J. STURROCK.

PITMAN CONNECTION.

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1,291,237.

Patented Jan. 14, 1919.

Fig. 1.

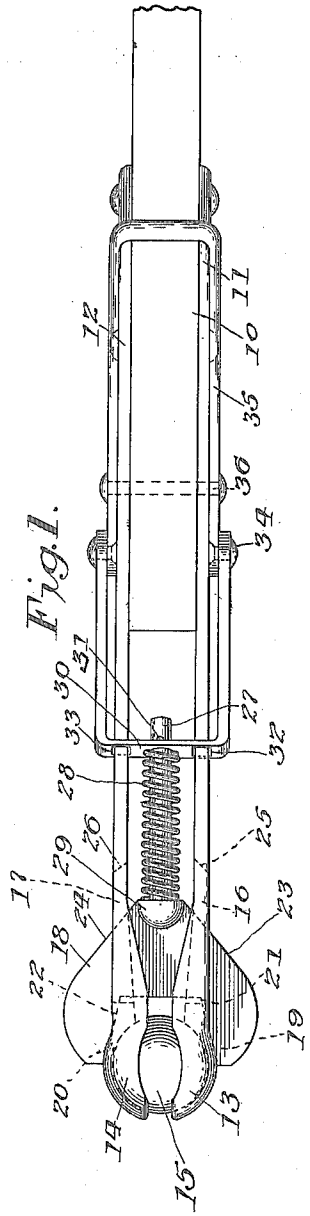
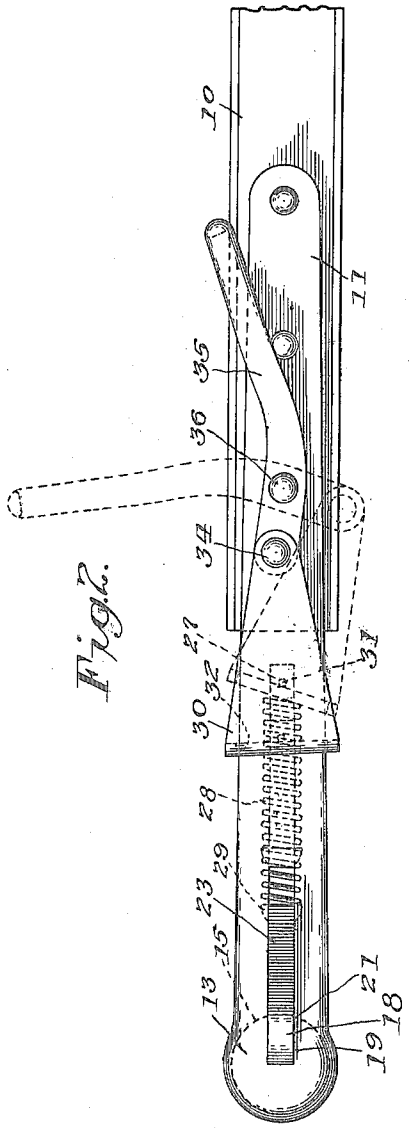


Fig. 2.



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UNITED STATES PATENT OFFICE.

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PITMAN CONNECTION.

1,291,237. Specification of Letters Patent. Patented Jan. 14, 1919.

Application filed April 20, 1918. Serial No. 229,786.

To all whom it may concern:

Be it known that I, JOHN STURROCK, a subject of the King of Great Britain, 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.

This invention relates to pitman connections for mowers, and like machines.

In the use of pitmen having one or more resilient straps or jaws to clamp the bearing member of the knife of the mower knife head, it has been found that the grassward end of the pitman has, in some instances, been accidentally pulled away from or separated from the knife head. This accidental separating of the grassward end of the pitman from the bearing member on the end of the knife head has occurred in some instances when the mower knives have encountered some tough or unyielding object, such, for instance, as a stick or stone. This object, in such instances, prevents the reciprocation of the knives, and as the crank disk continues to revolve the pitman is pulled away from the knife head, and the bearing is snapped from the clamping jaws.

This invention has for its object to remedy this condition by providing means utilized in connection with a pitman having one or more resilient jaws for preventing this accidental separation of the grassward end of the pitman from the bearing member on the mower knife head.

With this object in view, the invention comprises a jaw clamping member, and means for actuating said member, the actuating means having means for preventing the spreading of the jaws when the jaw clamping member is in clamping position.

In the accompanying drawings I have illustrated one embodiment of my invention, and in these drawings—

Figure 1 shows, in plan view, the grassward end of a pitman having my improvements embodied therein; and,

Fig. 2 is a side elevation of the construction shown in Fig. 1.

The body of the pitman 10 is formed preferably of wood, and has secured thereto, at its grassward end, straps or clamping jaws 11 and 12. One or both of these straps is formed of resilient material in order that the proper clamping action hereinafter described may be obtained. The straps 11 and 12 are provided at their grassward ends with spherical bearing portions 13 and 14, which coöperate with a spherical bearing member 15 formed integral with or secured rigidly to the knife head of the mower. The straps 11 and 12 are slotted, as shown at 16 and 17, and receive in the slot a reciprocable jaw clamping and spreading member 18. Bearing portions 13 and 14 of the straps are provided with outer inclined bearing surfaces 19 and 20, which coöperate with oppositely disposed inclined bearing surfaces 21 and 22 formed on the inner surfaces of the bifurcated outer end of the jaw clamping member 18. The stubbleward, or rear end of the clamping member 18, is provided with outer inclined bearing surfaces 23 and 24, which coöperate with the inclined bearing surfaces 25 and 26 formed at the stubbleward end of the slots 16 and 17. The clamping member 18 has a stubblewardly extending shank portion 27 on which is carried a spiral spring 28, which contacts with a shoulder 29 on member 18, at its grassward end, and at its rear end spring 28 bears against a U-shaped link 30. The shank 27 extends through an aperture in the member 30, and has secured thereto at its stubbleward end a cotter pin 31, which prevents the shank 27 from becoming separated from the member 30. The member 30 is also provided with slots 32 and 33 through which the straps 11 and 12 extend, and is pivoted at 34 to a U-shaped lever 35, which, in turn, is pivoted at 36 to the body of the pitman. The pivotal connections 34 and 36 are disposed in such a position, and the lever 35 is curved in such a manner, that a toggle locking action is obtained when the lever 35 is forced downwardly against the body portion 10 of the pitman in order to force the jaw clamping member 18 into clamping position. This is due to the fact that the pivot 34 between the grassward end of the lever and the U-shaped link 30 is disposed above and out of alinement with a line connecting the pivot 36 with the connection between the cross-portion of member 30 with the shank 27 of the jaw clamping member.

