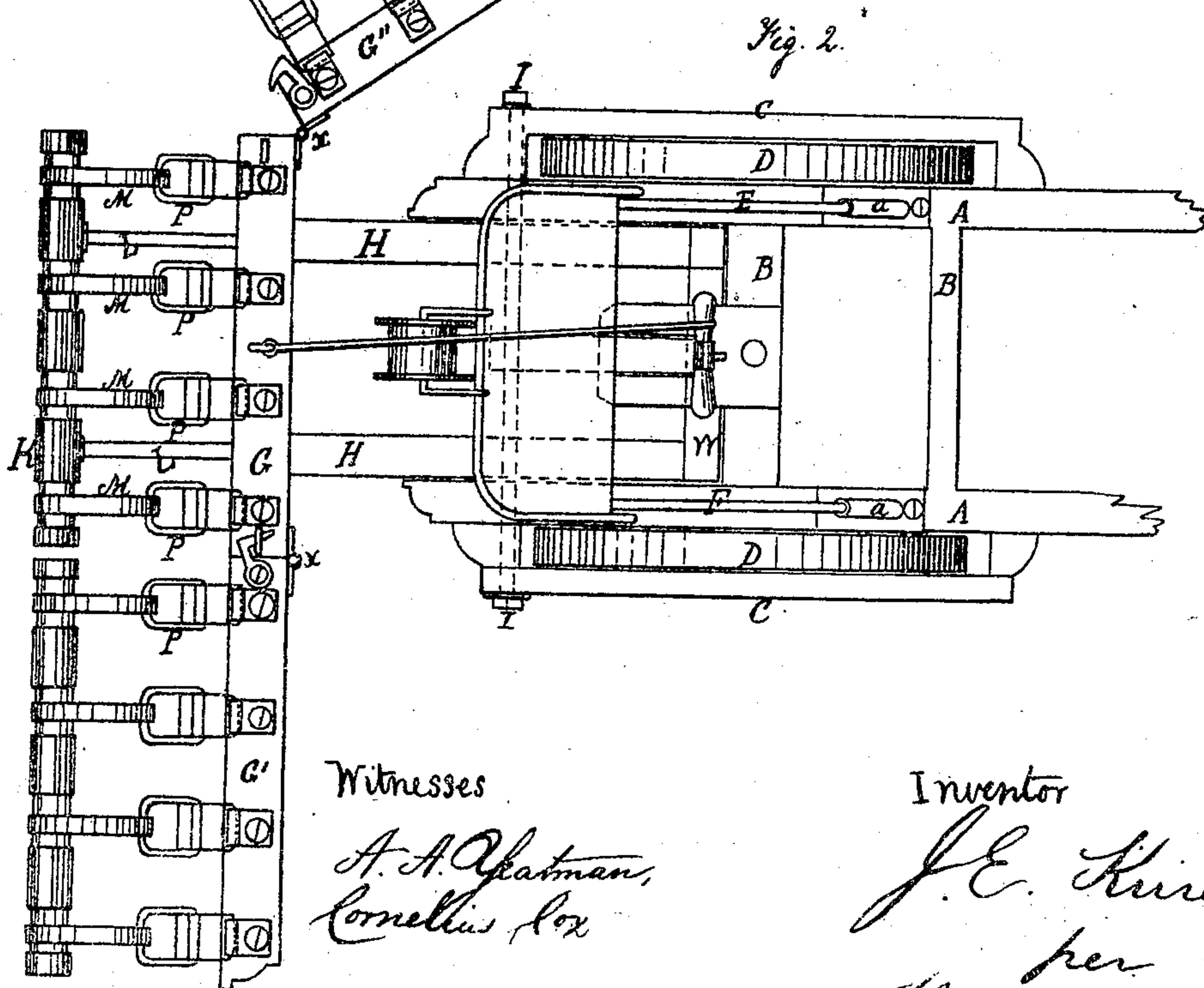
