(No Model.)

J. KIRBY, Jr.

SLEEPING CAR PUMP JOINT.

No. 281,192. Patented July 10, 1883.

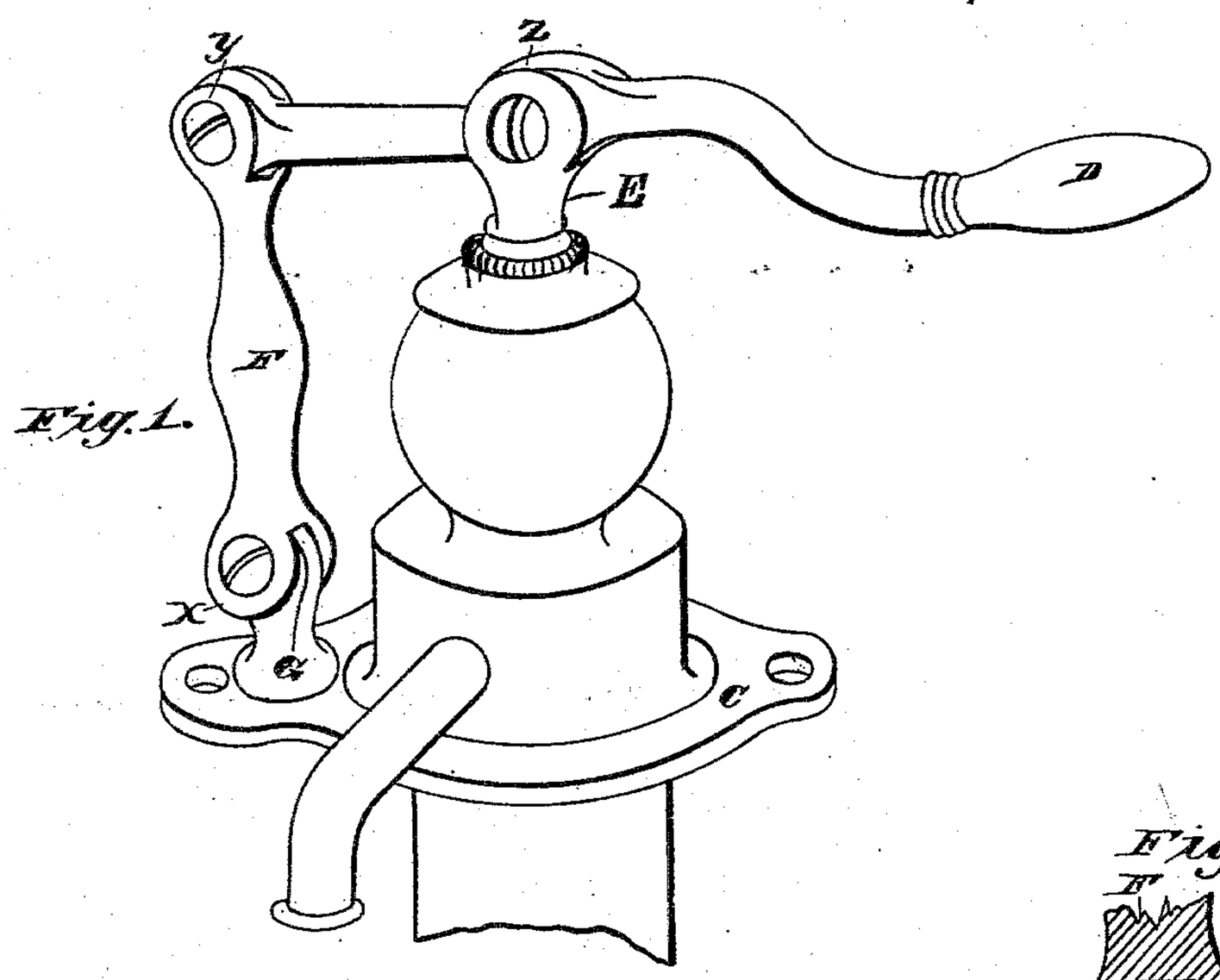

Fig. 1.

