

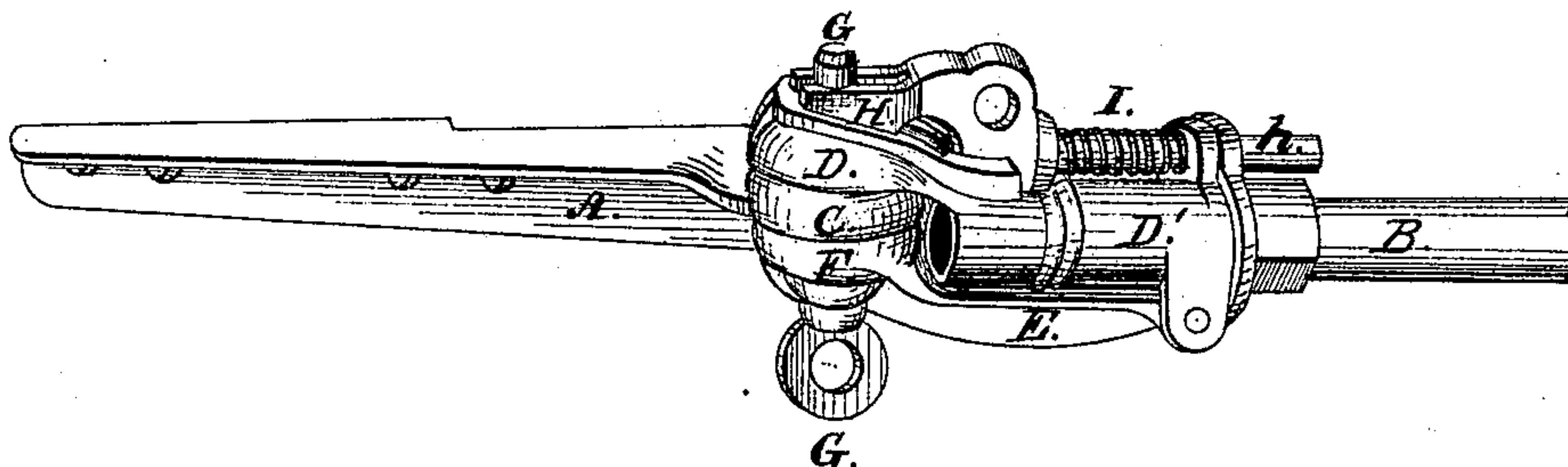
R. DUTTON.

PITMAN.

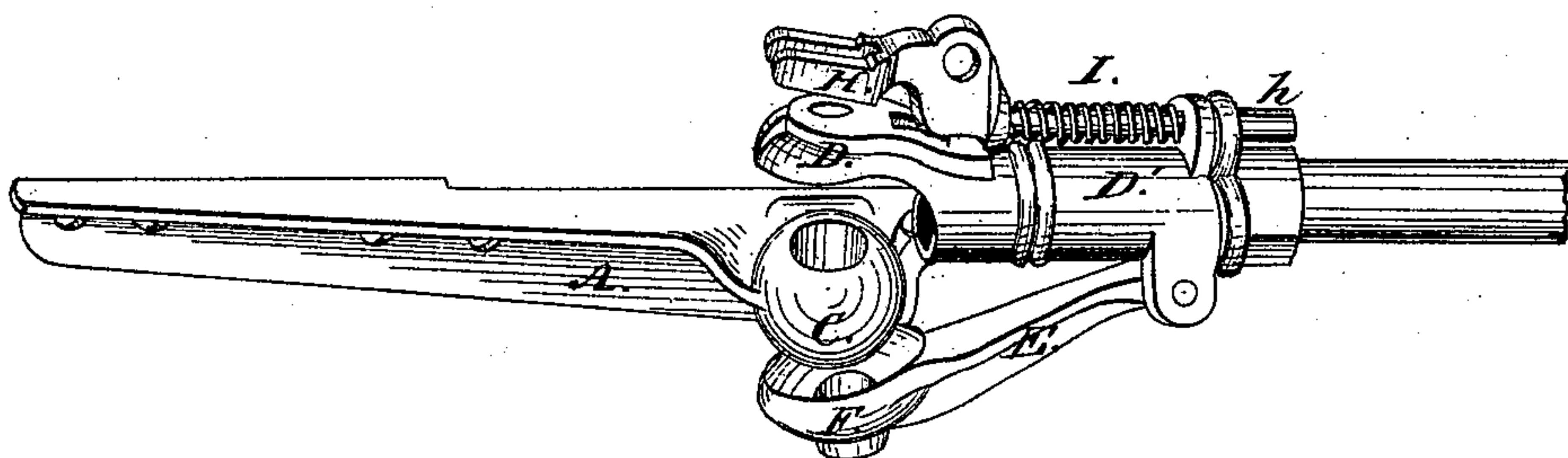
No. 174,791.