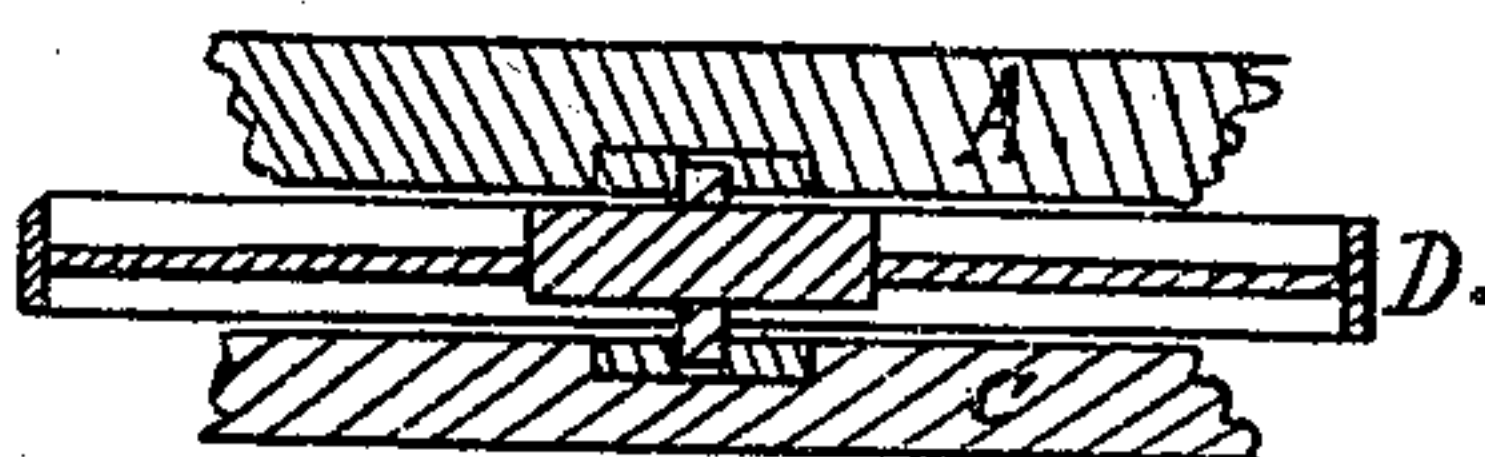
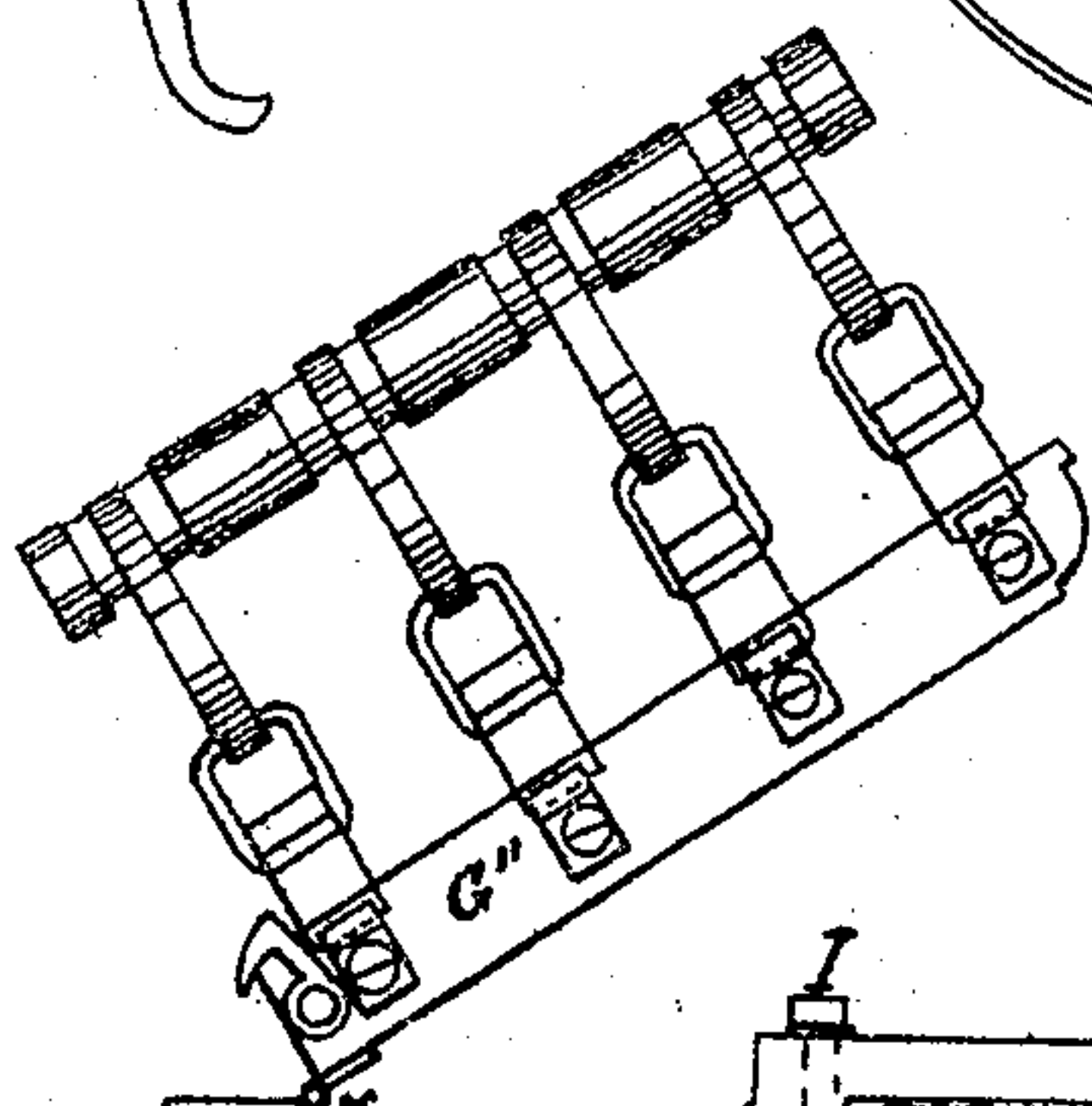
