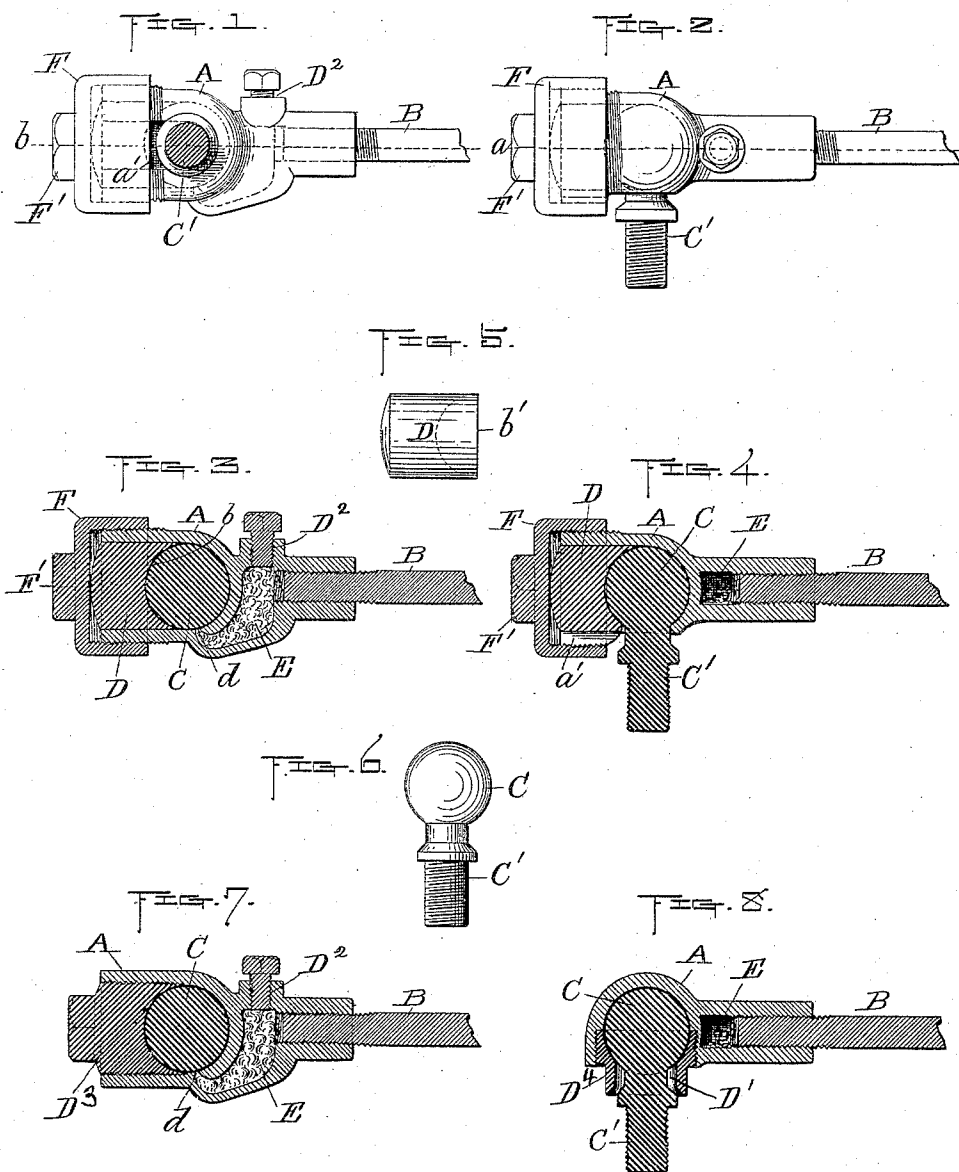


(No Model.)

J. GARFIELD.
PITMAN HEAD.

No. 445,775.

Patented Feb. 3, 1891.



Witnesses;
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UNITED STATES PATENT OFFICE.

JOEL GARFIELD, OF WORCESTER, MASSACHUSETTS.

PITMAN-HEAD.

SPECIFICATION forming part of Letters Patent No. 445,775, dated February 3, 1891.

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To all whom it may concern:

Be it known that I, JOEL GARFIELD, of the city and county of Worcester, and State of Massachusetts, have invented certain new and useful Improvements in Pitman-Heads for Mowing-Machines; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, forming a part of this specification, and in which—

Figure 1 represents a cross-section through the crank-pin, showing beyond a side view of my improved pitman-head. Fig. 2 is a plan view of the head. Fig. 3 is a vertical longitudinal section thereof, taken on line *a*, Fig. 2. Fig. 4 is a horizontal longitudinal section taken on line *b*, Fig. 1. Figs. 5 and 6 are detached views of parts of the pitman-head hereinafter described; and Figs. 7 and 8 are vertical and horizontal sections, respectively, similar to Figs. 3 and 4, showing modifications in the construction, also hereinafter described.

