C. WHEELER. Jr.

Journal Bearings and Pitman Connections.

No. 163,707. Patented May 25, 1875.

*Fig. 1.*

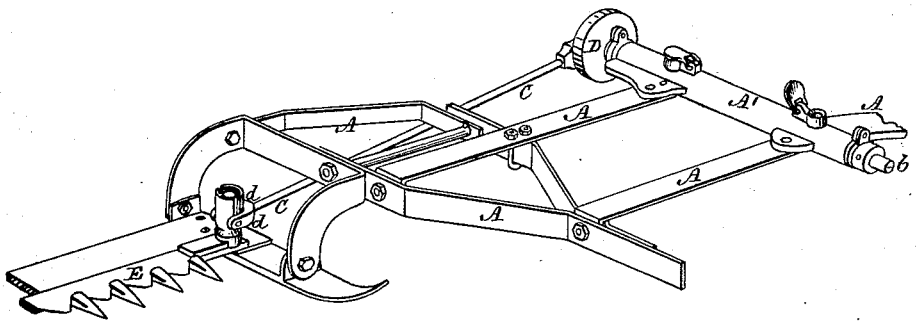



*Fig. 2.*

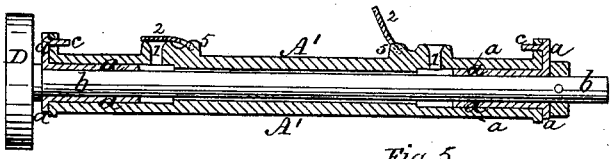



*Fig. 5.*


*Fig. 3.*

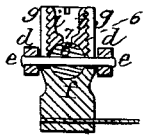
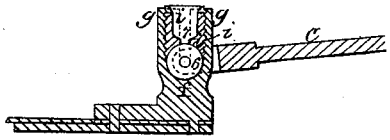



*Fig. 4.*




Witnesses.

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# UNITED STATES PATENT OFFICE.

CYRENUS WHEELER, JR., OF AUBURN, NEW YORK.

## IMPROVEMENT IN JOURNAL-BEARINGS AND PITMAN-CONNECTIONS.

Specification forming part of Letters Patent No. **163,707**, dated May 25, 1875; application filed April 5, 1875.

*To all whom it may concern:*

Be it known that I, CYRENUS WHEELER, Jr., of Auburn, in the county of Cayuga and State of New York, have invented certain new and useful Improvements in Journal-Bearings and Pitman-Connections; and that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawings making a part of this specification, in which—

Figure 1 represents, in perspective, my improvements as connected to a frame, and as applied to the movement of machinery. Fig. 2 represents a longitudinal section through a sleeve or hollow portion of the frame, through which the driving-shaft passes, and in which said shaft is supported in bushed bearings, that are removable and replaceable at pleasure. Figs. 3 and 4 represent vertical sections through the pitman-connection, said sections being taken at right angles to each other. Fig. 5 represents a top plan of one of the hinged oil-hole covers detached.

My invention relates, first, to a hollow or tubular portion of a sustaining-frame, through which a driving-shaft passes, and in which said shaft is supported and revolves in bushed bearings, which can be removed when worn and replaced by others, in combination with the oil-hole covers and devices for attaching them, through which holes oil is supplied to the interior journal-bearings. It further relates to a yielding connection between the pitman and the portion, part, or device reciprocated by it, composed of a ball, socket, and hollow screw, as will be explained.

For the sake of illustration, I have shown my improvements as applied to a portion of a harvesting-machine frame and cutting apparatus, for which it is more peculiarly adaptable, but, of course, may be used with other machines, where such devices are applicable, without change or alteration of the characteristics of the devices.

A represents a frame, the part or portion A′ of which is hollow or tubular. In each end or bearing portion of this tubular shaft A′ is set a bushing, *a*, of suitable metal, (anti-friction metal, if preferred,) in which bushings the driving-shaft *b* has its bearings. These bushings are removable and replaceable at pleasure, and may be held in place by a stud, pin, or screw, *c*, passing through a projection on the tubular piece A′, or by any other well-known holding devices. Through the tubular piece A′ are bored oil-holes 1 1, by or through which oil is supplied to the shaft-bearings. The covers 2 2 of these oil-holes are made of malleable cast metal, or may be stamped out of wrought or sheet metal, and have upon them projections 3, at the ends of which, respectively, so as to face each other, are teats 4 4, by which they are hinged or fastened to the holes or recesses made in a projecting piece, 5, on the tubular piece A. These covers are liable to be broken off, and by my plan of making and uniting them are readily replaced, as they carry with themselves the devices by which they are hinged, so as to cover and protect the oil-holes, as follows: The teats 4 are placed in the holes or recesses of the projection 5, and a slight tap of a hammer upon the arms 3 bends the latter sufficiently to make the teats hold in such openings or recesses.

C is a pitman, driven from a crank-wheel, D, on the shaft *b*, to which it is attached by one of its ends, its other end being forked, as at *d*, so as to be connected to trunnions *e e*, secured to a ball, 6, which works in spherical seat or socket *f*, made in the cup *g*.

The cup *g* is slotted diametrically, so that the ball with its trunnions may be placed therein; and when in place a hollow screw, *i*, is run down on the interior of the cup, so as just to touch, or nearly so, the ball 6, and so make a ball-and-socket connection between the pitman and the bar or cutter E, which it reciprocates.

The cup *g* is made hollow, as stated, to receive the ball 6 and the screw *i*, that holds the ball to its seat; and the screw *i* is made hollow, and with a small hole through its lower end, as at 7, to receive and convey oil to the ball-and-socket joint, to keep it lubricated.

Having thus fully described my invention, what I claim therein as new is—

1. The combination of the tubular frame A′, shaft *b*, and crank-wheel D, bushings *a a*, and oil-holes and covers 1 2, as and for the purpose described and represented.

2. The combination of the crank-wheel D, pitman C, and the pitman-connection, composed of the slotted cup *g*, ball 6, and its trunnions *e e*, and the hollow screw *i*, as and for the purpose described and represented.

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Witnesses:
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