

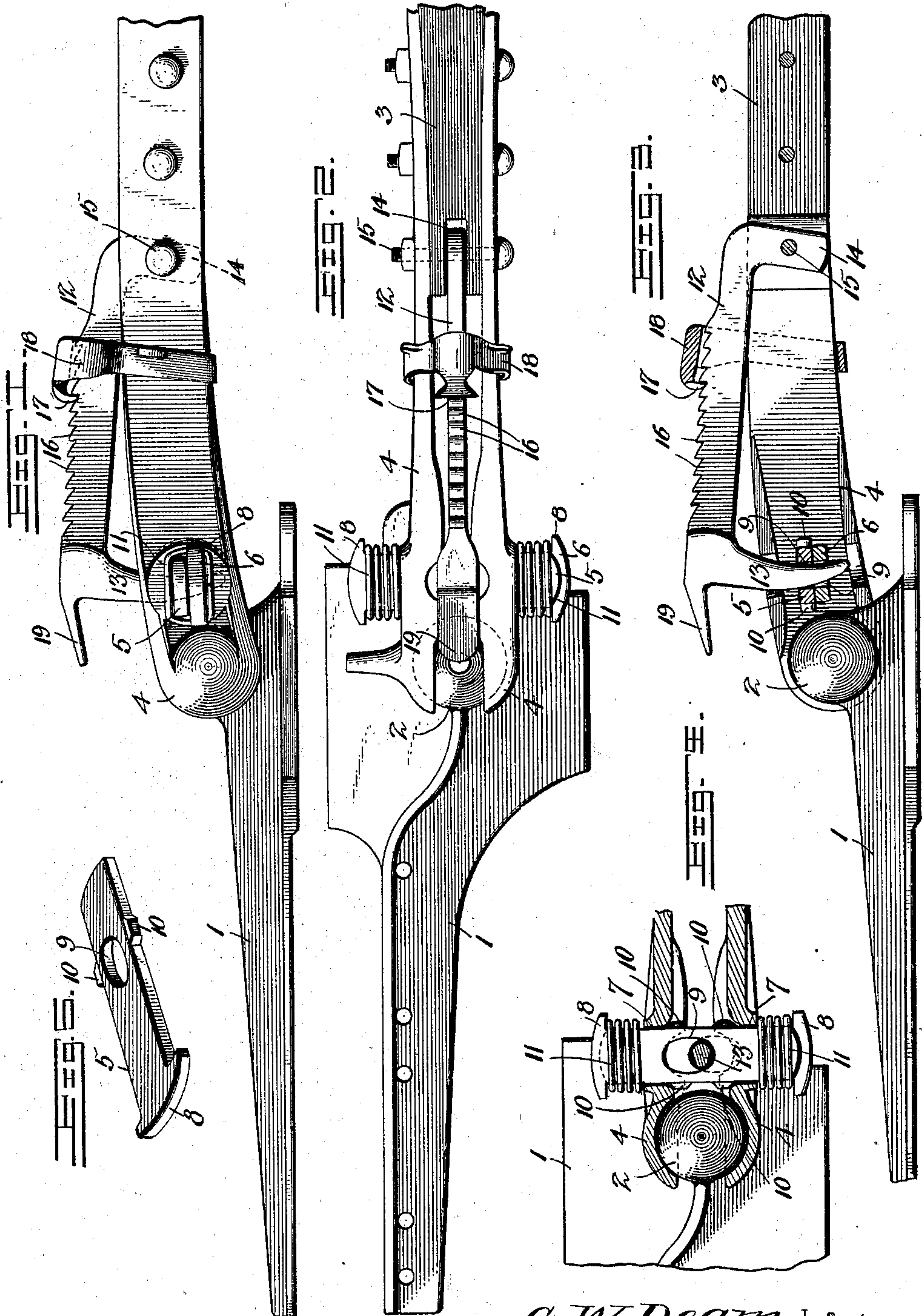
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Patented Apr. 22, 1902.

