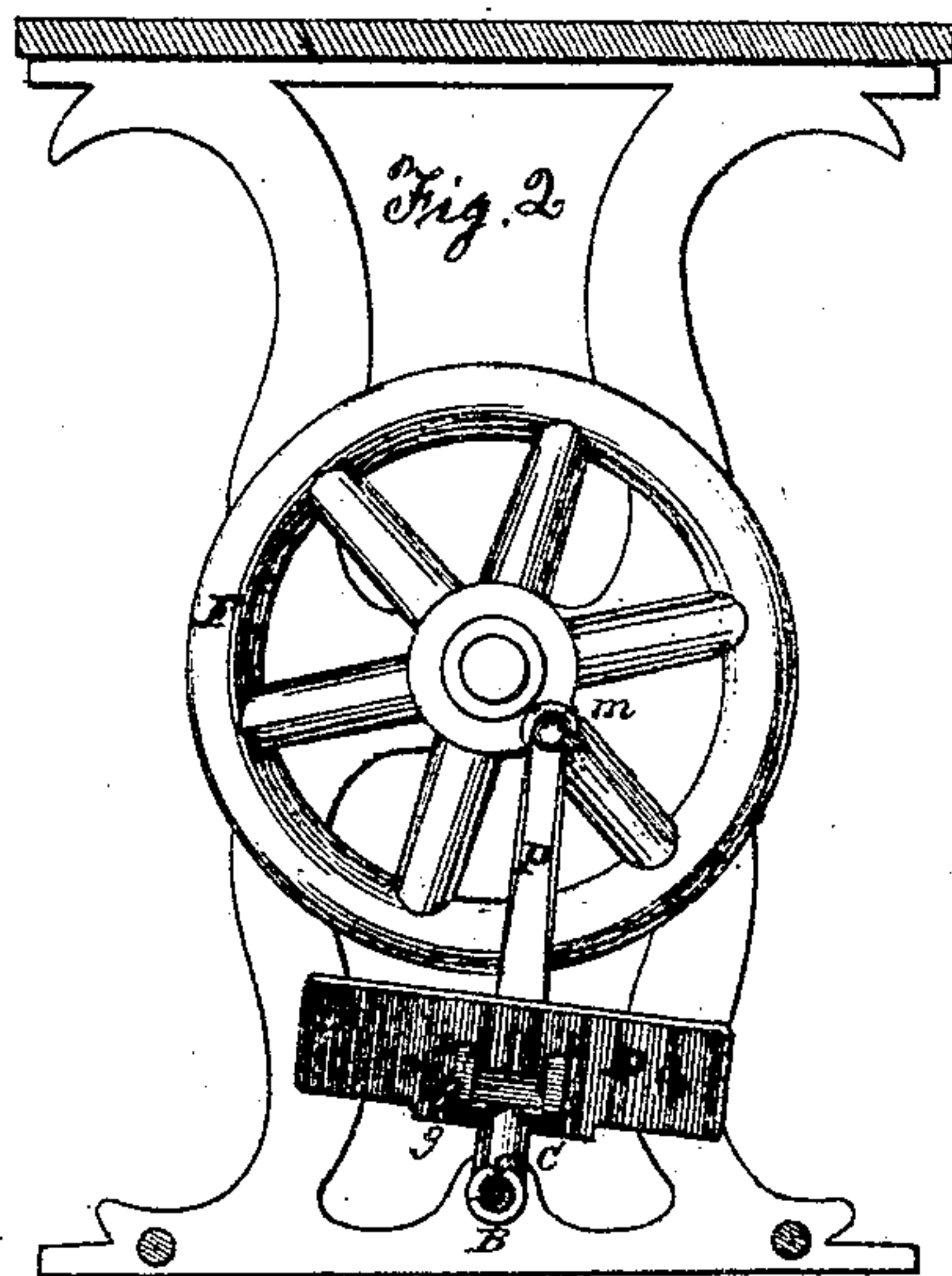
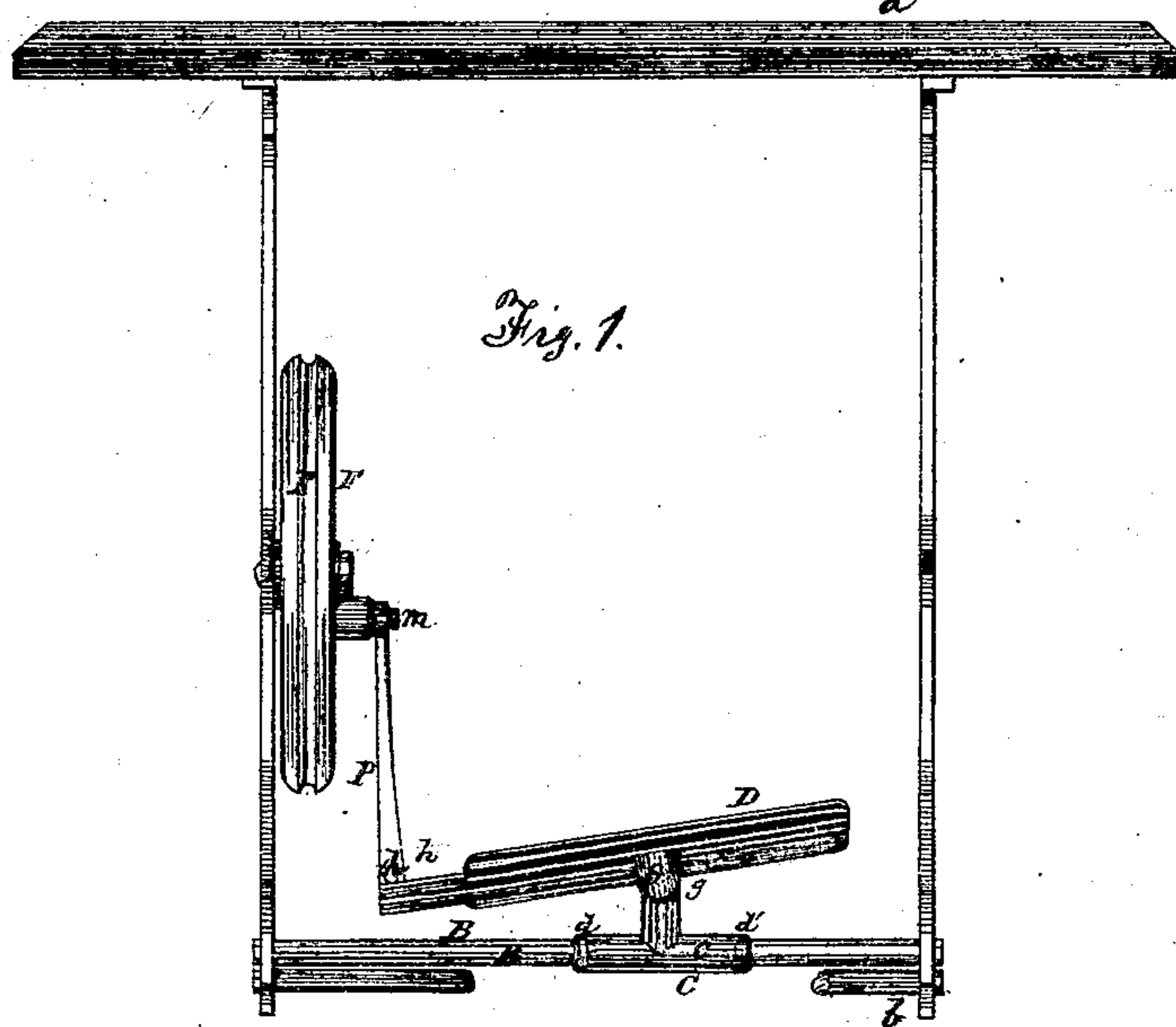


