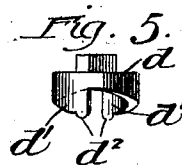
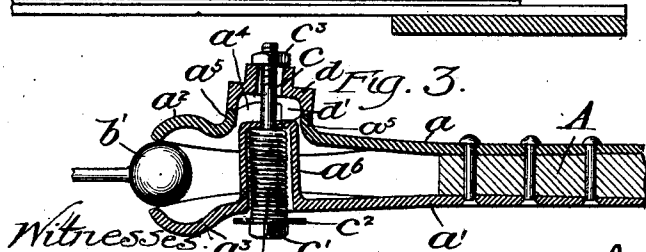
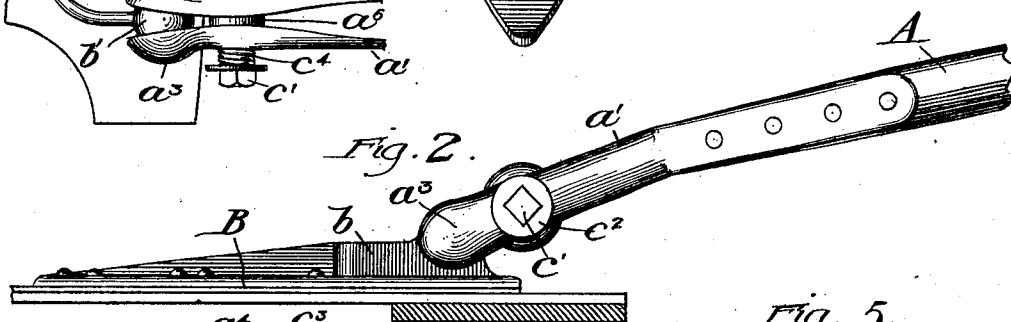
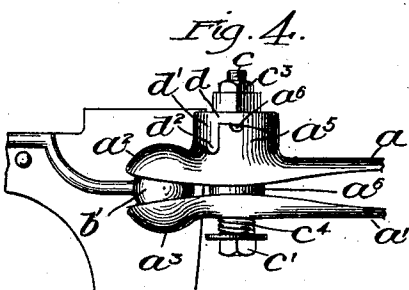
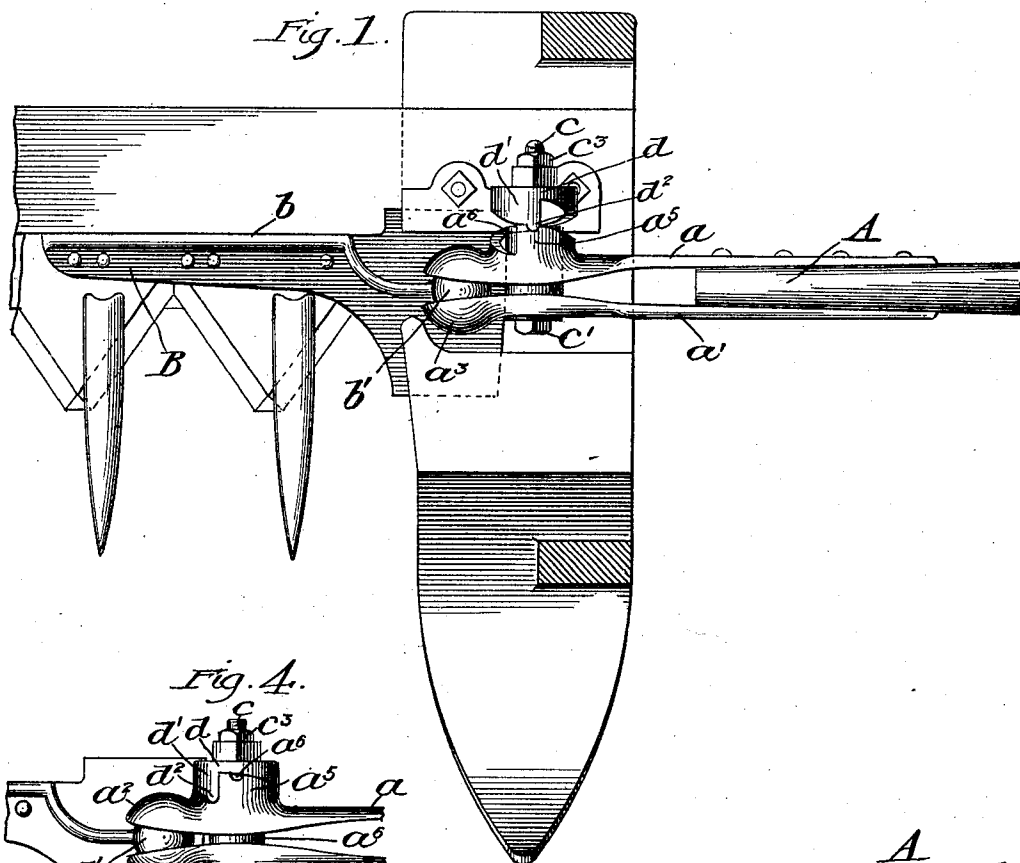


No. 682,745.

Patented Sept. 17, 1901.

J. W. PRIDMORE.
PITMAN CONNECTION.
 (Application filed Dec. 17, 1900.)

(No Model.)



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UNITED STATES PATENT OFFICE.

JOHN W. PRIDMORE, OF CHICAGO, ILLINOIS.

PITMAN CONNECTION.

SPECIFICATION forming part of Letters Patent No. 682,745, dated September 17, 1901.

Application filed December 17, 1900. Serial No. 40,090. (No model.)

