

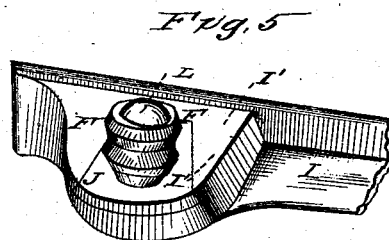
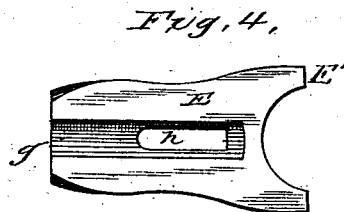
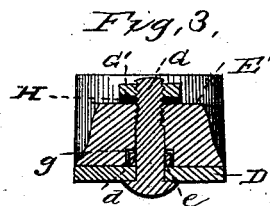
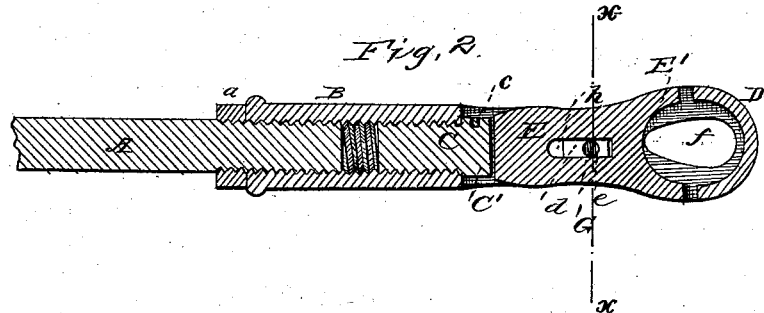
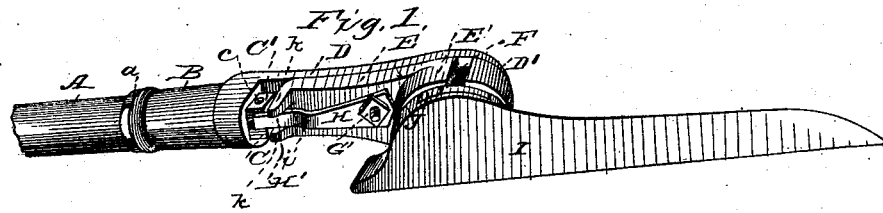
(No Model.)

I. G. BOWER.

KNIFE COUPLING FOR MOWING MACHINES.

No. 261,299.

Patented July 18, 1882.



WITNESSES:

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# UNITED STATES PATENT OFFICE.

ISAAC G. BOWER, OF FREMONT, OHIO, ASSIGNOR OF ONE-HALF TO BYRON R. DUDROW; OF SAME PLACE.

## KNIFE-COUPLING FOR MOWING-MACHINES.

SPECIFICATION forming part of Letters Patent No. 261,299, dated July 18, 1882.

Application filed April 13, 1882. (No model.)

*To all whom it may concern:*

Be it known that I, ISAAC G. BOWER, of Fremont, in the county of Sandusky and State of Ohio, have invented certain new and useful Improvements in Knife-Couplings for Mowing-Machines, &c.; and I do hereby declare that the following is a full, clear, and exact description of the invention, which will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, which form a part of this specification, and in which—

Figure 1 is a perspective view of my improved coupling device with one end of the pitman broken off. Fig. 2 is a longitudinal sectional view of the pitman, pitman-socket, and coupling-box with its adjuncts. Fig. 3 is a cross-section through the coupling-box on line *x x*, Fig. 2. Fig. 4 is a detail view of the inner side of the adjustable coupling-box, and Fig. 5 is a perspective detail view of the end of the knife-bar plate with its detachable knuckle and knuckle-plate.

Similar letters of reference indicate corresponding parts in all the figures.

