

P. F. HODGES.
HARVESTER-RAKE.

No. 170,086.

Patented Nov. 16, 1875.

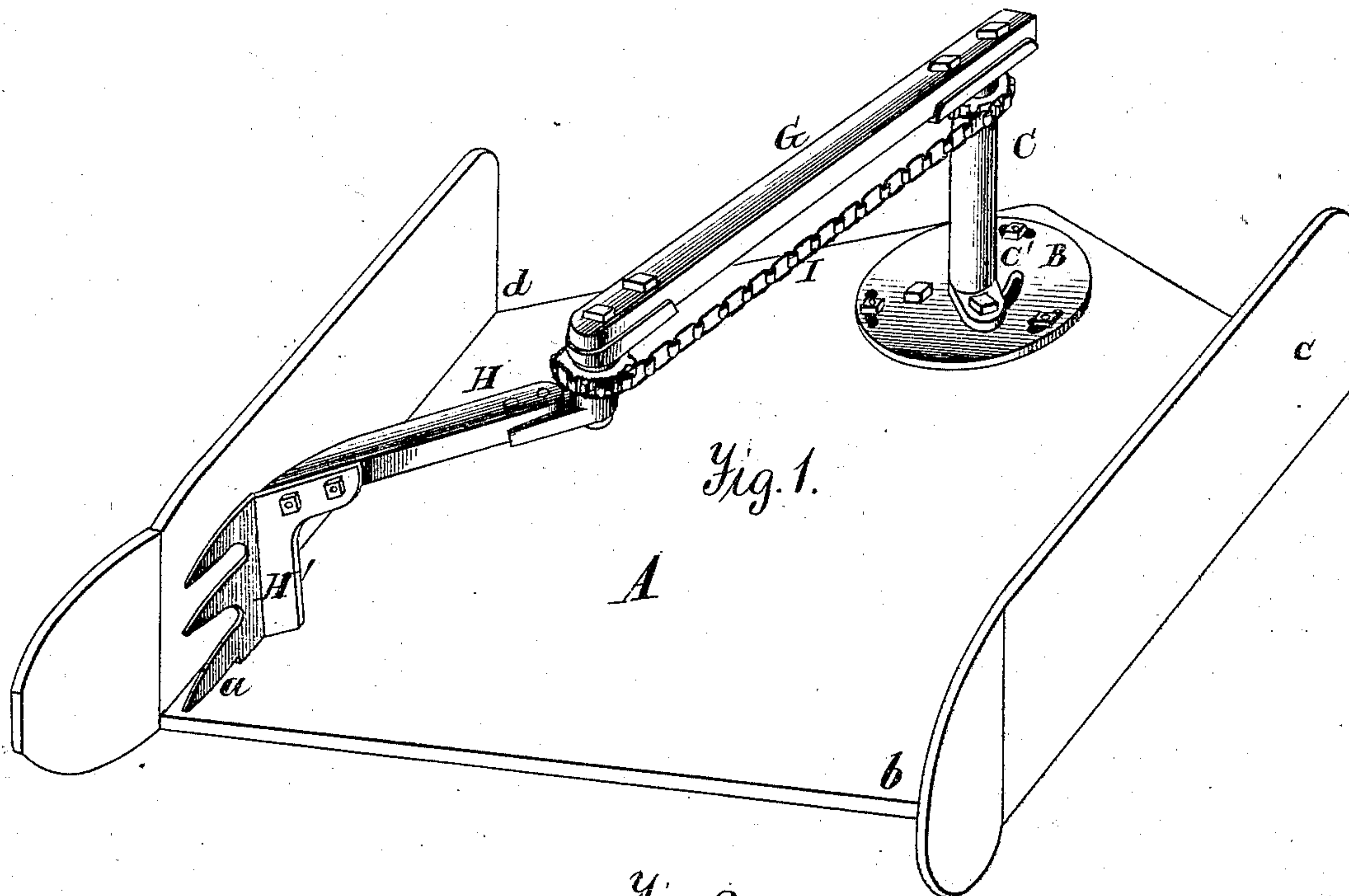
