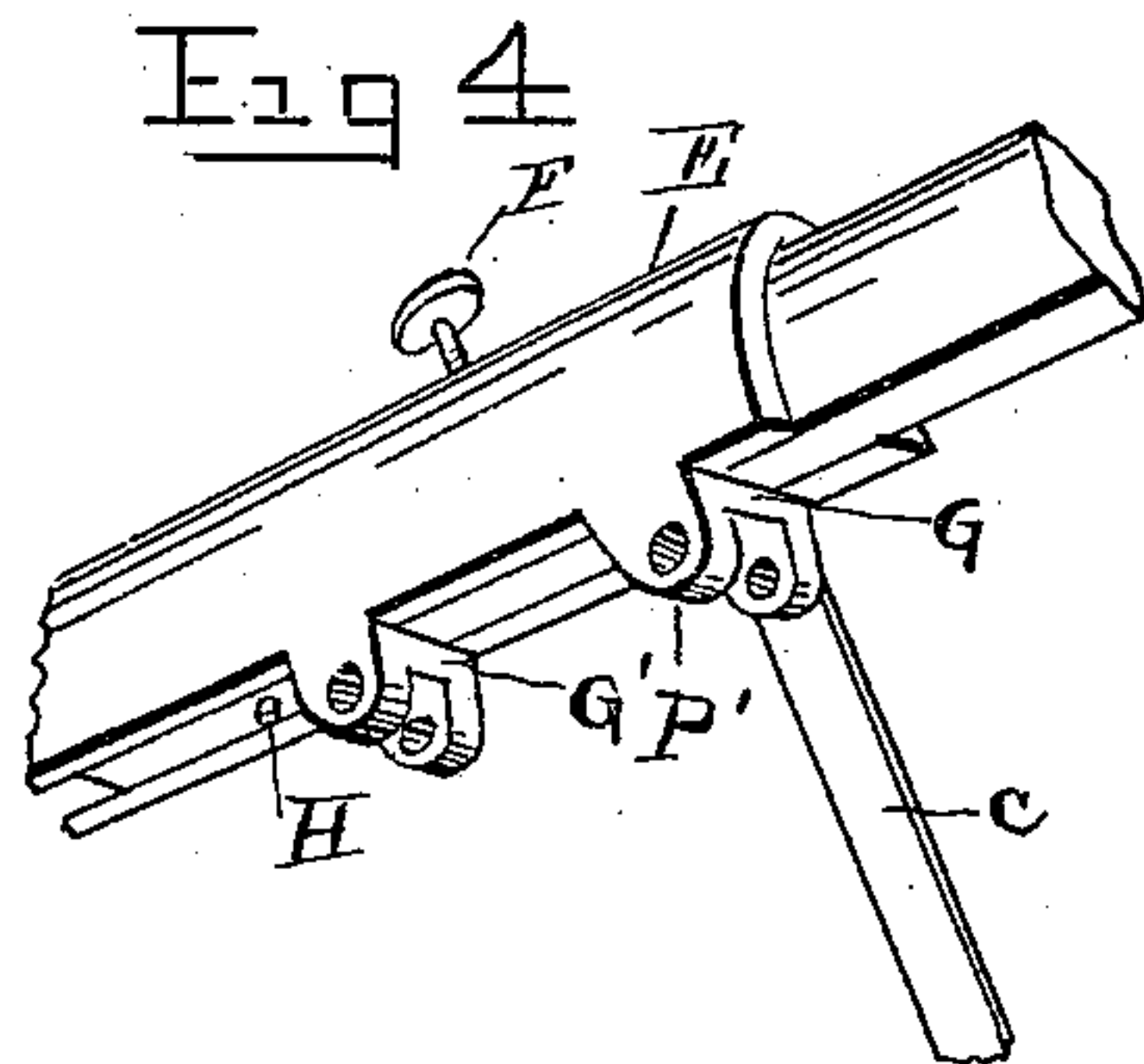
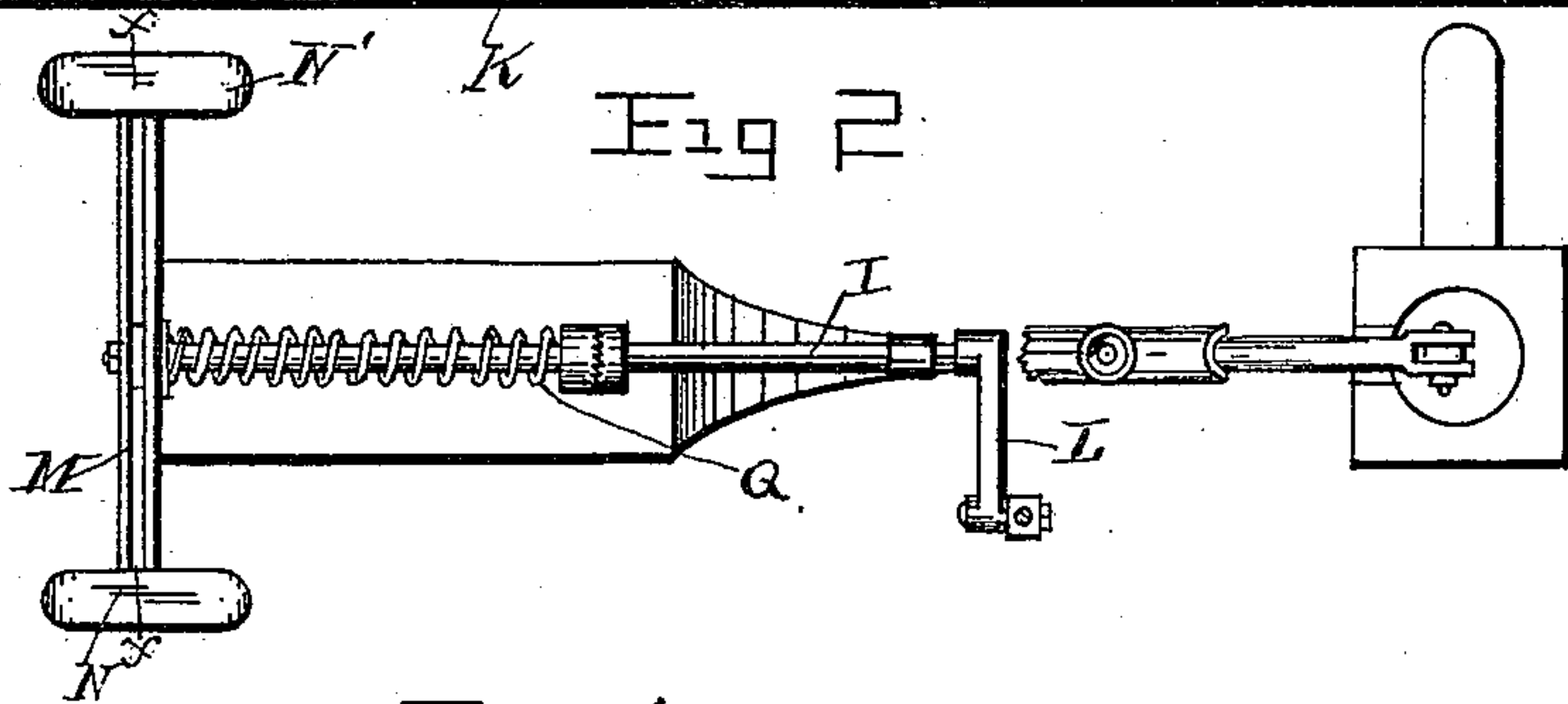
