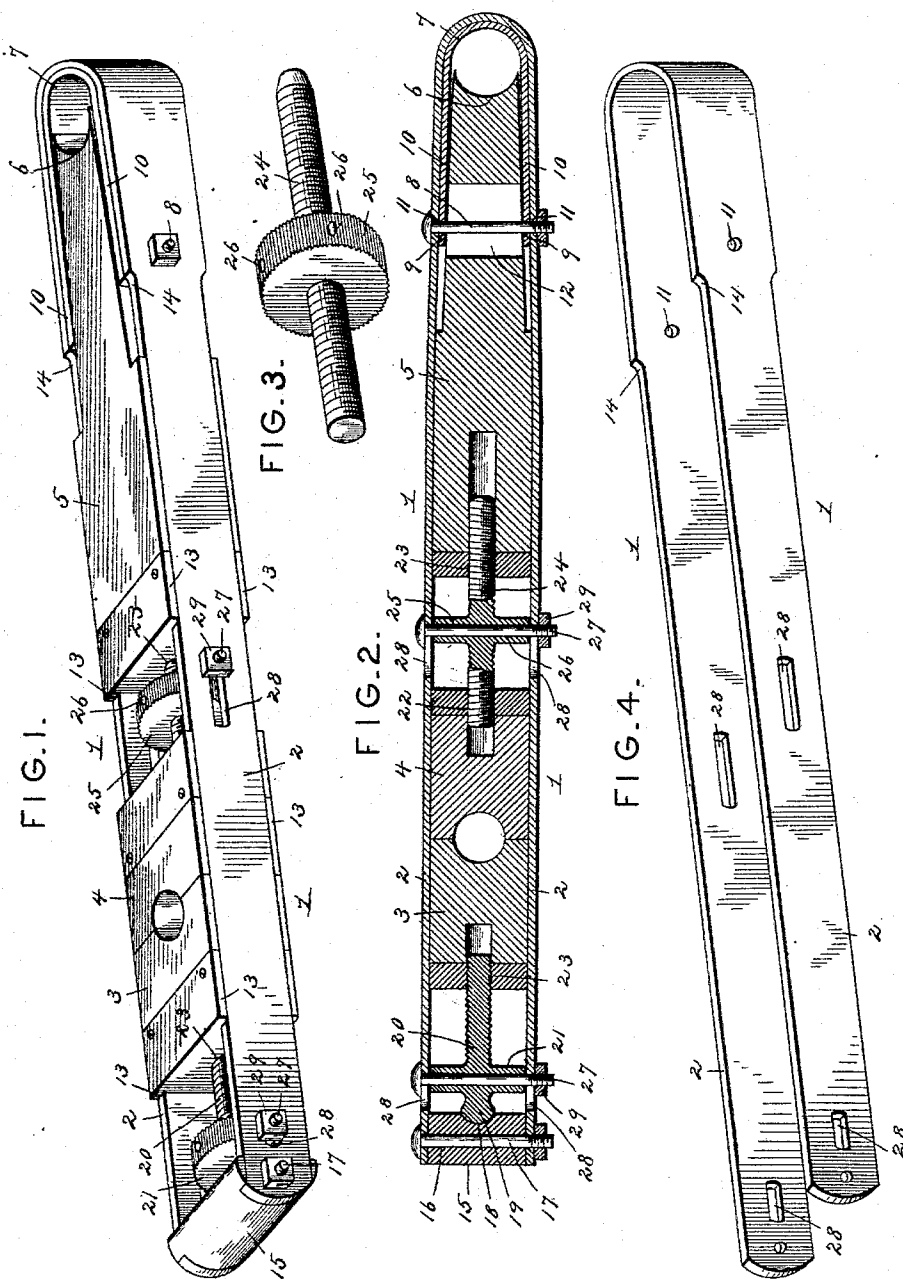


(No Model.)

T. C. MULLENIX.
PITMAN.

No. 533,549.

Patented Feb. 5, 1895.



Inventor

Theodore C. Mullenix.

Witnesses

Harry L. Amer.

By his Attorneys.

C. A. Snow & Co.

UNITED STATES PATENT OFFICE.

THEODORE C. MULLENIX, OF CHASE, KANSAS, ASSIGNOR OF TWO-THIRDS
TO H. L. MARSHALL AND A. E. JAMES, OF SAME PLACE.

PITMAN.