My invention has relation to the coupling or joint by which the knife-bar or sickle-bar is connected to the pitman of harvesters or reaping-machines; and it consists in an improved construction and combination of parts of the same, as hereinafter more fully described and claimed, which has for its object to take up all slack or lost motion caused by wear, and to so construct and arrange the wearing parts that they may be readily removed and others substituted for them when required.

In the accompanying drawings, A represents one end of the pitman, which is screwed into a threaded socket, B, into the other end of which is inserted a screw, C, having a square head, C', having holes or recesses *c*, so that it may be turned to either side by inserting a punch or other suitable tool into any one of the openings *c* and working it as a key or lever. The pitman is prevented from working loose in the threaded socket B by a jam-nut, a.

The coupling-box consists essentially of two parts—viz., a fixed part, D, which forms an extension of the socket B, and a detachable and adjustable part, E. The former has a step or projecting shoulder, *d*, on its inner side or face,

through which is a bolt-hole, *e*. At its enlarged outer end is an oblong slot, *f*, and a projecting semi-cylindrical cap or hood, D', which is corrugated on its inside to fit the corrugated knuckle F. The detachable and adjustable part E has a corresponding cap, E', and a longitudinal recess, *g*, which is adapted to fit over and ride upon the raised step or shoulder *d* of part D. Through this recess is cut a slot or oblong opening, *h*, to permit play of the part E upon the bolt G, which is inserted through the bolt-hole *e* in part D, a washer-plate, H, being interposed between part E and the bolt-nut G'. This plate H, it will be observed, is reduced in width at its free end, where it is bent to form a step or offset, *i*, and projecting part or lip H', which extends between lugs *k k* upon part E out over the squared head of screw C, which it overlaps, plate H H' being kept in place and prevented from moving sidewise by the lugs or projections *k k*.

I is the flanged plate, which is riveted to the knife-bar or sickle-bar, to which a reciprocating motion is imparted by the pitman A. The head I' of plate I is recessed or cut out to receive the knuckle-plate J, which has the projecting corrugated knuckle F. The knuckle, with its plate, is held firmly in place in the recessed head I' by a screw or bolt, L, the head of which projects into the slot *f* of part D. By withdrawing this bolt plate J, with its knuckle, may readily be removed.

From the foregoing description, taken in connection with the drawings, the operation of this device will readily be understood. To take up slack or lost motion caused by wear of the knuckle and its hood D' E', the bolt-nut G' is loosened sufficiently to loosen plate H, so that its lip H' may be swung to one side out of the way of the squared screw-head C'. By turning the latter in the manner described it will work against the end of the sliding box E E' and push this up against the knuckle F. When in its proper position it is fixed in place by again tightening down nut G', plate H H' having first been slipped into its place between the studs *k k*, overlapping head C', against which it operates as a nut-lock by preventing it from turning. Part E E' is guided in its adjustment by the step *d* on part D, so that it will always move in a true line, and thus also

prevent lateral play or motion of the part E upon its seat on D.

Having thus described my invention, I claim and desire to secure by Letters Patent of the United States—

1. The combination of the pitman A, threaded socket B, having fixed coupling-box D D', adjustable sliding box E E', adjusting-screw C, having square head C', bolt G, nut G', and plate H H', constructed and combined substantially in the manner and for the purpose herein shown and set forth.

2. The combination of the flanged plate I, having recessed head I', plate J, having the corrugated knuckle F, and bolt or screw L, substantially as and for the purpose herein shown and described.

3. The coupling-box composed of the following parts: fixed part D, having the cap or hood D', step d, bolt-hole e, and slot or aperture f, adjustable and detachable part E, having the cap or hood E', recess g, slot h, and lugs k k, nutted bolt G G', plate H, having the lip or extension H', screw C, having square head C', and threaded socket B, all constructed and combined substantially as and for the purpose herein shown and specified.

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

ISAAC G. BOWER.

Witnesses:

WM. HOCKE,

PETER BURROUGHS.