Having described the construction of my

improved pitman connection, I will now briefly set forth the operation of the same.

In full lines in Figs. 1 and 2, I have shown the jaw clamping member in clamping position, the lever 35 being pressed downwardly until its cross-portion is in contact with the body of the pitman. In this position the member 30 is forced in a grassward direction, compressing the spring 28, and through this spring forcing the jaw clamping member 18 into clamping position, thereby forcing the bearing portions 13 and 14 of the pitman straps 11 and 12 into bearing contact with the bearing member 15 on the mower knife head. It should be noted that this resilient clamping action automatically takes up the wear between the bearing portions 13 and 14, and the bearing member 15.

When it is desired to release the bearing member 15 from the pitman, the lever 35 is thrown to the dotted line position shown in Fig. 2, and in this position forces the member 30 through the pin 31 to draw the clamping member 18 rearwardly until the inclined bearing surfaces 23 and 24, acting in conjunction with the bearing surfaces 25 and 26, spread the pitman straps apart, and release the bearing member 15. When the lever 35 is in position to force the pitman straps into clamping relation, the cross-portion of the member 30 is in the position shown in full lines in Fig. 1, and by means of the slotted connection between this member and the pitman straps the accidental separation of the grassward end of the pitman from the knife head of the mower is prevented.

From the above description it will be seen that I have provided a simple and easily operated construction for connecting the pitman to the knife head of the mower in such a manner that the wear between the coöperating parts will be automatically taken up, and that accidental separation of the coöperating parts is effectively prevented.

While I have in the above specification described one embodiment which my invention may assume, it will be understood that the invention is capable of modification, and that modification may be employed without departing from the spirit and scope of the invention as expressed by the following claims.

What I claim as new is:

1. In a pitman connection, a pitman having jaws, one of which is resilient, means for forcing one of said jaws toward the other jaw, and means for actuating said last named means, said actuating means having means tending to prevent the accidental spreading of said jaws when said jaws are in clamping position.

2. In a pitman connection, a pitman having jaws, one of which is resilient, resilient means for forcing one of said jaws toward the other jaw, and means for actuating said last named means, said actuating means having means for preventing the spreading of said jaws when said jaws are in clamping position.

3. In a pitman connection, a pitman having jaws, one of which is resilient, reciprocable means for forcing one of said jaws toward the other of said jaws, and means for preventing the spreading of said jaws when said jaws are in clamping position.

4. In a pitman connection, a pitman having jaws, one of which is resilient, means for forcing one of said jaws toward the other of said jaws, and means for preventing the spreading of said jaws when said jaws are in clamping position.

5. In a pitman connection, a pitman having jaws, one of which is resilient, reciprocable jaw clamping means, resilient means for forcing said jaws into clamping position, said last named means having means for preventing accidental spreading of said jaws when said jaws are in clamping position.

6. In a pitman connection, a pitman having jaws, one of which is resilient, means for forcing one of said jaws toward and away from the other of said jaws, means for actuating said last named means, said actuating means having means for preventing the accidental spreading of said jaws when said jaws are in clamping position.

7. In a pitman connection, a pitman having resilient jaws, reciprocable means for clamping and spreading said jaws, resilient means for actuating said reciprocable means, said actuating means having means for preventing accidental spreading of said jaws when said jaws are in clamping position.

8. In a pitman connection, a pitman having resilient jaws, a jaw clamping and spreading member having a stubblewardly extending shank portion, means including a link member coöperating with said shank portion for reciprocating said clamping and spreading member, said link member having means coöperating with said resilient jaws for preventing accidental spreading of the same when said jaws are in clamping position.

9. In a pitman connection, a pitman having resilient jaws, means for clamping said jaws, and means including a link member for operating said clamping means and for preventing accidental spreading of said jaws when said jaws are in clamping position.

10. In a pitman connection, a pitman having resilient jaws, a jaw clamping member, and means including a slotted link for actuating said jaw clamping member and for preventing accidental spreading of said jaws when said jaws are in clamping position.

11. In a pitman connection, a pitman having resilient jaws, a jaw clamping member, and means including a slotted link for actuating said jaw clamping member and for preventing accidental spreading of said jaws

when said jaws are in clamping position, the slots of said actuating member receiving said jaws.

12. In a pitman connection, a pitman having resilient jaws, a jaw clamping member having a shank portion, a spring carried by said shank portion, and bearing at one end against a link member and at its opposite end against the jaw clamping member, means for preventing the operation of said link member and said shank portion, and means for reciprocating said link member, said link member having slots receiving said resilient jaws.

In testimony whereof I affix my signature.

JOHN STURROCK.