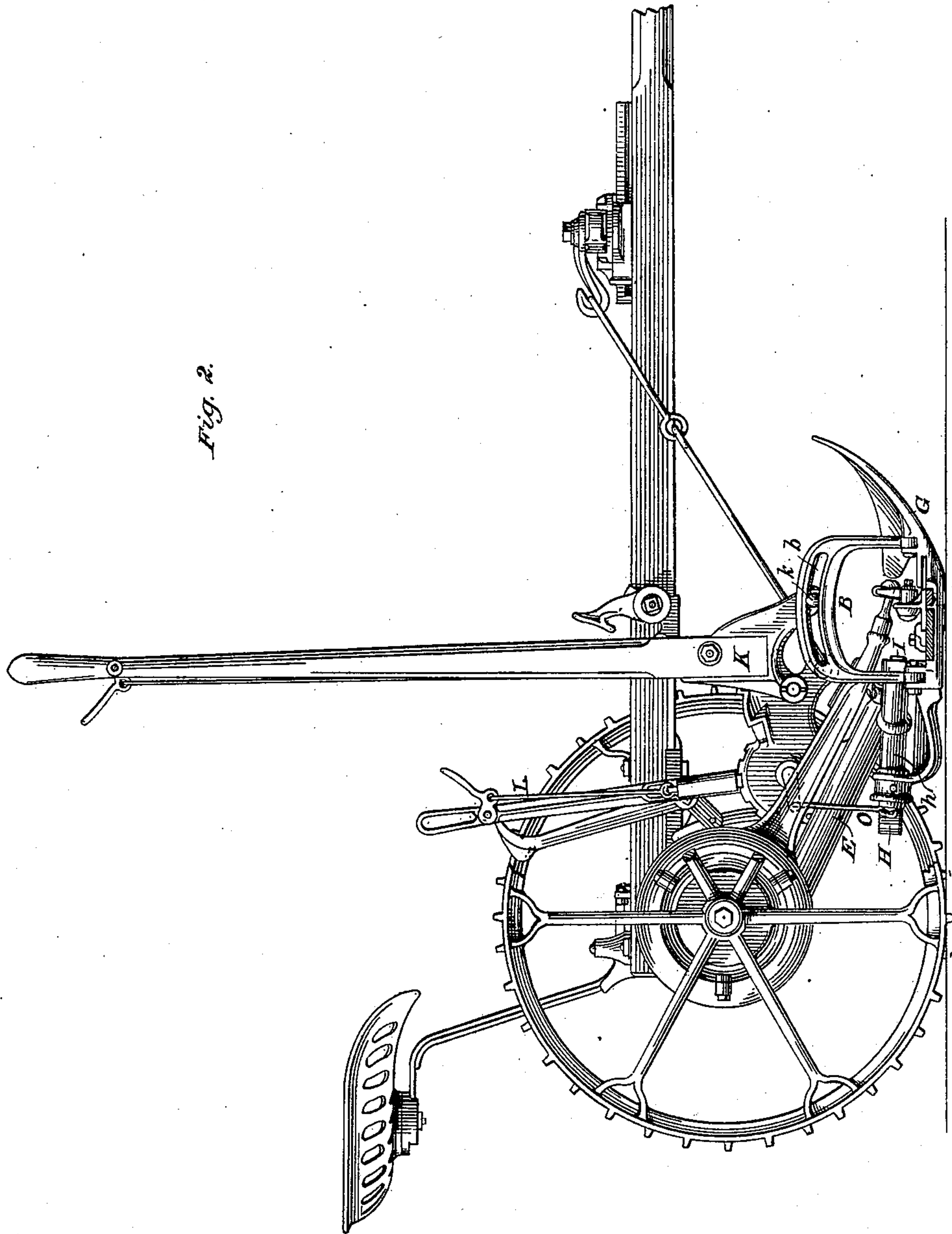
Rudolf Eickemeyer
By his atty
R. D. Smith

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Fig. 2.