The object of my invention is to produce a pitman-head for mowing-machines that is susceptible of adjustment to take up the looseness produced by wear of the crank-pin bearing, that is strong, durable, and effective in use, and which may be automatically oiled in a satisfactory manner.

It consists in combining with the outer casing and crank-pin ball-bearing a detachable ball-holding device consisting, preferably, of an adjustable plug having means for holding it in position and in forming an oil-chamber in said casing connecting with the ball-socket, the construction being such as to retain the oil in said socket, so as to oil the bearing for a much longer time than by the usual construction, as hereinafter more fully set forth.

In the drawings, A represents the outer casing; B, the pitman-rod; C, the ball fitted in a suitable socket in said casing and connected with the crank-pin C'.

D is the adjustable plug, and E the oil-chamber in casing A, previously alluded to. The casing is made open at the opposite end from the pitman-rod to receive the ball and plug D and with a lateral or side opening to receive the crank-pin C'. A longitudinal slot *a'* is also formed in the casing extending out from the side opening (see Figs. 1 and 4) to

permit the crank-pin to pass forward in slipping the ball and said pin into position, as is shown in the first four figures of the drawings. The longitudinal opening in the casing is extended out cylindrical in form from the inner socket end that the ball fits into, and the plug is fitted thereto as well as to the surface of the ball, as is shown in Figs. 3 and 4. Said plug is held in position against the ball, leaving sufficient play for said ball to easily turn by the hollow holding-cap F, which is turned on over the end of the casing, said casing and the inside of the cap being threaded for the purpose, a nut F' being also formed on the cap to facilitate turning it into position. The outer end of the plug D is preferably convex in shape, so as to obtain a central bearing against the cap F, while its opposite end is concave in shape to fit the ball. By this arrangement of employing a longitudinal plug, fitting against the ball C and a cap F, as aforesaid, it is obvious that as the ball-bearing becomes worn away by use the parts may be fitted up tight again by simply turning up the cap over the casing.

In fitting the parts together the ball and crank-pin C C' are first slipped laterally into position, the ball passing into the longitudinal opening in the head, and its pin through the longitudinal slot *a'*, previously referred to. The plug D is then slipped longitudinally into said head with its concave end *b'* fitted against the ball, after which the cap is screwed on over the end of the head up against the plug to hold the latter in position.

Although I prefer the foregoing construction, I do not limit myself thereto, as a similar result may be obtained by forming an internal thread on the casing and an outer thread on the plug D², so that said plug may be screwed into said casing against the ball, as is shown in Fig. 7, in which case the cap F, being unnecessary, is dispensed with. In Fig. 8 a similar construction is shown, except that an externally-threaded collar D³ is substituted for the solid plug, which is screwed into the side instead of the end of the casing, and said collar provided with a longitudinal opening D' to receive the crank-pin C', which in this instance, as will be observed, comes in line therewith. By this construction the wear is taken up by lateral instead of longitudinal

adjustment; otherwise it is substantially like those previously described.

The oil-chamber E is formed in the casing, and extends from in front of the threaded longitudinal pitman-rod opening around under the ball and connects at or near its lower end with the chamber or socket in which said ball is fitted, the casing being enlarged sufficiently upon the under side to admit of the formation of said oil-chamber therein, and is provided with a hole at *d* to allow the oil to pass out into the socket, as aforesaid, and as shown in Figs. 3 and 7 of the drawings. In practice said chamber is preferably filled with cotton waste or similar material in connection with the oil, and said oil and waste are supplied through a suitable plugged inlet D² at the top, as ordinarily.

By constructing the pitman-head as hereinbefore described it is obvious that the oil will be retained around the ball up to the level of the side opening, and therefore the ball-socket in a measure acts as an auxiliary or supplementary oil-chamber. Consequently, as but little oil is wasted, the renewal thereof is necessitated only at long intervals, while at the same time the ball-and-socket joint is kept oiled in a most perfect manner.

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

1. In a pitman-head for mowing-machines,

the threaded pitman-rod and casing, the latter having a threaded opening to receive said rod and a socket to receive the ball, also having suitable openings to receive the crank-pin and the detachable ball-holding device, also having an oil-chamber extending from in front of the inner end of the rod down under the ball-socket and connected therewith by a suitable outlet, in combination with said ball and crank-pin and the detachable ball-holding device whose inner end fits against the surface of said ball, substantially as and for the purpose set forth.

2. In a pitman-head for mowing-machines, the threaded pitman-rod B and casing A, the latter having a threaded opening to receive said rod and a socket to receive ball C, also having a lateral opening to receive the crank-pin and a longitudinal opening to receive plug D, as well as having an oil-chamber E extending from in front of the end of the rod down under the ball-socket and connected therewith by a suitable outlet *d*, said chamber also having a suitable inlet, in combination with said ball and crank-pin, the plug D, fitted against the ball, and cap F, screwed over the end of the casing against said plug, substantially as and for the purpose set forth.

JOEL GARFIELD.

Witnesses:

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