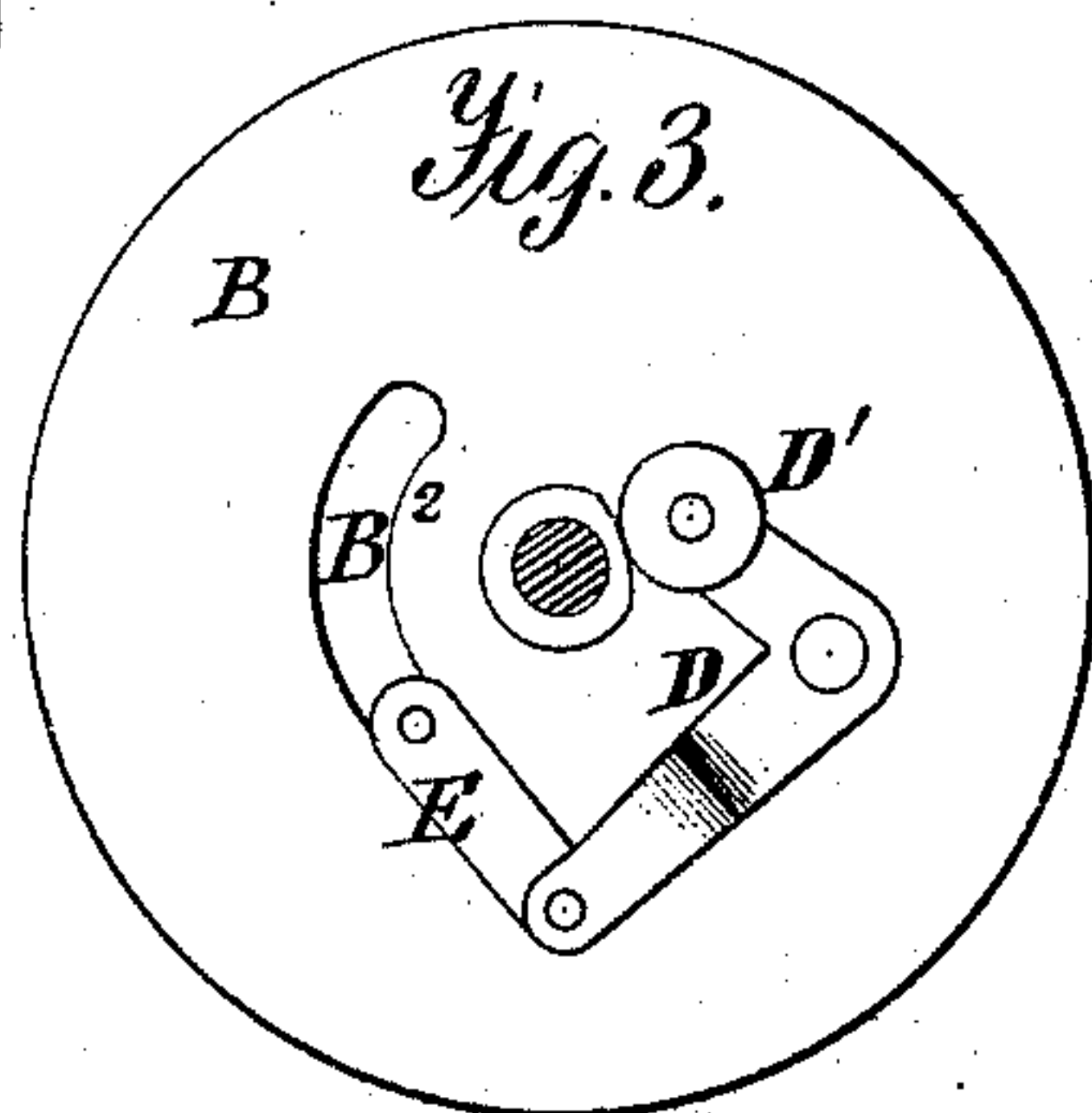
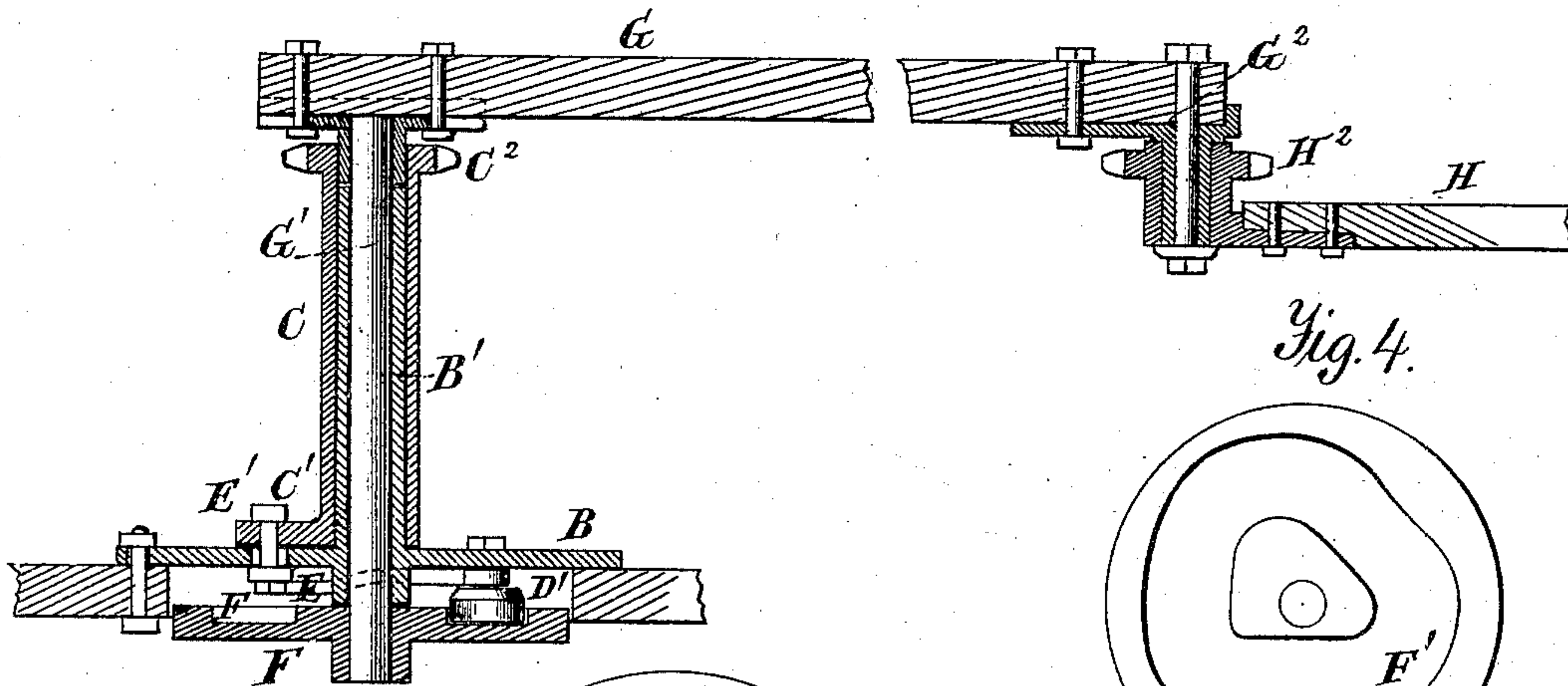