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Clarence Pool
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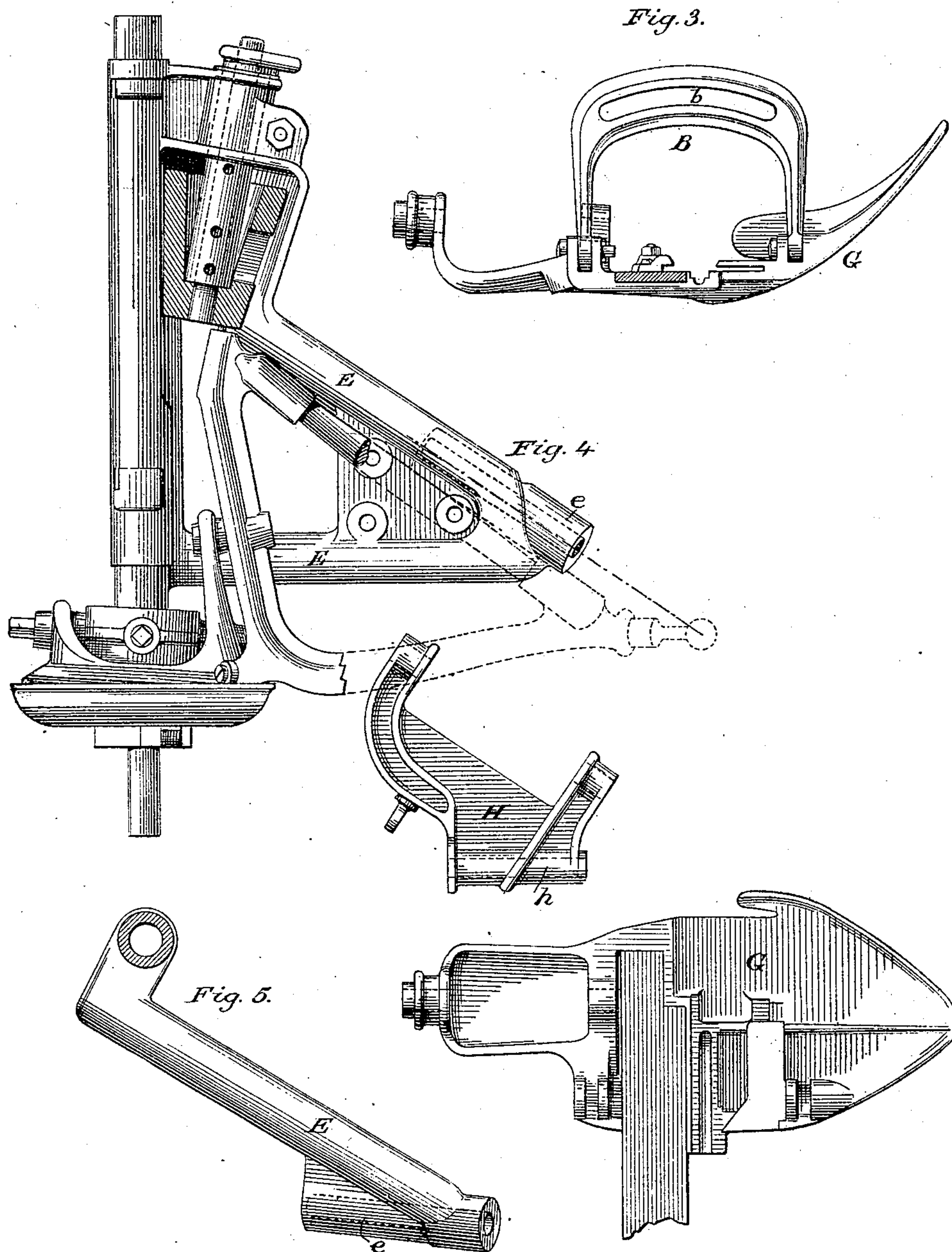
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See Tangier's Model

