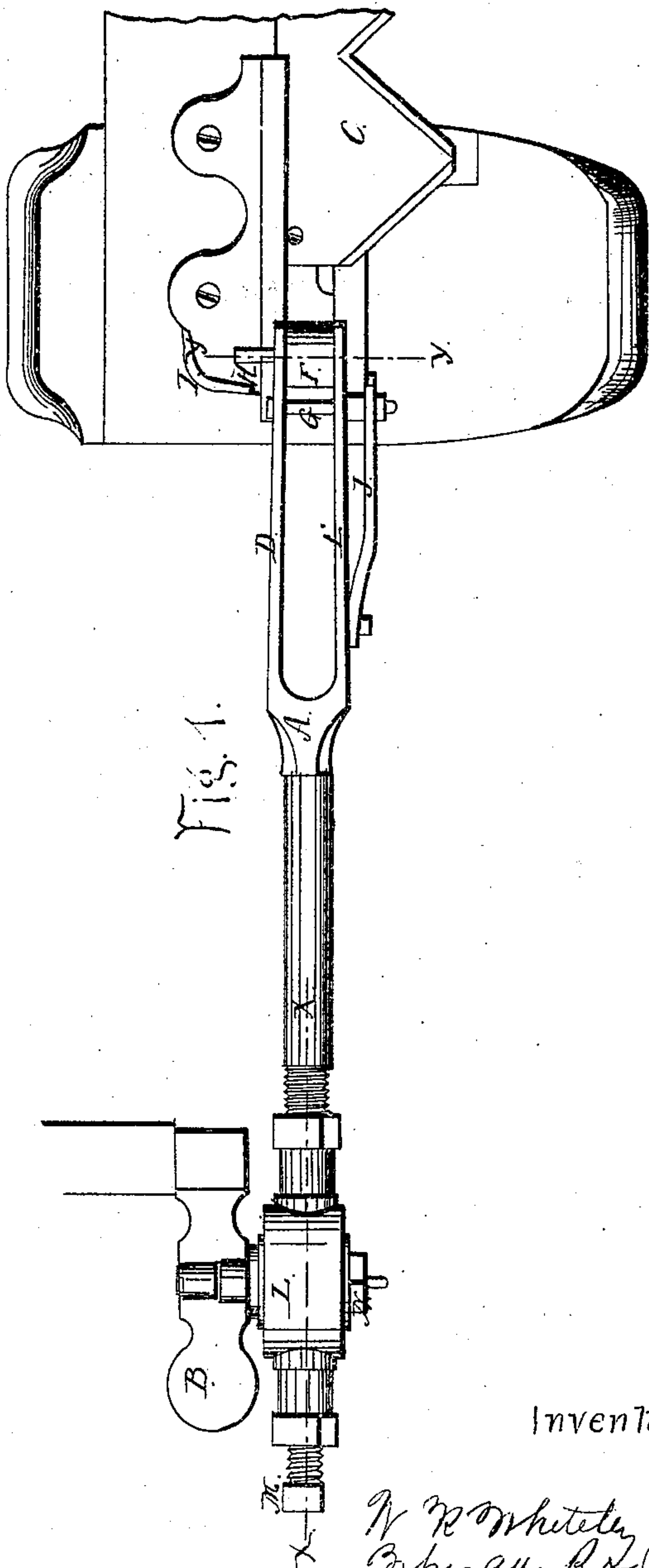
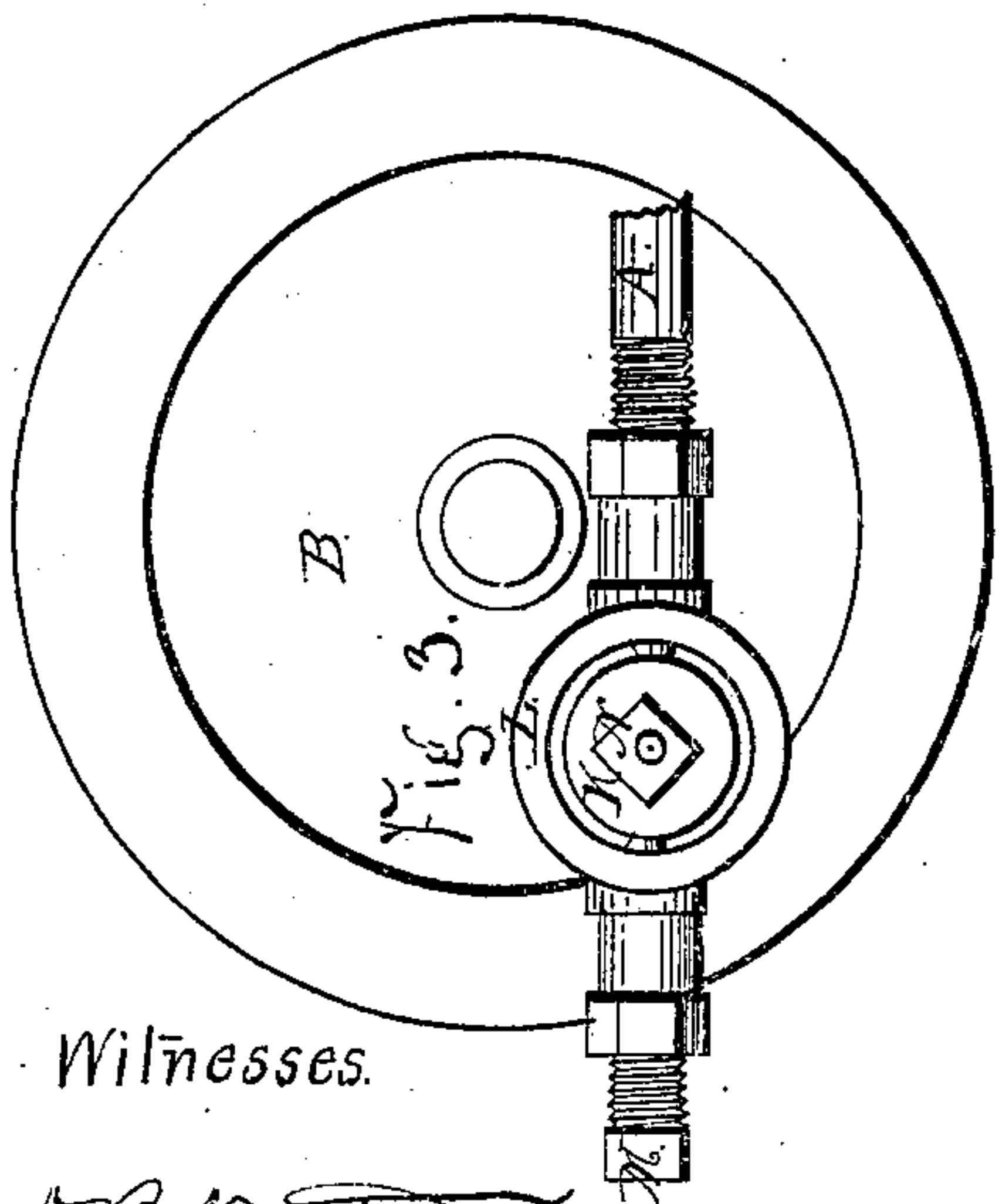
