

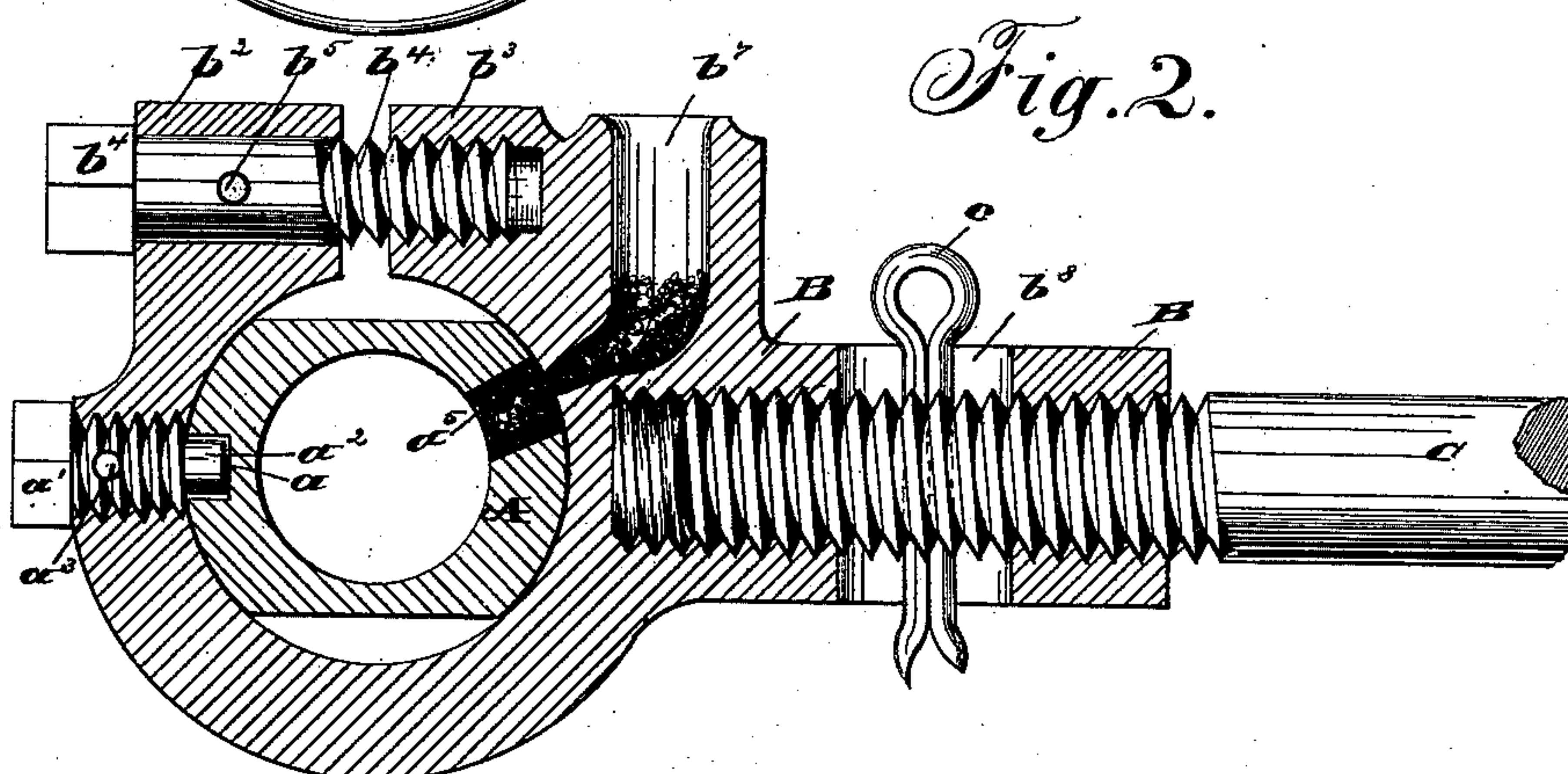
