Sheet 1. 2 Sheets.

W. H. McPherson.

Horse Rake.

No 66865 Patented Jul. 16, 1867.

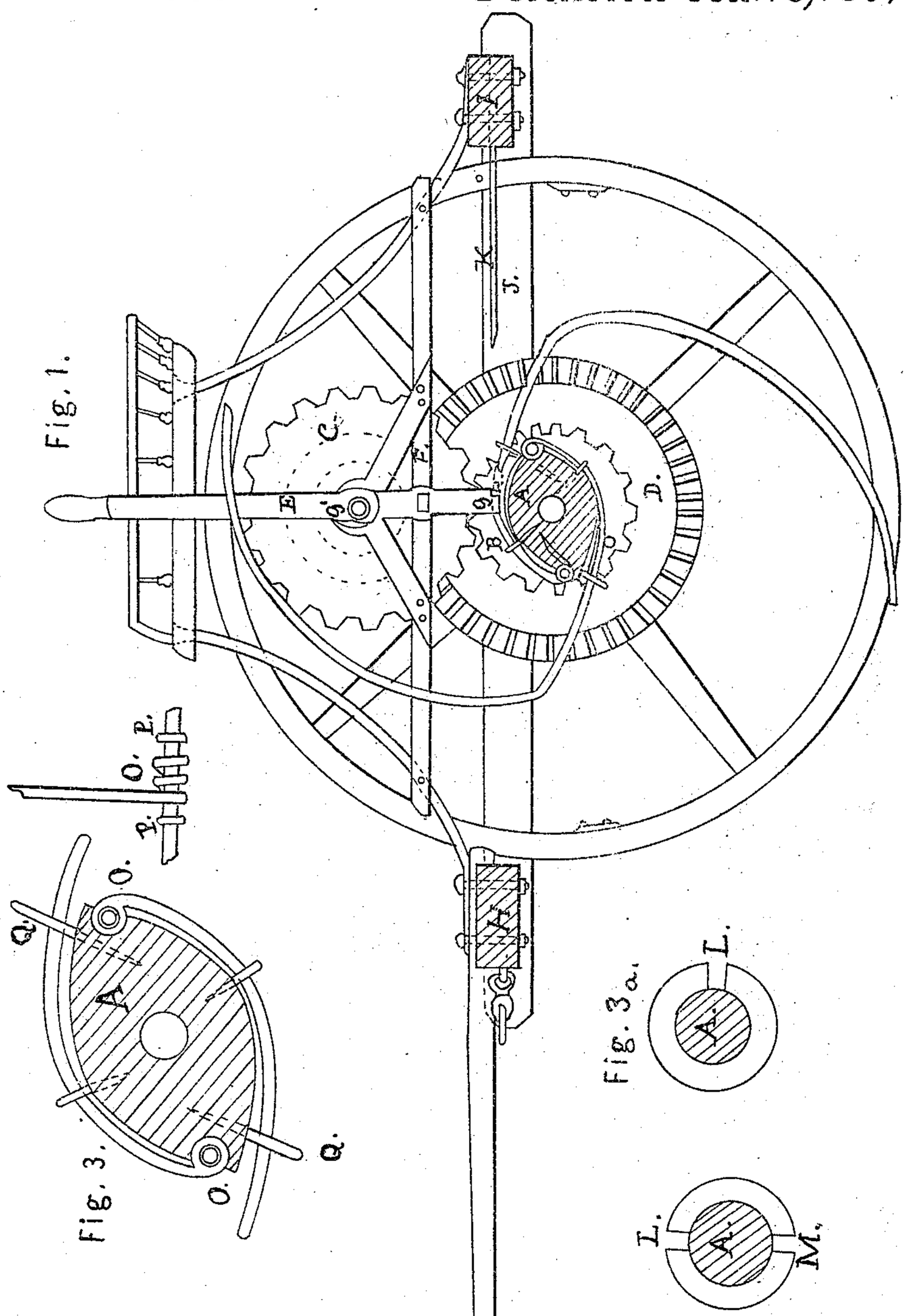

Fig. 1.

Fig. 3.

Fig. 3a.

Witnesses

J. McElheny

Samuel J. Parker.

J. McElheny

Inventor.

William H. McPherson

Sheet 2. 2 Sheets.

W. H. McPherson.

Horse Rake.