G. W. BEAM.  
PITMAN ROD CONNECTION.

(Application filed Nov. 15, 1901.)

(No Model.)



Witnesses  
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# UNITED STATES PATENT OFFICE.

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## PITMAN-ROD CONNECTION.

SPECIFICATION forming part of Letters Patent No. 698,357, dated April 22, 1902.

Application filed November 15, 1901. Serial No. 82,425. (No model.)

*To all whom it may concern:*

Be it known that I, GEORGE WASHINGTON BEAM, a citizen of the United States, residing at Robinson, in the county of Crawford and State of Illinois, have invented a new and useful Pitman-Rod Connection, of which the following is a specification.

This invention relates to pitman-rod connections for mowing-machines.

The object of the invention is to provide a novel form of adjustment of the socket members with relation to the ball-bearing of the knife-head, the mechanism employed to be such that the sockets will be held in positive adjustment with relation to the ball and in which disconnection of the sockets from the ball may be readily accomplished.

With these and other objects in view, as will appear as the nature of the invention is better understood, the same consists of the novel construction and combination of parts of a pitman-rod connection for mowers, as will be hereinafter fully described and claimed.

In the accompanying drawings, forming a part of this specification, and in which like numerals of reference indicate corresponding parts, there is illustrated a form of embodiment of the invention capable of carrying the same into practical operation, it being understood that the elements therein exhibited may be varied or changed as to shape, proportion, and exact manner of assemblage without departing from the scope of the invention, and in the drawings—

Figure 1 is a view in side elevation exhibiting the invention. Fig. 2 is a view in plan. Fig. 3 is a view in sectional elevation. Fig. 4 is a view in sectional plan. Fig. 5 is a perspective detail view of one of the locking-plates used for holding the socket members associated with the ball.

Referring to the drawings, 1 designates the knife-head of the cutter-bar, provided with the usual ball-bearing 2, 3 the pitman-rod, and 4 the socket members carried thereby and in engagement with the ball. As these parts may be of any usual or preferred construction and constitute no part of the present invention *per se*, further description is deemed unnecessary.

The present invention resides in the means

employed for holding the socket members associated with the ball and comprises two locking-plates 5 and 6, which are passed through rectangular openings 7 in the sides of the socket members and project laterally some distance beyond the same. As the construction of each locking-plate is the same, a description of one will serve for both. The plate is provided at one end with a head 8 of a size to span the opening 7 and intermediate of its ends with an approximately elliptical opening 9, adjacent to which on each edge of the plate is an outstanding shoulder 10, adapted to bear against the inner wall of the socket member on each side of the opening 7, thus to limit outward movement of the plate, the inward movement being limited by the head 8. Wound upon the outer portion of the plate, between the head and the socket member, is a spring 11, the coils of which are approximately rectangular, as shown in Fig. 1, and embrace the outward-protruding end of the other plate, as also shown in the above figure. The springs 11 exert outward pressure on the heads of the plates, and as these latter are held from disconnection with their respective socket members the thrust of the springs operates normally to keep the socket members separated, so that when drawn together to embrace the ball 2 friction between the latter and the socket members will be reduced to a minimum, and this friction will be still further reduced from the fact that the socket members are yieldably clasped about the ball and will thus give slightly to the vibrations of the cutter-bar and will prevent undue wearing of the ball-and-socket members. In assembling the locking-plates with the socket members each is passed through one of the members, and a mandrel is then driven into the opening 9 to spread the metal laterally on each side of the opening to form the shoulders 10, after which the springs 11 are coiled about the terminal ends of both of the locking-plates.