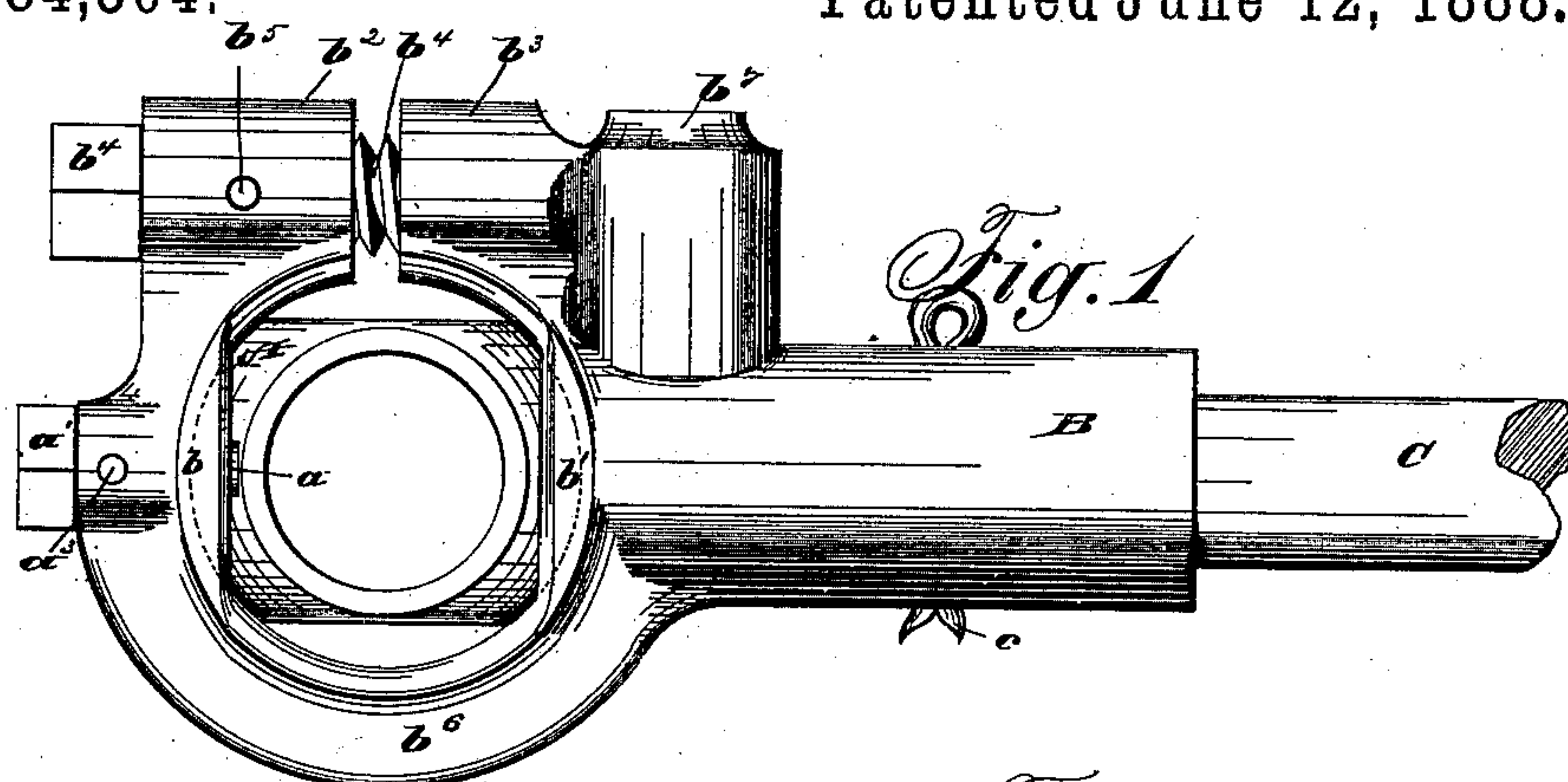
(No Model.)

