H. B. SPERRY.

PITMAN CONNECTION.

APPLICATION FILED APR. 10, 1916.

1,312,280. Patented Aug. 5, 1919.

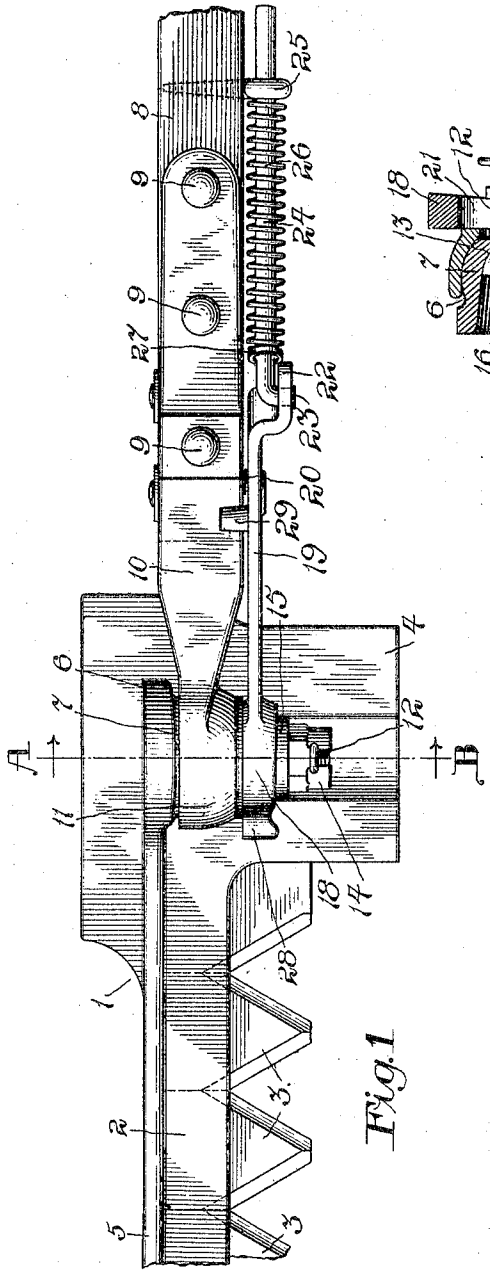


Fig. 1

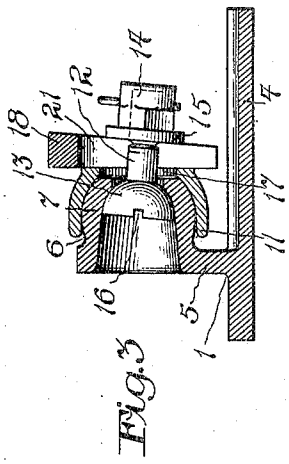


Fig. 3

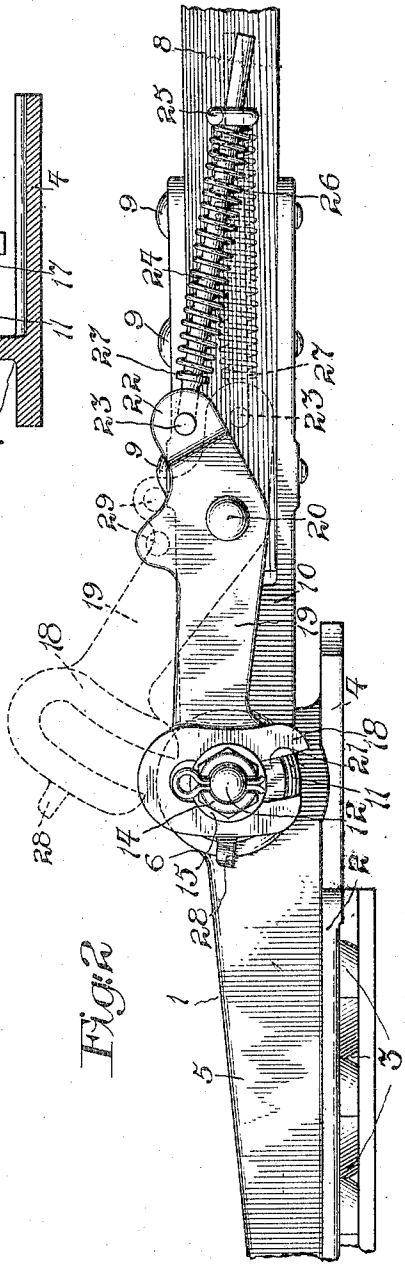


Fig. 2

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UNITED STATES PATENT OFFICE.

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PITMAN CONNECTION.

1,312,280. Specification of Letters Patent. **Patented Aug. 5, 1919.**

Application filed April 10, 1916. Serial No. 90,117.

To all whom it may concern:

Be it known that I, HERBERT B. SPERRY, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Pitman Connections, of which the following is a full, clear, and exact specification.

My invention relates to pitman connections, and comprises automatically actuated means operative to retain the coupling elements in close engagement as their meeting surfaces become worn by a relative movement thereof.

The object of my invention is to provide an improved construction and connectible members specially adapted for coupling the pitman of a mower to the knife head, wherein the requirements are such that the pitman must have a free movement axially upon the connecting member of the knife head and the knife head a free movement in the direction of tilt of the finger bar and the connecting members be kept adjusted in close engagement as wear occurs, and to provide means whereby a proper engagement of the parts is maintained automatically although a comparatively large amount of wear has developed by constant operation of the mechanism.

These objects are attained by means of the mechanism illustrated in the accompanying drawings, in which—

Figure 1 is a top plan view of a pitman and knife connection for a mower and embodying my invention;

Fig. 2 is a front elevation of Fig. 1; and

Fig. 3 is a vertical section on line A—B of Fig. 1.

The same reference characters designate like parts throughout the several views.

1 represents the knife head secured to a knife back 2, to which are secured toe sections 3. The head is provided with a relatively wide base 4 and a vertical longitudinally disposed flange 5 terminating at its stubbleward end in a forwardly extending barrel member 6, having a semi-spherical head portion 7 at its front end. 8 represents the body of a pitman, having secured thereto, by means of rivets 9, a shank 10, terminating at its