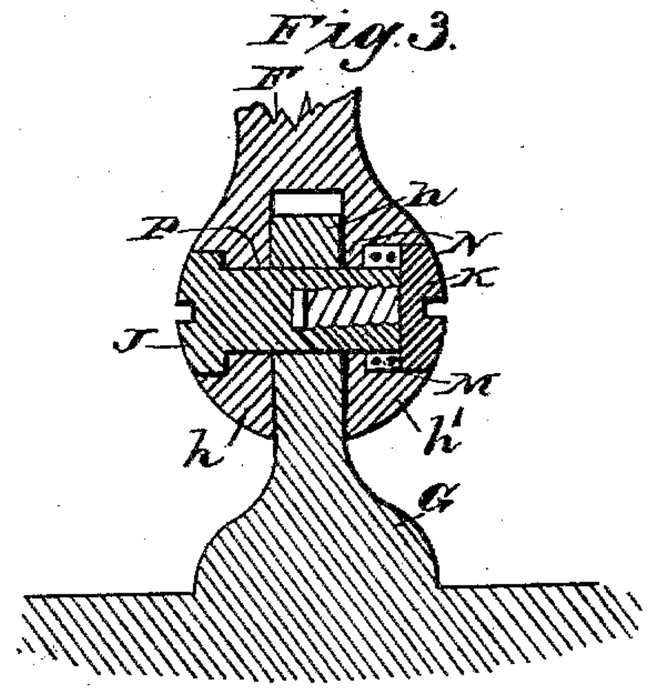

Fig. 3.

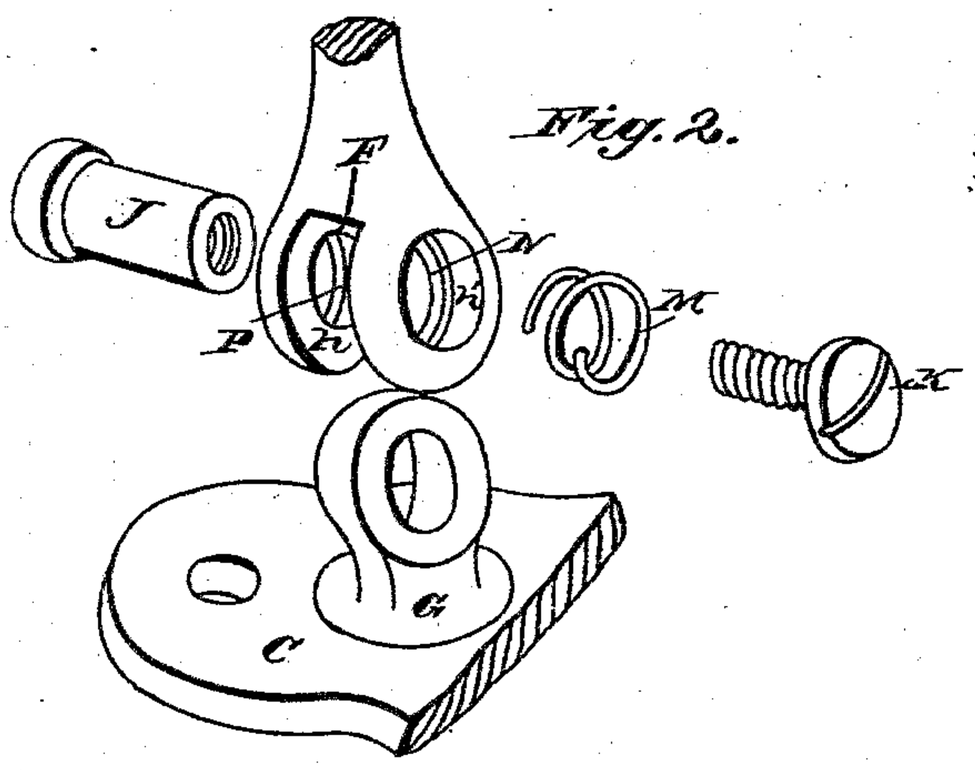

Fig. 2.