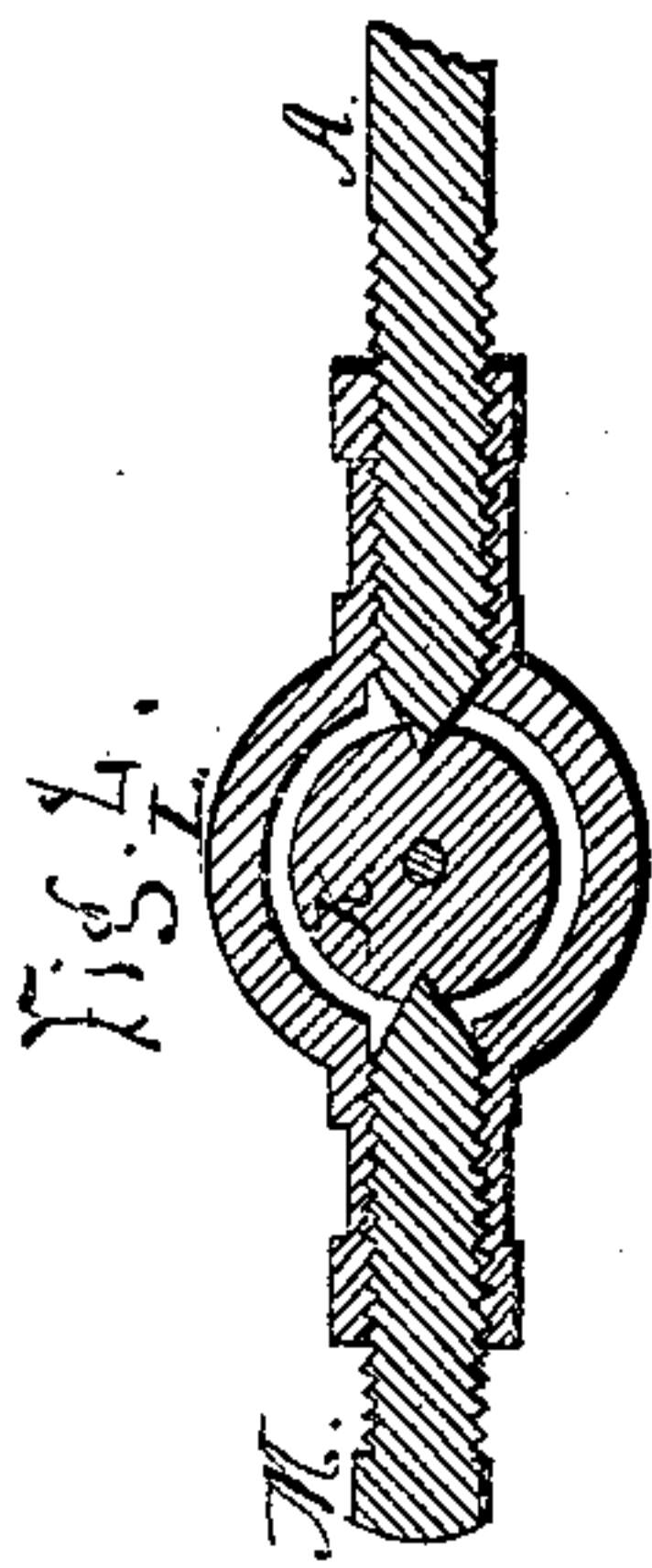
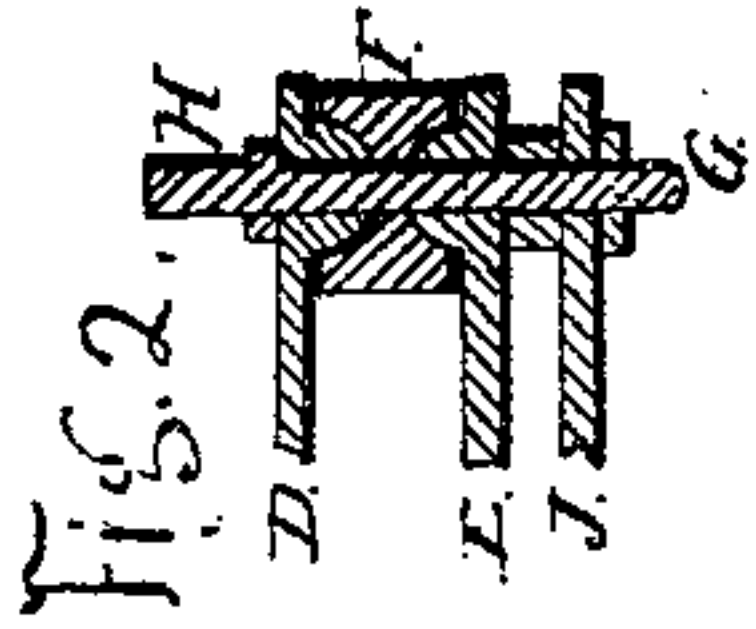