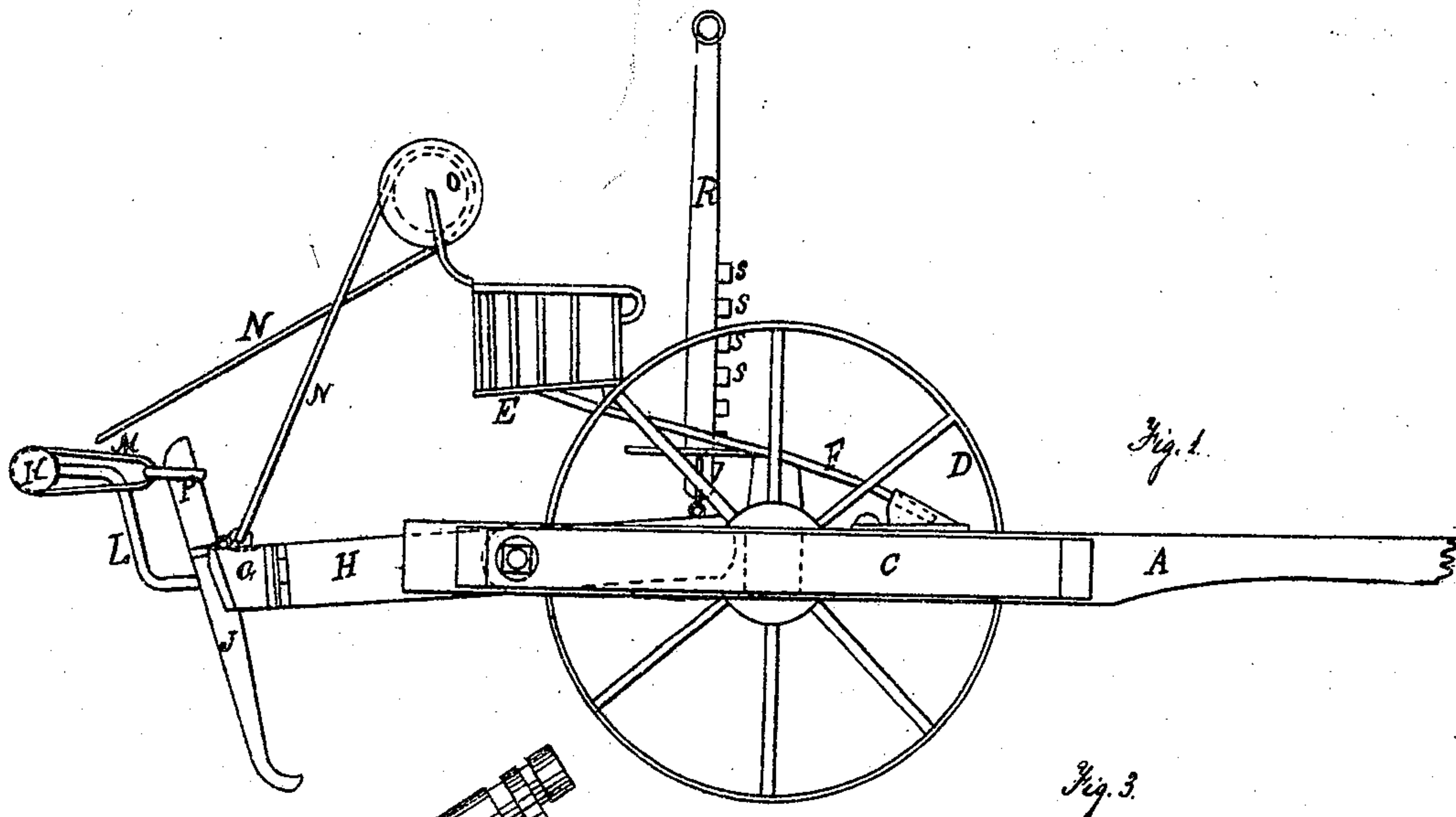