CHARLES P. LEAVITT.  
Improvement in Treadles.

No. 114,830.

Patented May 16, 1871.



Witnesses.

W. P. Kearns.

Chas. Heller.

Inventor  
Charles P. Leavitt

# UNITED STATES PATENT OFFICE.

CHARLES P. LEAVITT, OF NEW YORK, N. Y.

## IMPROVEMENT IN TREADLES.

Specification forming part of Letters Patent No. **114,830**, dated May 16, 1871.

*To all whom it may concern:*

Be it known that I, CHARLES P. LEAVITT, of New York, in the county and State of New York, have invented a new and useful Improvement in Treadles; and I do hereby declare that the following is a full and exact description thereof, reference being had to the accompanying drawing, and to the letters of reference marked thereon, making a part of this specification.

The nature of my invention consists in securing the foot-plate or treadle by a universal joint, and so connecting it with the pitman that it shall partake of both the vertical and horizontal movement of the same, thus enabling the operator to start the wheel in any position.

Figure 1 is a side elevation of my improvement, shown as it would be applied to a sewing-machine, with the wheel on the side; and Fig. 2 is a vertical section through the line *a b* on a plane at right angles to Fig. 1.

Similar letters refer to similar parts, and in both views the crank stands in the same position—viz., about one-fourth of a revolution from its lower center.

On the stationary rod *B* the cross-piece *C* is placed between the collars *d d'*, in such a manner that it is free to revolve around the rod, but can have no other motion. The projecting arm of *C* forms a joint, *g*, with the

treadle *D*, in such a manner that the axes of motion of the treadle *D* and cross-piece *C* shall be at right angles in parallel planes. Thus the treadle *D* is free to move in any direction allowed by this universal joint.

The pitman *P* is jointed to the treadle *D* at *h*. This joint is at right angles to that generally used, and only allows the pitman to vibrate in a plane drawn through the axis of the rod *B*, or at right angles to the plane of motion of the wheel *F*. The pitman is connected with the crank-pin *m* of the wheel *F* by a joint in the nature of a ball-joint, so that the pitman can oscillate slightly in a direction at right angles to the plane of motion of the wheel without binding in its bearings.

By means of the foregoing arrangement the treadle or foot-plate *D* receives a double motion, being moved with the pitman both when it travels vertically and horizontally.

What I claim as my invention, and desire to secure by Letters Patent, is—

1. The treadle *D*, with universal joint, consisting of the revolving tube *C* upon shaft *B* and joint *g*, substantially as described.

2. In combination with the above, the pitman *P*, arranged and operated as described.

CHAS. P. LEAVITT.

Witnesses:

W. F. STEARNS,

CHAS. HALLETT CLARK.