W. N. Whiteley.
Harvester Pitman.

Nº 71,255.

Patented Nov. 19, 1867.



Witnesses.

W. N. Whiteley
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Inventor

W. N. Whiteley
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United States Patent Office.

WILLIAM N. WHITELEY, OF SPRINGFIELD, OHIO.

Letters Patent No. 71,255, dated November 19, 1867.

IMPROVEMENT IN HARVESTERS.

The Schedule referred to in these Letters Patent and making part of the same.

TO ALL WHOM IT MAY CONCERN:

Be it known that I, WILLIAM N. WHITELEY, of Springfield, in the county of Clark, and State of Ohio, have invented a new and useful Improvement in Pitman-Connections; and I do hereby declare the following to be a full, clear, and exact description of the same, reference being had to the accompanying drawings, in which—

Figure 1 is a plan view of my invention.

Figure 2 is a sectional view of the pitman-joint at the heel of the cutting apparatus on the line *y y*.

Figure 3 is a side elevation of crank-wrist.

Figure 4 is a sectional view of the same on line *x x*.

My invention relates to the joints at the two ends of a pitman or connecting-rod, and is peculiarly adapted to harvesting machinery where the reciprocations are exceedingly rapid and violent, and the friction very great, though it is equally applicable to any other class of machinery in which connecting-rods are employed.