Witnesses

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UNITED STATES PATENT OFFICE.

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SLEEPING-CAR PUMP-JOINT.

SPECIFICATION forming part of Letters Patent No. 281,192, dated July 10, 1883.

Application filed February 13, 1883. (No model.)

To all whom it may concern:

Be it known that I, JOHN KIRBY, Jr., of Ludlow, Kenton county, and State of Kentucky, have invented a certain new and useful Improvement in Joints in Sleeping-Car Pumps, of which the following is a full, clear, and exact specification, reference being had to the accompanying drawings, forming part of this statement of invention, in which—

Figure 1 is a general perspective view of a sleeping-car pump having three joints. Fig. 2 is a perspective view of the parts of my joint detached. Fig. 3 is a vertical section through joint.

Similar letters of reference in the several drawings indicate the same parts.

My invention relates to improvements in the pivot-bolts for the joints of pumps, more especially for the joints of sleeping-car pumps.

In sleeping-car pumps as usually made the pivot at the joint is a slotted-headed screw-bolt, engaged when in position with an interior screw-thread on one of the lips of the connected member of the pump. It has been found in practice that the working of the handle and the jolting of the car frequently cause the unscrewing of the pivot-bolt. This leads to annoyance and the loss of the bolt.

My invention is designed to avoid this inconvenience and loss; and it consists, first, in a pivot-bolt (the detached parts of which are shown in Fig. 2 of the accompanying drawings) of two parts—viz., a hollow bolt, J, having broad slotted head and an interior screw-thread, and a broad slotted-headed screw, K, adapted to be screwed into the hollow bolt J; secondly, in cutting a shoulder in both of the lips of the connected parts, as at N and P in lips *h* and *h'* of connecting-rod F, Figs. 2 and 3; third, in the spring M, which, when in position, encircles the bolt J and rests on the shoulder N, and against which the head of the screw K presses, as shown in Fig. 3. The purpose of the spring is to take up any play there may be between the male screw K and the female screw in bolt J, arising from carelessness in putting them together. Its disuse would not essentially affect the working of my invention.

My invention is put into working position as follows: Bring the parts to be connected together, as shown in Fig. 1, where the handle D is connected with the plunger E at *z*, and with the connecting-rod F at *y*, and the connecting rod F is connected with the stud G at *x*, rigidly affixed to the base-plate C. Then insert the bolt J into the parts to be connected until its slotted head rests against the shoulder P, Figs. 2 and 3, in the lip *h*. Then pass the spring M over the end of bolt J until it rests on the shoulder N of lip *h'*. Then screw the screw K into the bolt J until its slotted head rests firmly against the end of bolt J and on the spring M, as shown in Fig. 3. When this is done the outside surface of the slotted heads of the bolt forms a continuous line with the surface of the double-lipped members of the pump.

It will be seen that the pivot is free to turn independently of the motion of the other parts of the pump. It therefore does not partake of the motions of the other parts incident to using the pump or the motion of the cars, and has no tendency to become loose or to fall out.

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

1. In a machine-joint, a pivot or joint bolt consisting of members F, a hollow bolt, J, and a screw, K, substantially as described.

2. In a pump, the combination of a double-lipped connecting member having a bolt-hole through both lips and a shoulder cut interiorly in both lips, with a pivot-bolt consisting of two parts, a hollow bolt, J, and a broad-headed slotted screw, K, substantially as described.

3. In a pump, the combination of the member F, having the lips *h h'* and the shoulders P N cut therein, with the bolt J, the crank K, and the spring M, substantially as described.

The foregoing specification of my invention signed by me this 12th day of January, A. D. 1883.

JOHN KIRBY, JR.

Witnesses:
JEPTHA GARRARD,
RICHARD L. AYER.