SPECIFICATION forming part of Letters Patent No. 533,549, dated February 5, 1895.

Application filed September 18, 1894. Serial No. 523,374. (No model.)

To all whom it may concern:

Be it known that I, THEODORE C. MULLENIX, a citizen of the United States, residing at Chase, in the county of Rice and State of Kansas, have invented a new and useful Pitman, of which the following is a specification.

My invention relates to pitmen for driving the sickle-bars of mowing, reaping and analogous machines, the object in view being to provide a simple, strong and efficient construction whereby the bearings which receive the wrist pin of the crank arm or wheel and the similar pin on the sickle-bar may be adjusted to take up wear without altering the interval between the centers of said bearings; and furthermore, to provide means for facilitating the removal and replacement of the bearing-blocks, whereby the frame or body-portion of the pitman may serve for the number of blocks.

Further objects and advantages of my invention will appear in the following description, and the novel features thereof will be particularly pointed out in the appended claims.

In the drawings:—Figure 1 is a perspective view of a pitman embodying my invention. Fig. 2 is a longitudinal section of the same. Fig. 3 is a detail view of one of the adjusting bolts with its milled thumb-nut. Fig. 4 is a detail view in perspective of the frame or body-portion of the pitman with the bearing-blocks and adjusting devices omitted.

Similar numerals of reference indicate corresponding parts in all the figures of the drawings.

1 designates the frame or body-portion of the pitman which consists of a continuous flat metal strap, bent upon itself at its center to form the approximately parallel sides or arms 2, and between these parallel sides or arms fit the slidable bearing-blocks 3, 4 and 5. The bearing-block 5, is arranged adjacent to the closed end of the frame or body-portion and is provided at the extremity contiguous to said closed end with a half bearing 6, which co-operates with a curved bearing-plate 7, fitted removably in and lying in contact with the closed end of the frame or

body-portion. This bearing-plate is secured in place by means of a transverse bolt 8, which passes through perforations 9 in the arms 10 of said plate, and through corresponding registering perforations 11, in the sides or arms of the frame or body-portion. This bolt also extends through a longitudinal slot 12, in the bearing-blocks 5, whereby the latter may be moved longitudinally in the frame or body-portion to compensate for wear on the bearing surfaces of the plate 7 and the terminal of said block.

All of the bearing-blocks are provided at their opposite sides with guiding flanges 13, which overhang the edges of the sides or arms of the frame or body-portion and thus prevent deflection of the blocks in the direction of the planes of said sides or arms; and the opposite side edges of said sides or arms are cut-away from the shoulders 14, to the extremities or free ends of the sides or arms, thus reducing the width of the sides or arms sufficiently to bring the outer surfaces of the blocks in the same plane with the unreduced portion of the frame or body-portion, or that portion adjacent to the bearing formed by the outer extremity of the bearing-block 5 and the contiguous bearing-plate 7. The bearing-block 5, is further reduced at its outer end to fit between the sides of the bearing-plate 7.

Between the free ends of the sides or arms of the frame or body-portion is fitted a removable block or cross-head 15, provided with terminal shoulders to engage the edges of the sides or arms and having a perforation 16, through which extends a securing-bolt 17 engaging registering perforations in the extremities of the sides or arms. In the inner surface of this block or cross-head, is formed a socket-bearing 18, to receive a ball, knob or rounded projection 19, on the adjusting bolt 20, a milled thumb-nut 21, being fixed to or formed integral with said bolt 20, to operate between the planes of the sides or arms of the frame or body-portion. This adjusting bolt engages a threaded-socket 23, in the adjacent bearing-block 3, and as the rounded head, ball or knob, 19, is mounted in the socket bearing of the removable block or cross-head, it will be seen that by turning the adjusting bolt by

means of its thumb-nut, said bearing-block may be adjusted longitudinally of the frame or body-portion to take up lost motion.