To all whom it may concern:

Be it known that I, JOHN W. PRIDMORE, a citizen of the United States, residing at Chicago, county of Cook, and State of Illinois, have invented certain new and useful Improvements in Pitman Connections; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to improvements in pitman connections, and pertains more particularly to ball-and-socket joints used in connection with the knife-heads of mowing-machines.

The object of my invention is to provide a ball-and-socket connection between the pitman and knife-head of a mowing-machine which will have an even uniform bearing under constant spring-pressure, that will automatically compensate for wear, and that will not have to be adjusted each time the knife is taken from the machine.

The invention is illustrated in the accompanying drawings, in which—

Figure 1 is a plan view of my invention applied to a mowing-machine. Fig. 2 is a side elevation thereof. Fig. 3 is a longitudinal section through the connection, showing the spoons in disengaged or open relation. Fig. 4 is a fragmentary plan showing the spoons unlocked, but in closed relation; and Fig. 5 is a detail of the locking cam-nut.

Referring to the drawings, A represents a pitman of a mowing-machine, to which are attached two spoons a a' , which are preferably formed of metal and possess an inherent resiliency, tending normally to force them apart. Spoon a is provided with an inwardly-projecting socket a^6 , through which passes a bolt c , which in turn is surrounded by a spiral spring c^4 , seated in the socket a^6 and bearing against a washer c^2 , adjacent the head c' of the bolt. The spoon a has an enlarged orifice a^4 opposite the socket a^6 , and around this orifice is an upturned flange provided with a series of cams or inclines a^5 . The outer end of the bolt is fitted with a swiveled nut d , working loosely on said bolt and held in position by a suitable screw-threaded nut c^3 . The depending flange of said nut is provided with cams d' , adapted to

coöperate with the corresponding cams a^5 on the spoon a . At the highest points of the respective cams d' are located lugs or projections d^2 , which engage corresponding depressions a^6 in the cams a^5 .

My invention is designed to obviate the objections incident to the use of ball-and-socket connections as previously constructed. Heretofore it has been necessary to readjust the bearing between the spoons and the ball-bearing on the knife-head every time the knife was removed. By my construction I provide means for keeping the spoons against the ball of the knife-head by spring-pressure, so as to insure a tight bearing at all times to take up the wear between the parts and maintain the parts in such relation that they will not have to be adjusted every time the knife is taken from the machine. To this end the bolt which holds the spoons together passes through a coiled spring that is seated in a recess or socket in one of the spoons, so as to be out of the way of the hay and other obstructions, and the other end passes through a nut provided with locking cam-rims coöperating with corresponding rims on the contiguous spoon. The effect of this spring will be to hold the spoons in closed relation to grasp or inclose the ball-bearing b' , which is connected by a suitable bracket b with the knife-head B, as illustrated in Fig. 4; but it is desired that sufficient pressure shall be brought upon the spoons to insure a reasonably firm connection between the ball and the sockets a^2 a^3 of the said spoons. When the ball-bearing b' has been slipped within the spoons, as indicated in Fig. 3, and said spoons have closed down over b' , as indicated in Fig. 4, the nut d is turned so as to cause the cam-flanges d' thereof to ride up on the corresponding flanges a^5 of the spoon a until the lugs d^2 drop into the recesses a^6 , when the parts are locked firmly together and the spoons are held on the ball-bearing with just the right tension. Any subsequent wear in the connection will be taken up by a corresponding expansion of the spring, and should it be desired to secure a firmer bearing between the ball and the sockets the nut c^3 may be turned up against the end of the nut c , thereby increasing the tension of the spring c^4 . By this construction whenever the parts are once set

to the required degree of strain on the spring any further adjustment is unnecessary.

The construction is simple and efficient and renders it impossible for an unskilful workman to make the joint between the pitman and the knife-head either too tight or too loose. When it is desired to uncouple the connection, the nut d is turned to disengage the lugs d^2 from the recesses a^6 until the cams on the nut conform to the those on the spoon. A lateral pressure on either spoon will separate the spoons sufficiently to remove the knife-head.

Having thus described my invention, what I claim is—

1. A pitman connection, comprising a pair of cooperating spoons, a clamping member having a yielding connection with one spoon, a cam-nut on said clamping member and a cooperating cam on the other spoon.
2. A pitman connection, comprising a pair of cooperating spoons, a spring-pressed bolt carried by one spoon, and a locking cam-nut on said bolt and a cooperating cam on the other spoon.
3. A pitman connection, comprising a pair of cooperating spoons, one of said spoons having a socket and the other having an orifice opposite said socket, a bolt passing through said socket and said orifice, a spring mounted in said socket and engaging said bolt, and cooperating means on said bolt and one of said spoons, whereby said spoons are brought together in operative position and held under tension of said spring.

4. A pitman connection, comprising a pair of cooperating spoons, one spoon having a socket and the other a registering orifice, a bolt passing through said socket and said orifice, a spring mounted in said socket and engaging said bolt, a cam-nut carried by said bolt, and a cooperating cam on one of said spoons whereby said spoons are brought together in operative position and held under tension of said spring.

5. A pitman connection, comprising a pair of cooperating spoons, a bolt passing through both spoons, a spring on said bolt held between the head of said bolt and the contiguous spoon, a cam-nut swiveled on the end of said bolt, a cooperating cam on the adjacent spoon, and means for locking said cams together when their higher points engage.

6. A pitman connection, comprising a pair of cooperating spoons, a bolt passing through both spoons, a spring on said bolt held between the head of said bolt and the contiguous spoon, a cam-nut swiveled on the end of said bolt, a cooperating cam on the adjacent spoon, one of said cams having a projecting lug and the other a cooperating recess whereby said cams are locked together when their higher points engage.

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

JOHN W. PRIDMORE.

Witnesses:

HENRY B. UTLEY,
FRED H. GERE.