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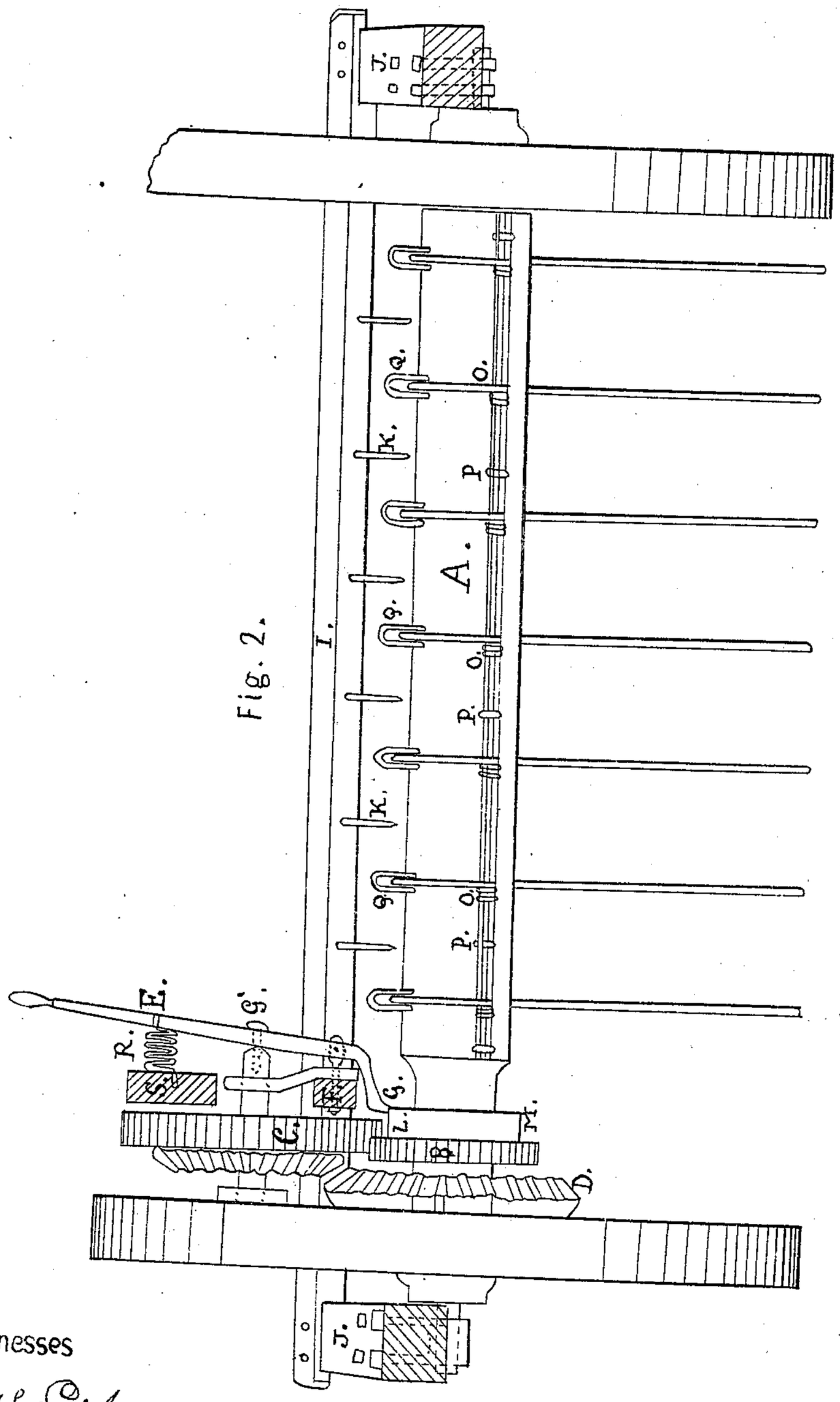

Fig. 2.

Witnesses

J. McElheny

Samuel J. Parker.

J. McElheny

Inventor.

William H. McPherson.

United States Patent Office.

WILLIAM H. McPHERSON, OF DANBY, NEW YORK.

Letters Patent No. 66,865, *dated July* 16, 1867.

IMPROVEMENT IN HORSE-RAKES.

The Schedule referred to in these Letters Patent and making part of the same.

TO ALL WHOM IT MAY CONCERN:

Be it known that I, WILLIAM H. McPHERSON, of Danby, Tompkins county, New York, have invented certain Improvements in Horse-Rakes; and I do hereby declare that the following is a full and exact description thereof, reference being had to the annexed drawings, and to the letters marked thereon.

My objects are, first, to simplify and make efficient a revolving rake-head; second, to cause one or both wheels to revolve the rake; third, to stop and hold the teeth to their work with great accuracy; and fourth, so control the whole working of the rake easily by a simple and peculiar lever, and its associated parts, and make it automatic. The first object I accomplish by putting the wheel axle through an oval-shaped head, and cutting grooves near the angles of the oval, and in the grooves inserting a rod on which the teeth are fastened by coils, and holding the rod and teeth in the grooves by staples or other means; the second by fastening to the head a cog-wheel, which gears into a second wheel, which has a wider face and an end play to its journals, so that it locks and unlocks to and from a third wheel on the rake-wheel; the third by making a lever, which locks and unlocks the wheels just named, do the further duty of engaging in the cam or other device usually on the cog-wheel on the rake-head; and fourth, by the arrangement of the lever which operates the rake; this is seen in the drawings, which are—

Figure 1, a longitudinal section.

Figure 2, a transverse section, and

Figure 3, enlarged views of the head, and the cam on it.

In fig. 1, A is the rake-head on its axle, with two sets of teeth in the grooves, fastened by rods and staples, with the pressure staples about the teeth; and B is the first, C the second, and D the third wheels, and E the lever with its fulcrum on the cross-piece F, with two points of action, one at G, on the cam on the pivot-wheel or near it, and the other at G′ on the journal of the second wheel; and H is the front beam, and I the rear beam of the frame connected by the side beams J. The strippers K project from the piece or beam I.

In fig. 2 one set of teeth only is used.

The same letters and explanations refer to the same parts.

The lever E has thrown the second and third wheels out of gear and is holding the teeth to the ground by its lower end in the depression in the cam at G, marked L. When two sets of teeth are used the lever enters alternate depressions L and M; and O are the coils about the groove rod held by the staples P. The pressure staples Q enclose the teeth on the upper part of the rake-head; and R is the spring that makes the action of the lever E automatic on the cam L M.

In fig. 3 the letters, parts, and explanations are the same as given.

The devices I use are apparent to those skilled in the art to which it appertains.

Claim.

1. I claim the oval revolving head A, provided with the groove or grooves O, the rod for holding the teeth and the pressure staples Q, as described.

2. I claim the combination of the lever E, made as described, the spring R and stop-plate L, substantially as and for the purposes described.

3. I claim the wheels B, C, D, and lever E, all constructed and arranged substantially as described.

WILLIAM H. McPHERSON.

Witnesses:

SAMUEL J. PARKER,

T. J. McELHENY.