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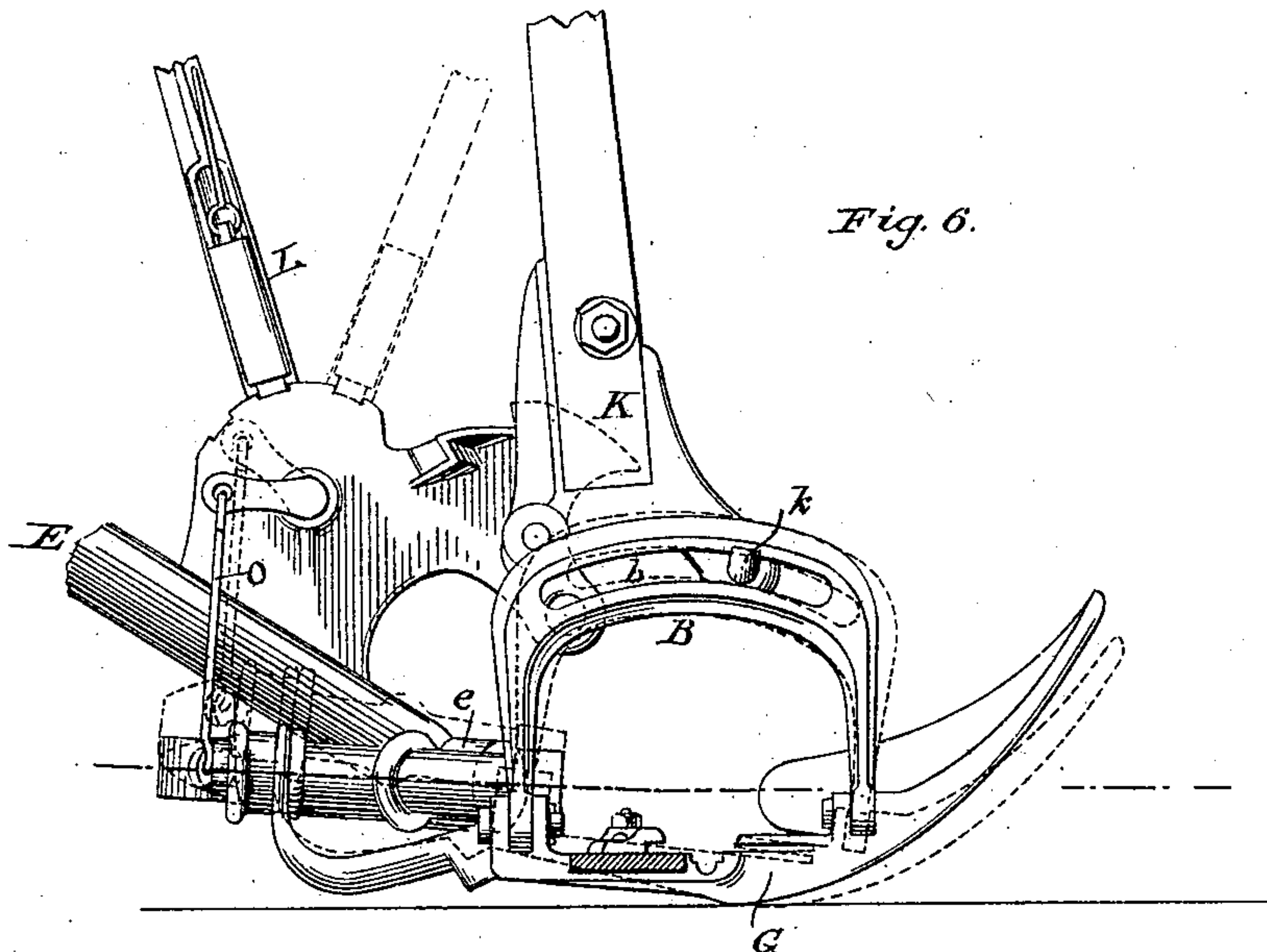


Fig. 6.