A. W. BRAMAN.

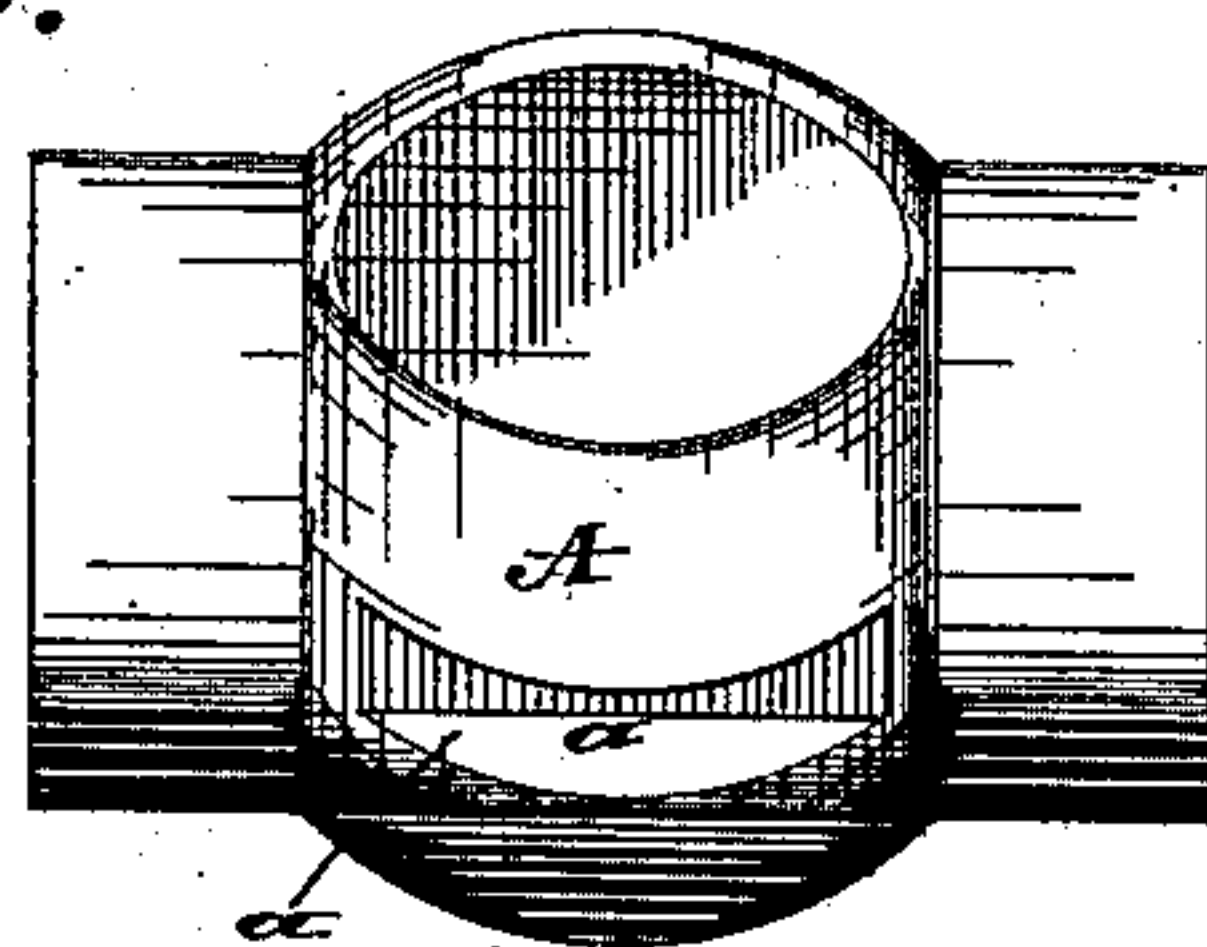
## PITMAN BOX FOR HARVESTERS.

No. 384,504.

Patented June 12, 1888.



*Fig. 3.*



*Witnesses:*

John B. Kaspari.

*Inventor:*

A. W. Braman.



# UNITED STATES PATENT OFFICE.

ALFRED W. BRAMAN, OF CHICAGO, ILLINOIS.

## PITMAN-BOX FOR HARVESTERS.

SPECIFICATION forming part of Letters Patent No. 384,504, dated June 12, 1888.

Application filed April 3, 1886. Serial No. 197,743. (No model.)

*To all whom it may concern:*

Be it known that I, ALFRED W. BRAMAN, of Chicago, Cook county, Illinois, have invented certain new and useful Improvements in Pitman-Boxes, of which the following is a description, reference being had to the accompanying drawings, in which—

Figure 1 is a side elevation of my pitman-head; Fig. 2, a longitudinal central section of the same, the pitman-rod and tightening-nut being shown in side elevation; Fig. 3, a side view of the pitman box or bearing.

The aim of my invention is to provide a pitman-head with a box or bearing which shall have freedom of movement in all the directions necessary to prevent it from binding upon a crank or wrist-pin having a variable path of rotation.

My improvement is designed more particularly for use in reaping and mowing machines, in which the pitman is used to communicate motion from a crank-shaft on the main frame to a reciprocating knife carried by a finger bar or support having a jointed connection with the main frame, so that the rotation of the wrist or bearing at one end of the pitman is constantly changing its position with reference to the wrist or bearing at the opposite end. To permit the motion required, I connect the box or bearing to the pitman-head by a globular joint of peculiar construction, hereinafter explained.

