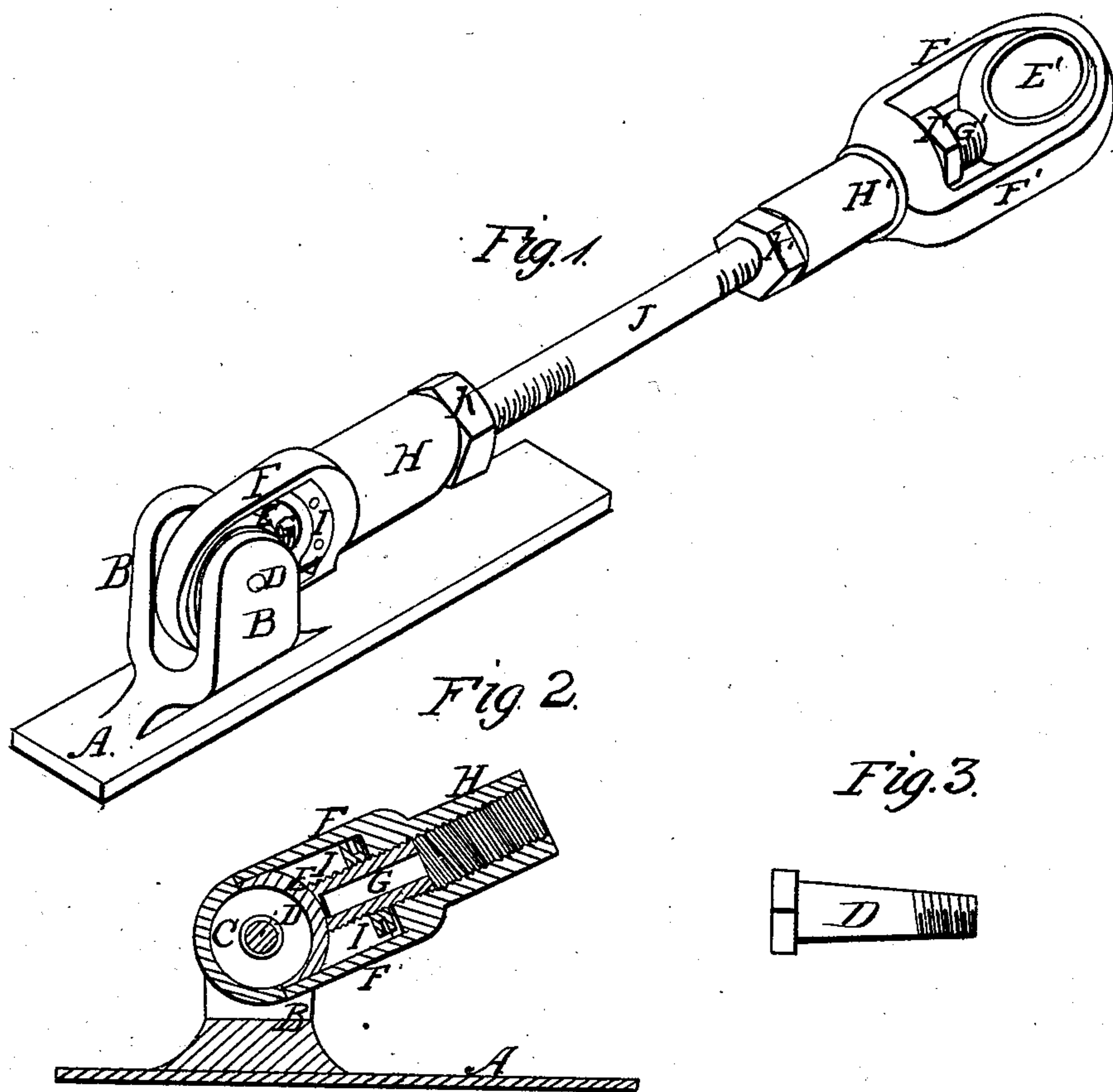


C. E. ROPER.
HARVESTER PITMAN.

No. 89,348.

Patented Apr. 27, 1869.



Witnesses:
Cornelius Cox
Leopoldo Camb

Inventor
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Attys

United States Patent Office.

CHARLES E. ROPER, OF CANTON, OHIO, ASSIGNOR TO HIMSELF
AND I. DURLIM, ACTUARY OF E. BALL & CO., OF SAME PLACE.

Letters Patent No. 89,348, dated April 27, 1869.

IMPROVEMENT IN HARVESTER-PITMEN.

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, CHARLES E. ROPER, of Canton, in the county of Stark, and in the State of Ohio, have invented certain new and useful Improvements in Pitmen; 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.

The nature of my invention consists in the construction and general arrangement of a "pitman," for reapers and mowers, and other machines requiring motion either in or out of a direct line.

In order to enable others skilled in the art to which my invention appertains, to make and use the same, I will now proceed to describe its construction and operation, referring to the annexed drawings, which form a part of this specification, and in which—

Figure 1 is a perspective view;

Figure 2 is a vertical of the joint; and

Figure 3, a side view of the tapering bolt.

A represents the end of the knife of a reaper and mower, on which are two lugs, or ears, B B.

Between the two ears B B, the ball C of a ball-and-socket joint is placed, and to obtain the rigidity necessary to a perfect working of said joint, the ball C is secured by means of a taper-bolt, D, said bolt passing through the two ears, or lugs, and the ball.

All wear and tear of the joint are easily overcome, by simply turning the said taper-bolt D to any desired degree of tightness.

The ball C is enclosed in a box, E, composed of two pieces formed to fit, or cover the ball, said pieces, or box being confined to their places by a strap, F, passing around the box; and said box E is controlled by an adjusting-screw, G, one end of which is contained in a hollow tube, H, to which the strap F is secured.

The other end of the screw G is made concave, to

fit box, or covering of ball C, and held to place by a jam-nut, I, both adjusting-screw G and jam-nut I being worked by a pin-wrench.

J represents the adjusting-centre of the pitman, composed of gas-pipe, or its equivalent, one end of said centre, or pipe J being possessed of a right, and the other end of a left-hand screw.

One end of the adjusting-centre J works in the hollow tube H, and the other in a similar tube, H'.

The hollow tube H' has a similar arrangement of adjusting-screw, jam-nut, strap, and box, as described for the tube H, and marked respectively on the drawing as G', I', F', and E'.

The adjusting-centre J is controlled by the adjusting-screws G G', working, in connection with ball-and-socket joint, at both ends of pitman, and by the jam-nuts K K, as shown in fig. 1.

By this means, I obtain a pitman which is adjustable and accommodating to any or all depressions in surface, being capable of extension or contraction, and being made entirely of gas-pipe and malleable iron, or its equivalent, can be made lighter and at less expense than those now in use.

Having thus fully described my invention,

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

The combination of box E, strap F, tube H, pipe J, ball C, taper-screw D, adjusting-screw G, and jam-nut I, with the journals B B, all constructed and arranged to operate substantially as herein set forth.

In testimony that I claim the foregoing, I have hereunto set my hand, this 6th day of January, 1869.

CHAS. E. ROPER.

Witnesses:

G. W. ALTHOUSE,
GEO. E. BALDWIN.