free end in an annular cup-shaped member 11 adapted to receive the head 7 of the barrel member 6, and 12 a threaded bolt provided with a semi-spherical head 13 and a nut 14, having an abutting flange 15 thereon. The head of the bolt is received by the barrel member 6 and is turnable within its semi-spherical head portion 7, and 16 represents a transverse slot across the head of the bolt whereby it may be secured against rotation when the nut 14 is adjusted. The opening 17 in the front side of the cup-shaped member 11 of the shank 10 is large enough to permit it to be passed over the flange 15 and in engagement with the head 13.

Means are provided for securing the cup-shaped member of the pitman shank in engagement with the coacting member of the knife head and to automatically retain them in proper operative relation as they become worn by use, including a wedge member 18 carried by an arm 19 pivotally mounted upon a stud 20 secured to the pitman 8 and provided with a concentric slot 21 adapted to receive the body of the bolt 12, the wedge being disposed between the flange 15 of the nut and the face of the cup-shaped member 11. 22 represents a stubbleward extension of the arm 19 provided with a laterally disposed opening that receives the laterally turned end 23 of a link 24, having its opposite end slidably received by an eye member 25 secured to the body of the pitman, and 26 a coiled compression spring reactive between the eye and a collar 27 on the link in a manner to turn the arm 19 about its pivot in a direction to move the wedge 18 downward in a manner to take up any wear of the connected parts. The axis of the arm 18 is disposed at right angles to the axis of the pitman and parallel with the axis of the cup-shaped member 11. When it is desired to disconnect the pitman from the knife head, the wedge and its carrying arm are turned upward by means of the finger engaging member 28, as shown in dottel lines in Fig. 2. When in that position a link sustaining pintle 29 on the arm 19 engages with the shank 10 in a manner to limit an upward swing of the arm, and the extension 22 of the arm carries the grassward end of the link 24 downward until the axis of its laterally turned end 23 is below an imaginary line drawn through the axis of the stud 20 and the eye member 25, whereby the reactive force of the spring 26 yieldingly retains the wedge and its carrying arm in a raised position.