The means employed for drawing the two socket members together, thus to cause them to impinge the ball, consists of a dog 12, pivoted between the socket members at their point of connection with the pitman, the forward end of the dog being provided with a



downturned curved toe or arm 13, which is approximately horn-shaped in elevation and elliptical in transverse section, as shown in Fig. 4, that portion of the dog that is pivoted  
 5 between the socket members being provided with a downturned extension 14, through which passes a bolt 15, which holds it in operative position. The top or upper edge of the dog is serrated or toothed, as at 16, and  
 10 these teeth are engaged by a detent 17, carried by a collar 18, which embraces the rear portion of the socket members, as clearly shown in Fig. 2. The forward end of the dog is provided with a projection 19, by which  
 15 the dog may be lifted out of engagement with the openings in the locking-plate when it is desired to disconnect the pitman-rod from the cutter-bar. By having the toe 13 of gradually-increased diameter from its point  
 20 upward it will operate when driven downward into the openings of the plates to draw the latter together, and thus cause them to impinge the ball in a manner that will be readily understood.

25 When a pitman carrying the improved connection herein described is to be connected with the cutter-bar, the socket members are sprung into engagement with the ball, and the dog is then driven downward  
 30 into the openings of the locking-plates, thereby drawing the two plates together in opposite directions and causing the socket members to embrace the ball with the desired frictional contact, after which the collar is moved up on the dog to bring the detent into engagement with the desired tooth  
 35 of the dog. Inasmuch as the pitman occupies an inclined position in use it will be seen that all danger of the dog becoming disconnected from the locking-plates will be  
 40 prevented, as the tendency of the collar is to work down upon the dog, and thus always remain in engagement therewith. When it is desired to disconnect the pitman from the  
 45 cutter-bar, the dog is driven downward a sufficient distance to permit the detent being moved out of engagement with the tooth of the dog, and a suitable implement is then inserted under the projection 19 and the dog  
 50 is lifted, thereby permitting the springs 11 to project the socket members laterally and free them from engagement with the ball.

By the provision of the shoulders 10 it will be seen that it will be utterly impossible for  
 55 the locking-plates ever to become detached from the socket members, so that their loss is positively guarded against, and as no wear is applied thereto the set first applied with the machine will last as long as the socket  
 60 members are used.

The coaction between the dog and the locking-plates is positive and when once adjusted

will be effective in holding the parts assembled against possibility of disconnection.

Having thus fully described my invention, 65 what I claim as new, and desire to secure by Letters Patent, is—

1. The combination with a pitman-rod connection of the character specified, of locking means therefor, comprising laterally-movable 70 members associated with the socket members, and means for retracting the movable members to bring the socket members into engagement with the ball.

2. The combination with a ball-and-socket 75 pitman-rod connection of locking means therefor comprising laterally-movable spring-pressed members associated with the socket members, means for retracting the movable members to bring the socket members into 80 engagement with the ball, and mechanism for locking the said means in adjusted position.

3. The combination with a ball-and-socket pitman-rod connection, of locking means therefor comprising two laterally-movable 85 plates carried by the socket members, and provided intermediate of their ends with openings, a pivoted dog having a part to engage the openings to effect lateral retraction of the plates, and means for locking the dog in its 90 adjusted position.

4. The combination with a ball-and-socket pitman-rod connection, of locking means therefor comprising two laterally-movable 95 plates, each provided with an opening intermediate of its ends, and with means for limiting its range of lateral movement, springs carried by the outer portions of the plates and operating normally to hold the socket members separated, a dog provided with a 100 toe for engaging said openings to retract the plates laterally to bring the socket members into engagement with the ball, and a collar mounted on the socket members and having a detent to engage teeth or serrations on the 105 dog, whereby to hold the same in its adjusted position.

5. The combination with a ball-and-socket pitman-rod connection, of locking means therefor, comprising two laterally-movable 110 plates each provided intermediate of its ends with an opening and with means for limiting its range of lateral movement, a pivoted dog having a part to engage the openings to effect lateral retraction of the plates, and 115 means for locking the dog in its adjusted position.

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

GEORGE WASHINGTON BEAM.

Witnesses:

JOSEPH B. CROWLEY,

WILLIAM A. BEAM.