

L. H. DAVIS.
Pitman-Connections.

No. 158,690.

Patented Jan. 12, 1875.

Fig. 1.

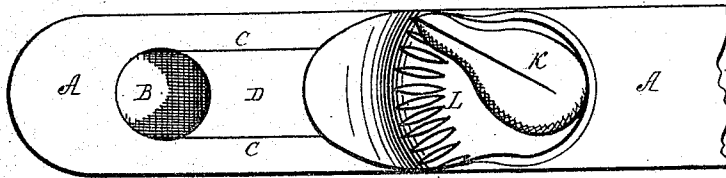


Fig. 2.

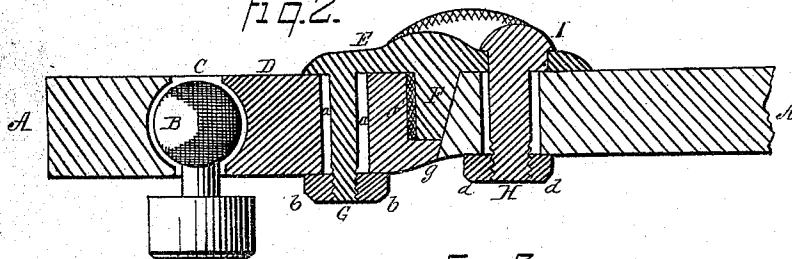


Fig. 3.

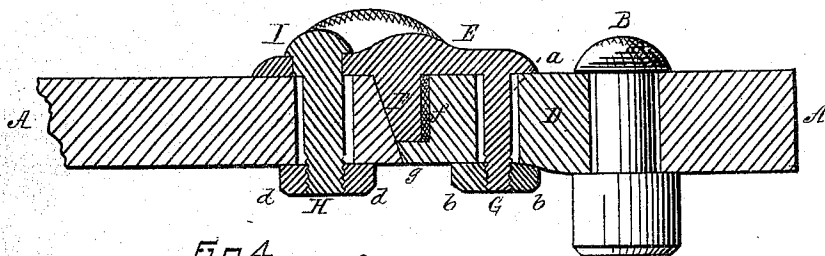


Fig. 4.

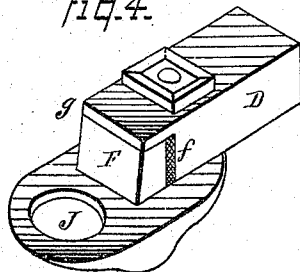
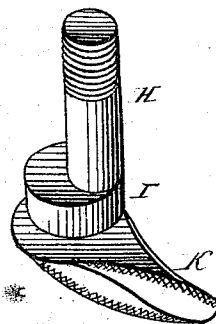


Fig. 5.



WITNESSES:

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UNITED STATES PATENT OFFICE.

LEVIS H. DAVIS, OF WEST CHESTER, PENNSYLVANIA.

IMPROVEMENT IN PITMAN-CONNECTIONS.

Specification forming part of Letters Patent No. **158,690**, dated January 12, 1875; application filed January 2, 1875.

To all whom it may concern:

Be it known that I, LEVIS H. DAVIS, of West Chester, in the county of Chester and State of Pennsylvania, have invented certain new and useful Improvements in Pitman-Connection, of which the following is a specification:

The object of this invention is to connect pitmen with the wrist-pins in such a manner that the boxes or bearings can be adjusted with ease and facility to compensate for wear. The invention consists chiefly in the employment of a turn-bolt or pin having an eccentric or cam-head, which is located in an eye formed in a top extension-plate of the bearing-block or box, so that, by turning said bolt more or less, the eccentric will force or press the box against the wrist-pin or journal in order to maintain the parts in proper relation with each other. The invention further consists in applying a handle or horizontal arm to the bolt having the eccentric head, said handle traversing a ratchet or serrated surface on the top of a plate attached to the pitman, so as to enable the adjusting-bolt to be retained at any desired position after the box has been properly set.

In the accompanying drawings, Figure 1 is a plan view of a pitman, having my invention applied thereto. Fig. 2 is a longitudinal sectional view of the same, illustrating a wrist-pin with a projecting head. Fig. 3 is a similar view, showing a ball-and-socket connection. Fig. 4 is a detail view of the bearing-block and metallic holder. Fig. 5 is a detail view of the eccentric-bolt. Fig. 6 is an enlarged view of the same.

