IMPROVED CONNECTING ROD
FOR MOWING MACHINES

JOHN BUTTER.

PATENTED
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Fig. I.

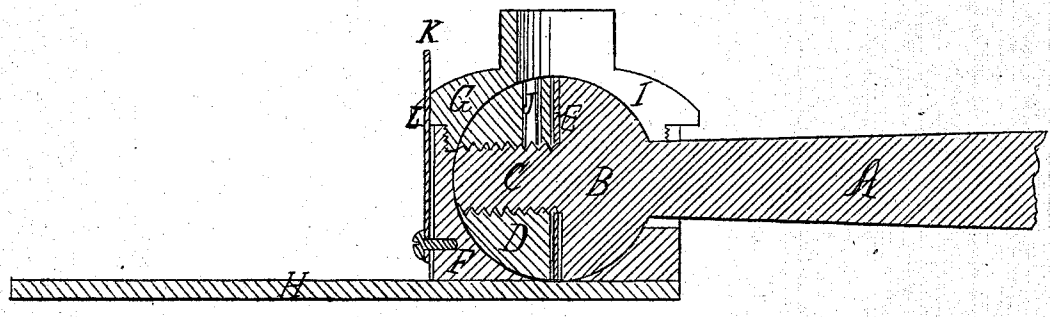
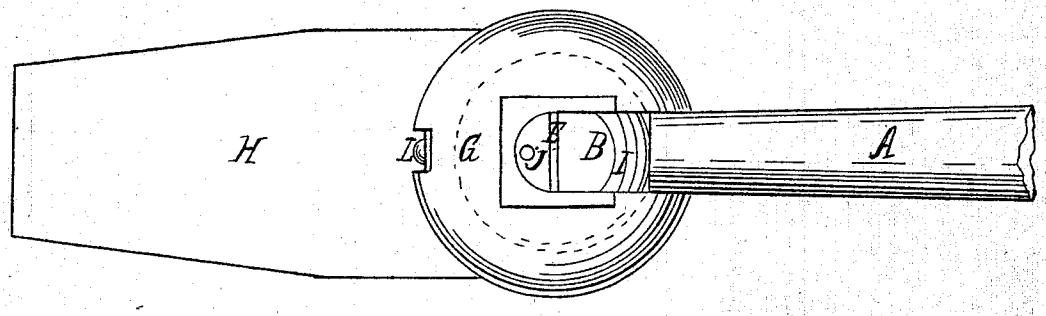


Fig. II.



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} WITNESSES

John Butter INVENTOR.

United States Patent Office.

JOHN BUTTER, OF BUFFALO, NEW YORK.

Letters Patent No. 71,450, *dated November* 26, 1867.

IMPROVEMENT IN PITMAN.

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, JOHN BUTTER, of the city of Buffalo, county of Erie, and State of New York, have invented a certain new and improved Connecting-Rod for Mowing-Machines; and I do hereby declare that the following is a full and exact description thereof, reference being had to the accompanying drawing, making a part of this specification, in which—

Figure I is a sectional elevation.

Figure II is a top plan view.

The nature of this invention relates to the construction of a ball-and-socket joint, for the purpose of connecting the connecting-rod of a mowing-machine to the cutter-bar thereof; and consists, first, in dividing the socket into two parts, the lower one of which is fastened to the cutter-bar, and the upper one screwed into the lower one, so as to allow an easy removal of the former for the purpose of inserting the connecting-rod ball; second, in dividing the spherical end or ball of the connecting-rod into two hemispheres, with a packing interposed, so as to enable the same to be adjusted to the spherical inside of the socket, when the ball and socket become worn by the jar of the machine; third, in providing the socket with a quadrant-opening or slot for the passage of the connecting-rod, so as to allow the cutter-bar to assume any position, from the horizontal to the vertical; fourth, in providing the socket with a spring-stop, for the purpose of preventing the upper part or cover from working loose by the jar of the machine.

Letters of like name and kind refer to like parts in each of the figures.

A represents the connecting-rod, made in one piece with the hemisphere B and the screw-bolt C. The latter serves the purpose of holding the hemispheres B and D together. A packing, E, is interposed, which may be taken out and replaced by a thicker one, when the jar of the machine has worn the ball and socket, so as to cause lash in the working thereof, so that under all circumstances a perfect fitting of the ball to the spherical inside of the socket may be obtained. The screwing on and unscrewing of the half-sphere D is performed by means of a pin placed into the hole J. F is the lower part or main body of the spherical socket, fastened to the cutter-bar H, and corresponds in size with the ball or sphere on the end of the connecting-rod A. It is provided at its upper end with a screw-thread for receiving the upper part or cover G, the latter forming, with the lower part, when screwed to it, a perfect hollow sphere, in which the sphere on the end of the connecting-rod closely fits. I is an opening or slot, through which the connecting-rod issues, cut into both the main body and the cover of the socket, and allowing the cutter-bar to assume any position, from the horizontal to the vertical, the latter being used when the machine is not in operation, and the cutter-bar folded for transportation. This slot also allows the connecting-rod a slight sidewise movement, resulting from the fact that the crank-shaft is generally not in the same plane with the cutter-bar. K is a spring-stop, fastened by screws to the main body of the socket, fitting to a notch, L, cut into the projecting rim of the cover G. It serves the purpose of retaining the cover in its proper position against the jar of the machine. Otherwise, the cover would be liable to become turned, and interfere with the connecting-rod within the limits allowed to the latter by the slot or opening I.

For the purpose of establishing the connection between the connecting-rod and the cutter-bar, the cover of the socket is unscrewed, the spherical end or ball of the connecting-rod put into the lower part or main body of the socket, and then the upper part or cover is screwed to the lower part of the socket, so forming a perfect closely-working joint, and at the same time allowing the connecting-rod and cutter-bar any necessary freedom of movement for enabling the machine to perform its work in the best manner.

When the ball and socket become worn by long use, it only needs the insertion of a new and thicker packing between the two hemispheres to again adapt the ball or spherical end of the connecting-rod to the spherical inside of the socket.

It will readily be seen from the foregoing description that my improved connecting-rod avoids all unnecessary friction resulting from the heretofore imperfect arrangement of the joint, and gives the latter a flexibility superior to any heretofore-known device for coupling the connecting-rod and cutter-bar of mowing-machines.

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

1. Constructing the socket in two parts, F and G, the lower one of which is fastened to the cutter-bar, for the purpose and substantially as described.

2. Constructing the spherical end or ball of the connecting-rod of two independent hemispheres B and D with interposed packing E, for the purpose and substantially as set forth.

3. Providing the socket with an opening or slot, I, for the purpose as herein described.

4. The spring-stop K, for the purpose and substantially as set forth.

JOHN BUTTER.

Witnesses:

W. H. FORBUSH,

EDW. WILHELM.