Referring to the accompanying drawings, A represents the pitman-box, designed to receive either the operating-crank or the wrist, to which motion is imparted. This box is made of tubular form in a single piece and with a spherical or globular enlargement at the middle. This globular portion is provided on one side with a longitudinal groove,  $a$ , and is flattened on the two opposite sides, as shown in the figures, to permit its ready insertion into the pitman-head, as will presently appear.

B represents the pitman-head, formed of a single piece with an opening adapted to admit of the box or bearing being inserted transversely therethrough. On the upper side the pitman is divided by a transverse slot and the parts on the opposite sides of the slot connected by a screw,  $B^4$ , inserted as shown. This screw serves as a means of contracting the

head in order to compensate for wear. The opening within the head is of substantially globular form, adapted to receive and closely embrace the globular surfaces of the box, flanges  $b$  and  $b'$  being extended, as shown, to give an increased bearing and retain the box the more securely in place. These flanges extend vertically at two sides only of the opening. The vertical height of the opening is such that when the box A is held with its flattened outer faces in a vertical position it may be passed endwise into the opening through the head, after which it is given a quarter-revolution about its own axis in order to seat the spherical surfaces against the corresponding surfaces in the head.

It will be observed that when in position the box receives a bearing in the head at its two sides only; but as there is no vertical strain or wear upon the parts of the box this gives the same sufficient support.

In order to prevent the box from revolving accidentally and assuming a position which would admit of its escape, I tap into the pitman-head a screw,  $a'$ , having at its inner end a neck,  $a^2$ , which enters the slot  $a$  in the box A. This screw, it will be observed, permits the box to rock or turn horizontally, as the changing position of the wrist-pin may demand.

To prevent the accidental escape of the screws  $a'$  and  $b^4$ , I pass pins  $a^3$  and  $b^5$  through the pitman-head and the respective screws, as shown.

For the purpose of properly lubricating the wrist I form in the pitman-head an oil-cup,  $b^7$ , extending from the top downward and terminating at its lower end opposite the box A, which is provided with a corresponding opening,  $a$ , through which the oil will pass to the wrist. I prefer to fill these openings with cotton waste or other absorbent material, as shown in the drawings, to insure the gradual delivery of the lubricant.

In order to permit the pitman to be lengthened or shortened, as occasion may require, I thread the end of the pitman proper, C, into the head, as shown in Fig. 2.

To prevent the accidental unscrewing of the parts by the vibration to which they are subjected, I form a longitudinal slot,  $b^8$ , in the



neck of the pitman-head and pass a key or pin, c, through this slot and through a hole in the pitman. On withdrawing this key the pitman is left free to turn. At each half-revolution the hole is brought in register with the slot, so that the pin may be inserted. This construction affords a simple and secure means of holding the parts in their different adjustments.

10 Having thus described my invention, what I claim is—

1. The box A, having the enlargement of true spherical form flattened or reduced at its sides, in combination with the pitman-head 15 having the transverse opening with spherical surfaces corresponding with those of the box and reduced at the sides in one direction, said members constructed, substantially as described, to admit of the box being inserted in 20 an endwise direction and secured by a partial rotation about its own axis.

2. The box A, having the globular enlargement, the flattened surfaces, and the groove a, in combination with the pitman-head having 25 the opening of greater diameter in one direction than the other to admit the box in an endwise direction, and the screw a', to prevent the rotation of the box when in operative position.

3. The box having the spherical enlargement reduced in thickness in one direction, 30 in combination with the divided pitman-head having the opening to admit the box in one direction only, as described, and the screw b', whereby said head may be contracted.

4. In combination with the pitman-head 35 provided with the slot b', the pitman secured therein and the fastening pin or key extended through the slot and pitman, substantially as described, whereby the pitman may be secured under different adjustments. 40

5. The box having the enlargement of true spherical form flattened or reduced at its sides, in combination with the pitman-head 45 having the transverse opening with spherical surfaces corresponding with those of the box and reduced at the sides in one direction, said members constructed, substantially as described, to admit of the box being inserted in 50 an endwise direction and secured by a partial rotation about its own axis, and means for preventing the accidental rotation of the box when in place.

ALFRED W. BRAMAN.

Witnesses:

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JOHN B. KASPAR.