Arranged between the contiguous ends of the bearing blocks 4 and 5, and engaging threaded-sockets 22 and 23, formed respectively in said blocks, is a double adjusting bolt 24, provided at an intermediate point with a milled thumb-nut 25, similar to that which forms a part of the single adjusting bolt 20. Said thumb-nuts are preferably made of a diameter corresponding with the interval between the inner surfaces of the sides or arms of the frame or body-portion, and they are provided with diametrical perforations 26 for the reception of locking-bolts 27, which are arranged transversely in the frame or body portion, and engage longitudinal slots 28, formed in said sides or arms. A series of these diametrical perforations is formed in each milled nut, whereby the adjusting-bolts may be locked at any desired adjustment by inserting the locking-bolts through the slots in the sides or arms and the registering diametrical perforations of the thumb-nuts. When the nuts 29, are engaged with the threaded-terminals of the locking-bolts and are tightened to contract the sides or arms of the frame or body portion, the inner surfaces of the latter are brought into contact with and bear firmly against the surfaces of the bearing-blocks, and an excessive contraction of the frame is prevented by the thumb-nuts filling the space between the inner surfaces of the sides or arms. When said nuts are tightened, therefore, all of the parts of the pitman are locked firmly together, thus providing a strong and rigid structure. In case of binding of the sides or arms of the frame against the contiguous surfaces of the bearing-blocks, due to an expansion or contraction of any of the parts or members of the pitman, the bolt by which the terminal block or cross-head between the extremities of the sides or arms is held may be loosened, thus allowing said sides or arms, which are preferably of such a material as to have a certain amount of elasticity, to spring outward and thus release the blocks.

From the above description, it will be seen that the various bearing-blocks may be adjusted independently to take up lost motion and thus compensate for wear without altering the distance between the axes of rotation, or of the crank pins which are connected by the pitman: Furthermore, it will be seen that the construction of the device is simple, and that when the bearing-blocks have become worn to such an extent as to be useless, having reached the limits of adjustment, the removable block or cross-head, by which the extremities of the sides or arms of the frame or body-portion are connected, may be detached, and said bearing-blocks removed and replaced by new blocks. It is obvious that the doubled-bearing-plate which forms one side of the terminal bearing at the closed end

of the frame or body-portion, may be removed and replaced as described in connection with the bearing-blocks.

The improved pitman may be constructed of any desired material and size to suit the machine in connection with which it is used, and it will be obvious that the same may be employed in connection with any machinery in which a pitman is used for communication from a driving to a driven part.

It will be understood furthermore, that different means for locking the adjusting bolts in their desired position may be adopted, and that various changes in the form, proportion, and minor details of construction may be resorted to without departing from the spirit or sacrificing any of the advantages of the invention.

Having thus described my invention, I claim—

1. In a pitman, the combination, of a parallel-sided frame or body-portion having one end permanently closed, a block or cross-head fitted removably in the other end of the frame or body-portion, a transverse bolt for securing said block in place bearing-blocks slidably fitted in said frame, and adapted to be inserted and removed through the end of the frame in which the block or cross-head is fitted and means for adjusting said blocks, substantially as specified.

2. In a pitman, the combination of a parallel-sided frame having an open end, a block or cross-head removably secured in said open end and provided with a socket-bearing, an adjusting bolt having a rounded head fitted in said socket-bearing, bearing-blocks slidably mounted in the frame, one of the blocks being engaged by said adjusting-bolt, a double adjusting-bolt arranged between contiguous ends of two bearing-blocks and engaging threaded-sockets therein, and means for turning said adjusting-bolts and locking them in their adjusted positions, substantially as specified.

3. In a pitman, the combination of a frame, bearing blocks slidably mounted therein, adjusting-bolts engaging the threaded-sockets in said bearing-blocks, and locking-bolts engaging diametrical perforations in the adjusting-bolts and registering openings in said frame, substantially as specified.

4. In a pitman, the combination with a frame and bearing-blocks slidably mounted therein, of adjusting-bolts threaded in sockets in the bearing-blocks and provided with thumb-nuts having diametrical perforations, said frame being provided with slots with which said diametrical perforations may be registered, and locking-bolts engaging registering slots and perforations to secure the adjusting-bolts in their adjusted positions, substantially as specified.

5. In a pitman, the combination with a frame having parallel side bars, of bearing blocks 3, 4 and 5 slidably mounted in said

frame, an adjusting bolt 20 seated at one end
in a bearing formed in a removable bar at
one end of the frame and threaded in a socket
of the block 3, a right and left threaded bolt
5 engaging the sockets in the contiguous ends
of the blocks 4 and 5, and means for locking
said bolts at the desired adjustment, substan-
tially as specified.

In testimony that I claim the foregoing as
my own I have hereto affixed my signature in 10
the presence of two witnesses.

THEODORE C. MULLENIX.

Witnesses:

M. S. ROBERTS,
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