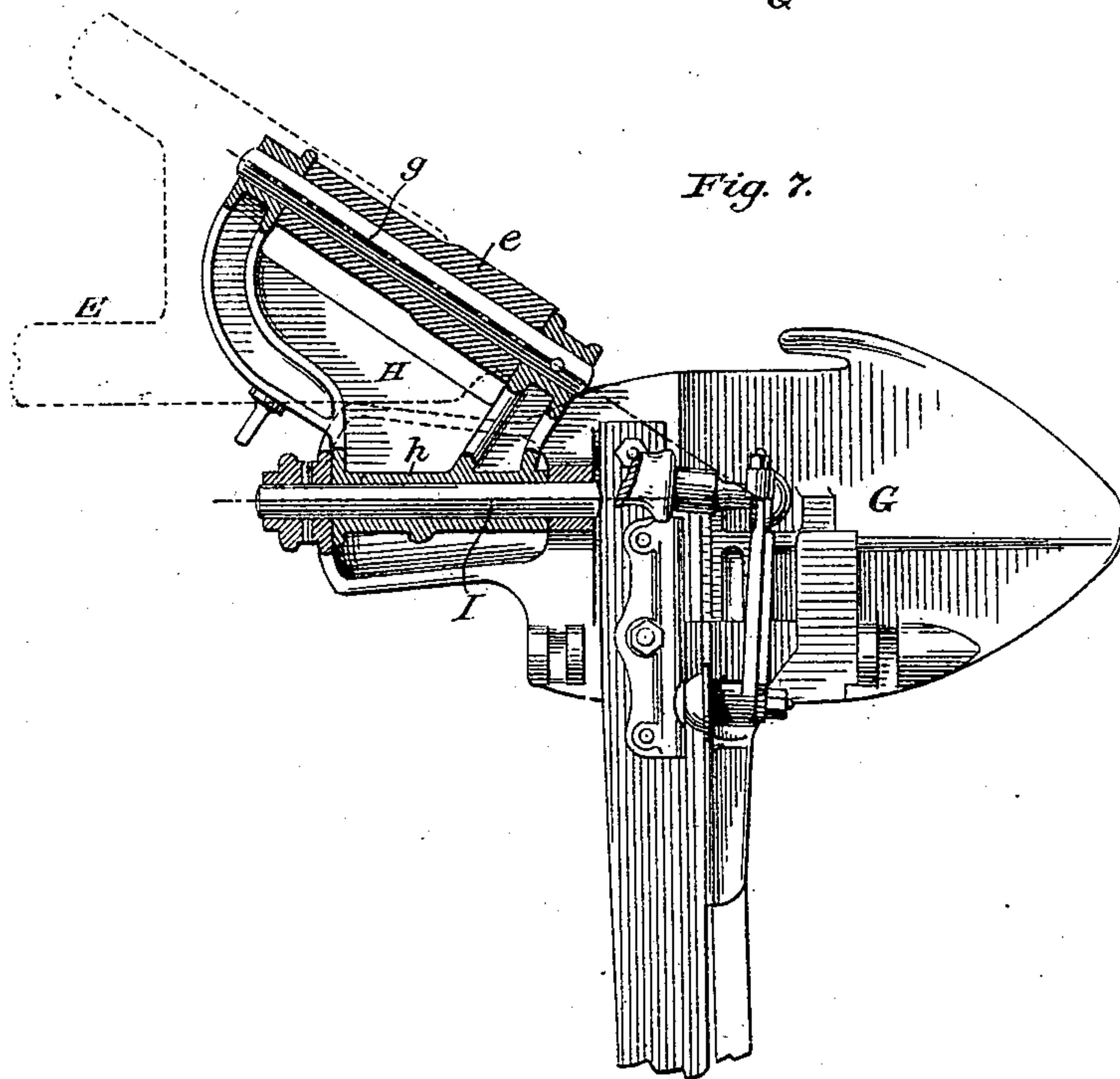


Fig. 7.

Attest:

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R. O. Smith

UNITED STATES PATENT OFFICE.

RUDOLF EICKEMEYER, OF YONKERS, NEW YORK.

HARVESTING-MACHINE.

SPECIFICATION forming part of Letters Patent No. 236,564, dated January 11, 1881.

Application filed September 9, 1879.

To all whom it may concern:

Be it known that I, RUDOLF EICKEMEYER, of Yonkers, Westchester county, in the State of New York, have invented new and useful
5 Improvements in Harvesting-Machines; and the following is a full, clear, and exact description of the same, reference being had to the accompanying drawings, wherein—

Figure 1 is a perspective view of my machine.
10 Fig. 2 is a sectional side elevation of the same. Figs. 3, 4, 5, 6, 7 are details in elevation, plan, and section.

This improvement relates to the invention for which Letters Patent were issued to me
15 12th April, 1870, No. 101,719, and to W. N. Whiteley December 4, 1877, No. 197,916; and it consists, principally, in a triangular frame, a shoe, and a coupling-arm jointed to said shoe by a pin the axis whereof is substantially parallel to the line of progression, and to said triangular frame by a pin the axis whereof is oblique to said line; in connection therewith,
20 a lifting-lever connected to said coupling-arm, whereby said coupling-arm may be rotated upon said diagonal pin; in a triangular frame, a shoe, and a coupling-arm with intermediate axis-pins, the one substantially parallel to and the other oblique to the line of progression, said axes intersecting at the pitman-joint; in
30 a hinged shoe, a lifting-lever, and an interposed bail hinged to the shoe and provided with a curved slot to receive and confine a hook on said lifting-lever. Other points will be mentioned in the description and claims.

35 That others may fully understand my invention, I will particularly describe it.

For a detailed description of the structure and general operation of the devices included in this machine, excepting those devices here-
40 inafter specially described and claimed, reference is hereby made to the patent last above named.

In the patent last above named, and referring to the letters of reference therein, there
45 is a triangular frame, E, and at the forward end thereof there is a box, *i*, having a longitudinal wedge-shaped orifice, through which the coupling-bolt I passes, its ends being seated in lugs *j k* of the shoe G. This coupling fits the box
50 *i* laterally, so that there can be little or no side shake, but is free to slide up and down at one end therein, actuated by the crank-lever L and

coupling-rod *o*, as the points of the guards and cutters are tilted.