J. E. Kendall. Horse-Rake

N^o 72404

Patented Dec. 17, 1867



Witnesses

A. A. Glatman,
Cornelius Fox

Inventor

J. E. Kendall

per

Wm. A. Mason
Atty

UNITED STATES PATENT OFFICE.

J. E. KENDALL, OF PLYMOUTH, INDIANA, ASSIGNOR TO J. E. KENDALL AND CHAS. WHITMORE.

IMPROVEMENT IN HORSE-RAKES.

Specification forming part of Letters Patent No. 72,404, dated December 17, 1867.

To all whom it may concern:

Be it known that I, J. E. KENDALL, of Plymouth, in the county of Marshall and in the State of Indiana, have invented certain new and useful Improvements in Horse Hay-Rake; and do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings and to the letters of reference marked thereon.

In the annexed drawings making part of this specification, A A represent the two side pieces of the sulky-frame, the forward ends of which are formed into shafts, and their rear ends being disconnected so as to receive between them the shafts of the rake-head. C C represent two side pieces which are placed upon the outside of the pieces A, with blocks intervening between at their ends, and, being made fast, serve as outer bearings for the short axles of the wheels D D. The wheels D are inserted between the pieces A and C, with short axles having bearing in each. The pieces A are connected together near their centers by the cross-pieces B B, which are firmly framed into them. G G' G'' represent the rake-head, which is formed in three parts and hinged together as seen. The shafts H H of this head reach forward and are pivoted about their centers between the rear ends of the frame-pieces A by means of a bolt I, which passes through them. To the forward ends of the shafts H H is secured a cross-piece, W, and to the upper side of this cross-piece is connected a bar, R, which has teeth upon one side of it. This bar stands in a vertical position, and its teeth catch into a suitable plate on one of the cross-pieces B, for the purpose of stationing the ring in any desired position. J J represent the rake-teeth, which are made of wood and which are hinged near their upper ends to the back side of the rake-head, at its upper edge. K represents a bar, which is connected to the rake-head by means of the rods L L.

This bar lies crosswise of the machine, and behind the head, and about as high as the upper ends of the rake-teeth. Links P P surround the upper ends of the rake-teeth, and India-rubber bands (or other springs) connect these links to the bar K, so that the upper ends of the teeth are being constantly drawn backward, thus keeping their lower ends in proper position forward. When an obstacle strikes the lower end of a tooth the spring M, at its top, yields, and it passes backward until relieved, when the spring immediately draws it forward again in position. E represents the driver's seat, which is supported upon two wooden spring-poles, F, which have their forward ends thrust into sockets *a a* on the frame-pieces A A. Upon the rear of this seat is placed a pulley, *o*. A cord, N, having one end secured to the center of the rake-head, passes around this pulley and then to the rear of the machine, where the operator, in walking behind his machine, may operate the rake as well as if he were in the seat E. The rake-head is in three parts, so that it can be folded or disjointed when it is desirable to have the rake smaller than its greatest capacity.

Having thus fully described my invention, what I claim as new, and desire to secure by Letters Patent, is—

The hinged rake-head G G' G'', provided with teeth J J, and connected to the bar K by the springs M, as described, said rake-head being connected to the sulky-frame and adjusted by the toothed bar R, and cord N passing over the pulley at the driver's seat, the whole constructed and operating substantially as described.

In testimony that I claim the foregoing I have hereunto set my hand this 9th day of September, 1867.

J. E. KENDALL.

Witnesses:

MEYER LAUER,
CHAS. WHITMORE.