Patented March 14, 1876.

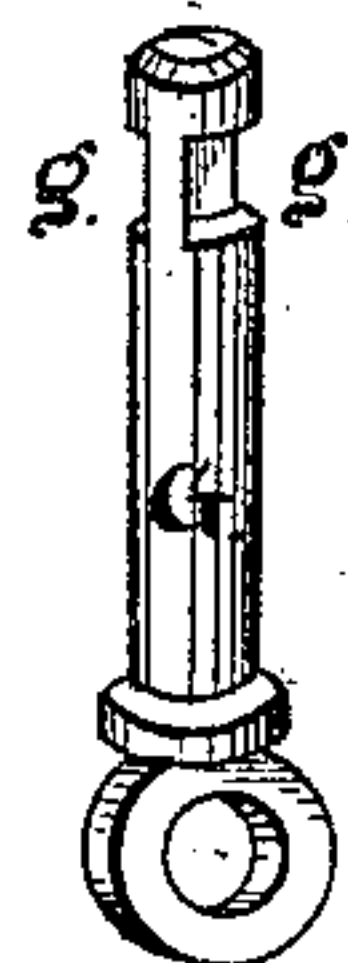
*Fig 1.*



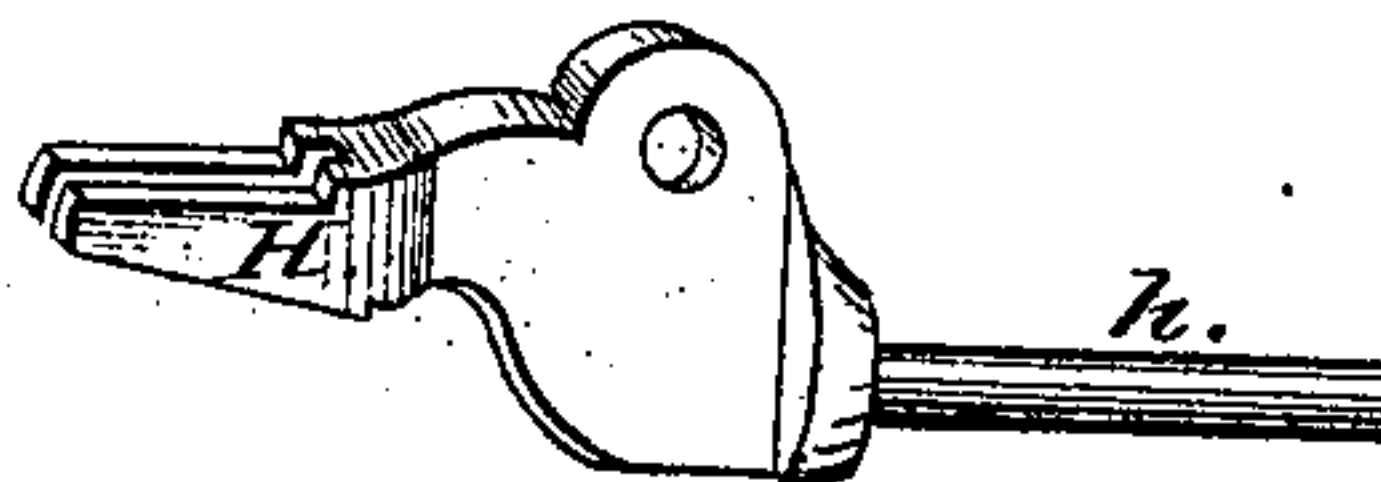
*Fig 2*



*Fig 3.*



*Fig 4.*



*Witnesses:*

*L. D. Law*  
*A. Gulitz*

*Inventor:*

*R. Dutton*

# UNITED STATES PATENT OFFICE.

RUFUS DUTTON, OF YONKERS, NEW YORK, ASSIGNOR TO R. DUTTON & CO.,  
OF SAME PLACE.

## IMPROVEMENT IN PITMEN.

Specification forming part of Letters Patent No. **174,791**, dated March 14, 1876; application filed  
September 29, 1874.