Having shown and described one embodiment of my invention, I do not desire that it be limited to the precise details of the structure as illustrated, it being understood that many changes may be made in the form, proportion and organization of its associated parts without departing from the spirit of my invention as indicated in the appended claims.

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

1. A pitman connection including a ball and socket joint, means movable in a plane transverse to the longitudinal axis of the pitman for taking up the wear on said joint, and toggle mechanism for actuating said take-up means.

2. A pitman connection including a ball and socket joint, take-up mechanism including a wedge movable at right angles to the longitudinal axis of the pitman, and toggle mechanism for actuating said wedge.

3. A pitman connection including a ball and socket joint, means including a member pivoted on the pitman and having an inclined bearing surface for taking up the wear on said joint, and toggle mechanism for actuating said means.

4. A pitman connection including coacting spherical bearing surfaces, means movable in a plane transverse to the longitudinal axis of the pitman for forcing said surfaces into bearing contact, and toggle mechanism for actuating said means.

5. A pitman connection including a ball and socket joint, pivoted means extending through said joint for forcing the members of said joint into contact with each other, and spring controlled means for actuating said first mentioned means.

6. A pitman connection including a ball and socket joint, a clamping bolt extending through said joint, and toggle controlled means coöperating with said bolt to take up the wear on said joint.

7. A pitman connection having a ball and socket joint, a clamping bolt for closing said joint, a lever pivoted to the pitman and having an inclined bearing surface on one end, abutting means carried by said bolt adapted to contact with the inclined bearing surface of said lever, and resilient means for actuating said lever.

8. In combination, a pitman including an annular cup-shaped shank, a separable element coactable therewith and including a barrel member provided with a semi-spherical head adapted to be received by said cup-shaped shank, a bolt having a semi-spherical head received by the head of said barrel member, an abutting element carried by the opposite end of said bolt, and a wedge movable at right angles to the longitudinal axis of said pitman and adapted to coact with said abutting element and said shank in a manner to retain said shank in operative engagement with said separable coacting element.

9. In combination, a pitman including an annular cup-shaped shank, a separable element coactable therewith and including a barrel member provided with a semi-spherical head adapted to be received by said cup-shaped shank, a bolt having a semi-spherical head received by the head of said barrel member, an abutting element carried by the opposite end of said bolt, an arm pivotally mounted upon said pitman and having its axis at right angles with the longitudinal axis thereof, and a wedge member carried by said arm and adapted to coact with said abutting element and said shank in a manner to retain said shank in operative engagement with said separable coacting element.

10. In combination, a pitman including an annular cup-shaped shank, a separable element coactable therewith and including a barrel member provided with a semi-spherical head adapted to be received by said cup-shaped shank, a bolt having a semi-spherical head received by the head of said barrel member, an abutting element carried by the opposite end of said bolt, an arm pivotally mounted upon said pitman and having its axis at right angles with the longitudinal axis thereof, a wedge member carried by said arm and provided with an open slot adapted to receive the body of said bolt, said wedge coacting with said abutting element and said shank in a manner to retain said shank in operative engagement with said separable coacting element, and a spring carried by said pitman and reacting to normally move said wedge in a downward direction.

In testimony whereof I affix my signature, in the presence of two witnesses.

HERBERT B. SPERRY.

Witnesses:
GEO. W. NEIR,
F. KOENTZ.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."