Letter A designates a pitman, and B the wrist or crank pin to which it is connected. The pitman is provided with a slot, C, for the reception of the wrist-pin and of a bearing block or box, D, which is generally made of wood and metal. In the present instance the wooden bearing-block is attached to a metallic holding-plate, E, which has a flange, F, projecting from its under side, to serve as an end support for the wooden block. A bolt or shank, G, also projecting from the under side of the metallic plate, extends through a slot or opening, a, in the bearing-block, and has a nut, b, applied to its threaded end for securing the block to the plate. The bearing-block is in-

serted into the slot in the pitman so as to embrace the neck of a wrist-pin having a projecting head, as shown in Fig. 3, or, when a wrist-pin with a globular or ball head is employed, as shown in Fig. 2, the end of the bearing-block is provided with a corresponding socket, to form a ball-and-socket joint. The bearing-block is secured to the pitman by means of a bolt, H, which passes through the plate E, or an extension of the same, and is provided with a screw-threaded end for the reception of a fastening-nut, d. The bolt H is made or provided with an eccentric or cam-shaped head, I, which is located in a circular opening, J, in the plate E. It is generally deemed expedient to provide the head of the bolt with a handle or horizontally-projecting arm, K, which projects over or onto a serrated, roughened, or ratchet surface, L, on the upper surface of the plate E. By the provision of these devices the bolt can be turned so as to bring more or less of the eccentric in contact with the inner side of the bolt-opening made in the plate E, thus forcing the bearing-block in an inward direction, or toward the wrist-pin for maintaining a proper joint at all times, or as the block wears away. The handle of the bolt is formed with a V-shaped or angular lower edge, so as to cause it to drop into the serrations of the surface L for retaining the bolt in position after the block has been properly adjusted in relation to the wrist-pin. In certain instances the handle and locking surface may be dispensed with, but the eccentric head is used always for adjusting the bearing-block. The bearing-block, when first inserted or used, is set with the eccentric in such a position as to exert pressure upon the block, and as the latter wears away the bolt is turned so as to cause the eccentric to force the block toward the wrist-pin. When the block can be adjusted no farther by the eccentric it is itself adjusted on the metallic holder or plate, this being permitted by the slot a in the block. A layer of pasteboard, leather, or other suitable material, f, is then inserted in rear of the block, or between the blocks and supporting flange F, when the block is again in position to be used as in the first instance. The wooden box and metallic holder can be superseded by a block made entirely of metal, and other

means than those described may be resorted to for using the box so long as possible. A flange, *g*, formed on the bearing-block, is caused to overlap the supporting-flange *F*, so as to retain the elastic packing *f* in position.

I do not confine myself to the exact construction and arrangement of parts above described, as the eccentric or cam may be used separate from a bolt firmly attached to the same, in which instance an ordinary bolt may go through the cam, or the latter may be used without a bolt at all. The eye formed in the bearing-block, or extension of the same, for the reception of the cam, may be a long slot, or half an eye, or the cam may rest on a flat surface and bear against a stop or ledge.

It is obvious that the cam may be used for tightening boxes, or other journals than pitmen.

A washer or plate may be located on the reverse side of the pitman for more firmly securing the bearing or box, the plate being provided with a slot for the passage of the bolts, so as to enable the adjustment of the box to take place.

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

1. The combination of a turn-bolt, *H*, having an eccentric or cam, *I*, with the adjustable bearing-block *D*, pitman *A*, and a wrist-pin, *B*, substantially as described.

2. The combination of the turn-bolt *H*, provided with an eccentric or cam, *I*, and handle or arm *K*, with the bearing-block *D*, plate *E*, with its ratchet or locking-surface *L*, the pitman *A*, and a wrist-pin, *B*, substantially as described.

3. The adjustable bearing-block *D*, having a slot, *a*, and flange *F*, in combination with the turn-bolt *H*, provided with an eccentric or cam, *I*, pitman *A*, and wrist-pin *B*, substantially as described.

In testimony that I claim the foregoing I have hereunto set my hand.

LEVIS H. DAVIS.

Witnesses:

WM. WHITEHEAD,
ABM. WANGER.