For convenience, it is exhibited as employed in a harvesting machine; and it consists, first, in the stop which prevents the cutter from being withdrawn from the guard-fingers; second in the jam-nut and plates to prevent the loosening of the clamping-bolt; third, in the construction of the rocking-box at the crank-wrist end of the pitman.

That others may fully understand the construction and operation of my invention, I will describe it.

A is the pitman or connecting-rod, and B is the crank-wheel. C is the cutting apparatus of a harvester. The pitman A is provided with the branches D E, at that end which is connected to the heel of the cutter. The joint at this end of the pitman is a double conical or conoidal joint, as shown, and the cones may be either upon the branches D E, projecting inward into corresponding sockets formed in the lug F, or they may be placed upon the lug F and project outward into or through sockets formed in the branches D E. In this application they are represented as projecting from the branches into sockets in the opposite sides of the lug F, it being in effect immaterial in which the joint is constructed. The bolt G, or its equivalent, is employed to prevent any lateral movements of the ends of the branches, which might permit the cones to withdraw from their sockets either wholly or partially.

It has always been found necessary in harvesting machines to provide some device which should prevent the withdrawal of the cutters from their position within the slots of the guard-fingers, especially when the cutting apparatus should be folded upon the frame for transportation, and it has also been necessary to construct this holding device so that the cutter could be withdrawn readily when the pitman should be uncoupled from it.

To accomplish this purpose readily and with certainty, without the intervention of any spring or hinged parts, I have secured to the end of the pitman a stop, H, which projects laterally therefrom, and the flange I, which projects vertically from the upper surface of the inner shoe of the cutting apparatus, in such a position that the pin H will come in contact with it, and stop the further movement of the cutter in that direction. The head of the bolt G may form the stop H, as shown in the fig. 2, and said bolt may pass back of the lug F, as is shown in the fig. 1, or it may pass through the axis of the cones which form the joint, as shown in fig. 2.

When the bolt G is removed, or the binding-nut slackened off, the branches D E may be moved asunder, so as to remove the cones from their sockets and disconnect the pitman from the cutter, after which the cutter may be slipped out of its slots in the guard-fingers and entirely removed, there being no other stop to prevent so doing except the stop H.

The bolt G must regulate the position of the cones of the joint with the utmost nicety, otherwise the joint will be loose, and the advantage of the employment of the cones will be neutralized, or the friction will be too great. It is, therefore, necessary to employ a jam-nut.

A jam-nut as ordinarily used is unreliable in this place, for two reasons: first, in setting it up hard against the under nut, the latter may also be moved a little, sufficient to render the joint too tight; and, second, the violent movement and constant jar of the pitman and its connections will cause these nuts, if bearing against each other, to work loose, when the attendant may suddenly find the pitman free from the cutter, and perhaps serious damage done to his machine. These difficulties I obviate by placing between the under and jam-nuts a plate, J, which is loosely secured to the pitman, so that the jam-nut only exerts a direct pressure upon the

under nut, and cannot force it to turn in the least. The jam-nut itself being forced against the unyielding surface of the plate J will be less liable to work loose by the jar of the pitman while the machine is in operation.

The points of the guard-fingers are constantly liable to change in their inclination to the surface of the ground, and every such change must cause a movement of the pitman upon its own axis, and this will necessarily cause the bearings at the ends to bind, so that more power will be required to drive the machine, and the abrasion of the journals must also be increased. The pivoted box K, at the crank-end of the pitman, is therefore employed, said box being pivoted upon two points, which are coincident with the axis of the pitman.

The box K is hung within the ring L, which is cast in one piece with the remainder of the pitman-head. The pitman screws into the neck of the ring L, as shown in fig. 4, and the box K is enclosed within the same ring, and pivoted between the conical end of the pitman, or upon a fixed point inserted for the purpose, and the conical end of the adjusting-screw M inserted through the opposite portion of the ring, as shown. Jam-nuts are required on both pitman and adjusting-screw to retain them in their proper positions. The wrist-pin N may be either straight or conical, and the latter form may be preferable, though not so represented in the drawings.

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

1. A projecting stop-pin, H, or its equivalent, on the pitman, which, when folding the cutter-bar, will come in contact with a stationary part of the guide-bar or shoe, and prevent the knife from running out of the shoe; as set forth.

2. A plate, J, secured at one end to the pitman, and placed between the under and jam-nuts on a clamping-bolt, as and for the purposes described and set forth.

3. In combination with the pitman A of a harvesting machine, the solid ring-head L, as and for the purpose described.

WILLIAM N. WHITELEY.

Witnesses:

THOS. J. PRINGLE,
CHAS. EVANS.