*To all whom it may concern:*

Be it known that I, RUFUS DUTTON, of Yonkers, in the county of Westchester and State of New York, have invented a new and useful Improvement in Pitman-Connections; and I do hereby declare that the following is a full, clear, and exact description thereof, and of its mode or manner of operation, reference being had to the accompanying drawings, and to the letters of reference marked thereon, and making a part of this specification.

My invention relates to a new and improved construction of pitman-connection, the object or purpose of which is that the wear of the parts from use shall be constantly taken up, automatically, and the joint thus always be kept close and tight.

My invention is more particularly designed for making the attachment of the pitman or connecting-rod to the knife-head in mowing or reaping machines, and the description and drawings have more special reference to such an application; but the invention is adapted to other uses and applications.

Figure 1 shows a knife-head of a mowing-machine connected to a portion of the connecting-rod according to my invention. Fig. 2 is a like view with Fig. 1, the bolt removed and the joint spread apart. Fig. 3 is a detached view of the bolt securing the joints or parts together. Fig. 4 is a detached view, slightly enlarged, of the device for holding and keeping tight the bolt.

I use in making the connection a ball-and-socket joint, to prevent torsion or cramping of the joint when the upper and lower bearings of the connecting-rod are not in line or parallel with each other, or when the bar is folded or the points of the fingers are raised or lowered for the purpose of varying the cut of the knife. Ordinarily the joint between the pitman or connecting-rod and the knife-head is very liable to become worn and loose, thereby rendering the knife and knife-head liable to become broken, and otherwise materially injuring the machine.

My invention effectually remedies or prevents such difficulty and its results, as by it, as fast as the joint may become worn by use,

the parts are taken up automatically, and the joint being always kept tight, there will consequently be much less wear.

A is the knife-head, or part to which the pitman B is to be attached, terminating in a ball, C, which forms one part of the joint. D' is a socket-piece, having at one end a metallic socket, D, fitted to receive the ball C, and in which such ball can move. Such socket-piece forms the lower end of the pitman-rod, and is attached thereto by a thread cut in the inside, into which the pitman-rod, which has also a thread cut upon it, is screwed and held firmly by a jam-nut.

Any other convenient mode of connecting the two may be adopted, although I prefer the method described.

To the socket-piece D' is also hinged a metallic piece, E, the lower end of which has also a socket, F, fitted to receive the other side of the ball C. Through the sockets D and F, and through the center of the ball C, is a hole to take the bolt G; the hole in the ball being considerably larger than such bolt or pin, so as to allow lateral movement of the ball within its sockets without interference from the pin. One end of such pin has a head, and at its other end recesses *g g* are made on its opposite sides, to receive the wedge-shaped forked piece H, which is used to hold the pin G in the sockets D and F, and press them upon the ball C. The wedge-shaped fork H has a stem, *h*, which rests against a projection on the socket-piece D', and around such stem is put a coiled spring, I, which presses against such piece H, and forces its forks or prongs into the recesses *g g*, and, by their wedge form, holds the sockets D and F closely against the ball C. As the sockets of the ball become worn, the spring I, acting on the piece H, presses its wedge shaped prongs into the recesses *g g* of the pin G, thereby drawing up such pin, and constantly keeping the sockets D and F closely to the ball C, and thus continually securing a proper operation of the parts. In some cases but one recess in the pin G will be required, and but one wedge-shaped fork or fastening; but, when possible, two will be preferred. The recess in such pin may also be in the form of a slot through it,



having a wedge-shaped key passing through such slot, acted upon by any suitable spring.

This device or arrangement of a tapering or wedge-shaped key or fastening, actuated by a spring to take up the wear of the joint, is not limited, however, in its application to the ball-and-socket joint proper, but can also be made use of, and with the same result, in a socket-joint when the parts are conical in shape, or when the joint is made by a concave socket or seat upon but one side, with a convex part fitting therein, or semi ball-and-socket joint.

What is claimed as new, and is desired to be secured by Letters Patent, is—

1. In combination with a ball-and-socket joint, the recessed pin or bolt and tapering or wedge-shaped key or fastening, actuated by a spring, for automatically taking up the wear of the joint, substantially as described.

2. The ball-and-socket joint, recessed bolt, wedged-shaped key, and spring, in combination with the knife-head and connecting-rod of a mowing or reaping machine, substantially as herein described.

R. DUTTON.

Witnesses:

S. D. LAW,

A. T. GURLITZ.