Fig. 2.



Witnesses.
A. Ryker
C. Hadaway

P. F. Hodges
Inventor.
D. P. Holloway & Co
Atty

UNITED STATES PATENT OFFICE.

PLINY F. HODGES, OF MASSILLON, ASSIGNOR OF ONE-HALF HIS RIGHT TO
HOOVER & CO., OF MIAMISBURG, OHIO.

IMPROVEMENT IN HARVESTER-RAKES.

Specification forming part of Letters Patent No. **170,086**, dated November 16, 1875; application filed
May 17, 1875.

To all whom it may concern:

Be it known that I, PLINY F. HODGES, of Massillon, in the county of Stark and State of Ohio, have invented a new and useful Improvement in Harvester-Rakes, of which the following is a specification:

In the annexed drawings, making part of this specification, Figure 1 is a perspective view of the table with the rake attached. Fig. 2 is a vertical section of the raking mechanism. Fig. 3 is a plan of the stationary plate as seen from below when looking up, and Fig. 4 is a plan view of the revolving cam-plate.

The same letters are employed in all the figures in the designation of identical parts.

A is the table or platform on which the grain is held until a gavel has been collected. A hole is cut through the rear end of the platform, and a plate, B, is adjustably attached thereto by bolts passing through a series of slots near the edge of the plate. This plate may be cast in one piece with the sleeve B¹, around which is placed the oscillating pipe C, turning freely on the sleeve. It has an arm, C¹, through which an oscillating movement is communicated to it through the following-described mechanism:

A bell-crank lever, D, is pivoted at its angle to the plate B, and supports at one end the friction-roller D¹, and at the other the link E, the outer end of which is bolted to the arm C¹, the bolt passing through the segmental slot B² in the plate B. The friction-roller D¹ is fitted into the irregular groove F¹, in the cam-plate F. The form of this groove is substantially as shown in the drawing, Fig. 4. The cam-wheel revolves continuously when in gear, deriving motion from any convenient part of the machinery, and the movement of the parts D and E, dependent thereon, communicates an irregular oscillation to the pipe C. At the upper end of the pipe is a sprocket, C². Within the sleeve B¹ is the shaft G¹ keyed to the cam F, and revolving continuously with it and carrying the arm G, which is bolted to a bracket on top of the shaft. The bracket is provided with slots to regulate the tension of the chain. On the outer end of the arm G is a round rod, G²,

which carries a hub, C, and tubular metallic bearing, H², on the arm H of the fork H¹. The fork revolves with the arm G, but at the same time has an independent rotation upon its own axis G², which is controlled by cam-wheel F and oscillating pipe C, acting through the sprocket-wheels C² and H², and the endless chain I.

The form of the cam F¹ is such that, as the arm G revolves, the rake being in the position shown in Fig. 1, the chain I will draw back the rake-head so that it will traverse the front side of the platform immediately behind the cutters, and so sweep the cut grain from *a* to *b*. When the rake reaches *b* it will stand nearly parallel to the side of the platform, and so it will be drawn from *b* to *c*, when the grain is dropped on the stubble, when the free end of the rake is drawn rapidly toward the arm G, passing under it as it is in line with the draft projecting directly to the rear, and then rapidly thrown forward until the teeth pass over the platform at *d*, from which point to *a* the fork is projected, the arm H being nearly parallel to the side.

I have illustrated the fork as passing under the arm G. It is, however, obvious that the machine can readily be modified, so that the fork may pass over the arm, and other mechanism may also be employed for communicating the required movement to the tube C and to the fork or rake.

I have also shown the rake as constructed in the form of a fork, and I have sometimes so called it. It is, however, obvious that this form may be modified.

What I claim as my invention, and desire to secure by Letters Patent, is—

1. In combination with the oscillating pipe C, the cam-wheel F, bell-crank lever D, and link E, for communicating an irregular oscillation, substantially in the manner and for the purpose set forth.

2. In combination with the oscillating pipe C, the arm G, continuously revolving on its own axis, the sprocket-wheels C² H², chain I, and rake H, having also an independent rotation, substantially as set forth.

3. The adjustable slotted plate B and sleeve B¹, in combination with the oscillating pipe C and the continuously-rotating shaft G¹, for communicating a constant rotary movement to the rake-arm, and an irregular independent movement to the rake, substantially as set forth.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

PLINY F. HODGES.

Witnesses:

ISAAC ULMAN,
W. H. RAY.