The method above described of constructing
55 the connecting-joint between the shoe G and the triangular frame E has in practice certain defects, which I have avoided by the improved structure shown herein, and which I will now describe, referring to the annexed drawings. 60

Upon the under side of the triangular frame E there is secured a box, *e*, located in a horizontal plane when the shoe G is upon the ground and oblique to the machine's line of progression. A pin, *g*, passes through this box and
65 forms the axis of motion for a short coupling-arm, H, which has at its extremity a similar box, *h*, and a coupling-pin, I, resting therein, its axis being parallel with the machine's line of progression, and therefore oblique to the
70 axis of the pin *g*. The shoe G is jointed to the pin I, as it is in the machine patented to W. N. Whiteley, above mentioned; but instead of producing two independent motions upon one joint-pin, as in that machine, I now have
75 two independent joints, one for each of said motions—that is to say, when the outer end of the cutting apparatus is raised or lowered its motion is about the axis of the pin I, but when the points of the fingers or guards are raised
80 or lowered the motion is about the axis of the pin *g*. By this means the simplicity, cheapness, and durability of the joint are greatly enhanced.

In the machine patented to W. N. Whiteley
85 above, the hand-lever is connected to the shoe G, at its rear edge, by means of a link or connecting-rod, M; but this rod acts upon one edge of the shoe only, and entirely behind the axis of the cutting apparatus, and it has a fur-
90 ther disadvantage in the unequal stress when the points of the guards are up or down. These disadvantages I avoid by providing a bail, B, the ends of which are jointed to the shoe G in front and rear of the finger-bar, and hanging
95 said bail upon a suitable hook, *k*, projecting from the extremity of the lever K. The latter will exert its strain uniformly in the same direction, and if the bail may slide over said hook as the front of the shoe is raised or low-
100 ered, the strain will be rendered practically uniform in all positions of the parts. This is a desideratum.

The bail B is preferably made with two sides

and a connecting arched part or top, the curvature whereof corresponds more or less exactly with the curve of motion which the shoe has when rotating upon the joint-pin *g*. This
 5 arched part rests over the hook *k*, and as the shoe is rocked upon the pin *g* the bail slides over the hook *k*. I prefer to construct the bail wholly or partly of cast metal and with the curved slot *b*, which engages with the hook
 10 *k*, and aside from increasing the strength of the bail, it enables the lever *k* to push downward upon the shoe, as well as pull upward thereon.

Having described my invention, what I claim
 15 as new is—

1. A triangular frame, *E*, and the shoe *G* of a harvesting-machine, combined with the coupling-arm *H*, which is jointed to said shoe by a pin, *I*, the axis whereof is parallel with the
 20 line of the machine's progression, and to said triangular frame by a pin, *g*, the axis whereof is oblique to the line of progression, whereby said shoe and the cutting apparatus attached thereto may be rotated upon the pin *I* to raise
 25 the outer end of said cutting apparatus from the ground, or may be independently rotated upon the pin *g* to raise or depress the points of the fingers and cutters, substantially as set forth.

30 2. A triangular frame, *E*, shoe *G*, and the connecting coupling-arm *H*, as described, combined with the lifting-lever *L* and coupling-rod *O*, connecting the crank end of said lever with the coupling-arm *H*, whereby said coupling-
 35 arm may be rotated upon the pin *g*, substantially as set forth.

3. The shoe *G*, connected with the frame of the machine by a longitudinal joint-pin, *I*, combined with the bail *B*, the end whereof is joint-
 40 ed to said shoe in front and rear of the cutter-bar, and the lever *K*, provided with the hook *k*, wherewith said bail is engaged and whereby said shoe is caused to rotate upon said joint-pin *I*, substantially as set forth.

4. A shoe, *G*, connecting with the frame of
 45 the machine by a coupling-arm, *H*, one joint whereof is in the line of the machine's progression and the other joint oblique thereto, so that the cutting apparatus attached to said shoe may be raised or lowered at its outer end
 50 or raised or lowered at the point of the fingers and cutters, and the lifting-lever *K*, provided with the hook *k*, combined with the bail *B*, constructed with a longitudinal curved slot, *b*, to receive and confine said hook *k*, whereby
 55 said shoe may be rotated upon its oblique axis while being supported wholly or partly above the ground by the lever *K*, substantially as set forth.

5. The inner shoe of a harvesting-machine
 60 hinged to one side of a brace or arm, which arm in turn is hinged to one end of a vibrating frame by a hinge diagonal to the shoe-hinge and bisecting the axis thereof at or near the pitman-joint at the heel of the cutter-bar,
 65 substantially as and for the purpose set forth.

RUDOLF EICKEMEYER.

Witnesses:

J. GEORGE NARR,
 OTTO C. BEER.