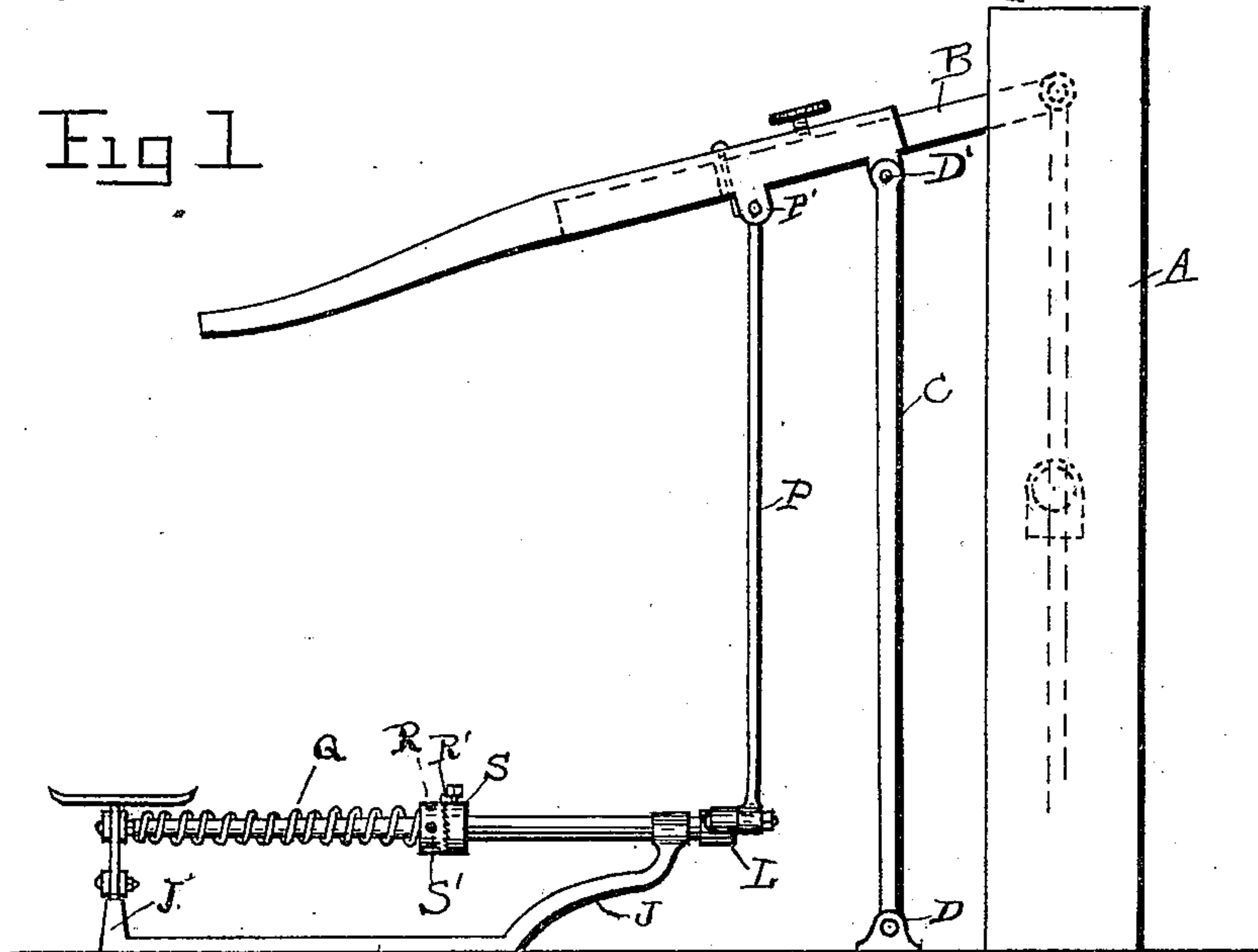


(No Model.)

W. W. HERR.  
ATTACHMENT FOR PUMPS.

No. 426,814.

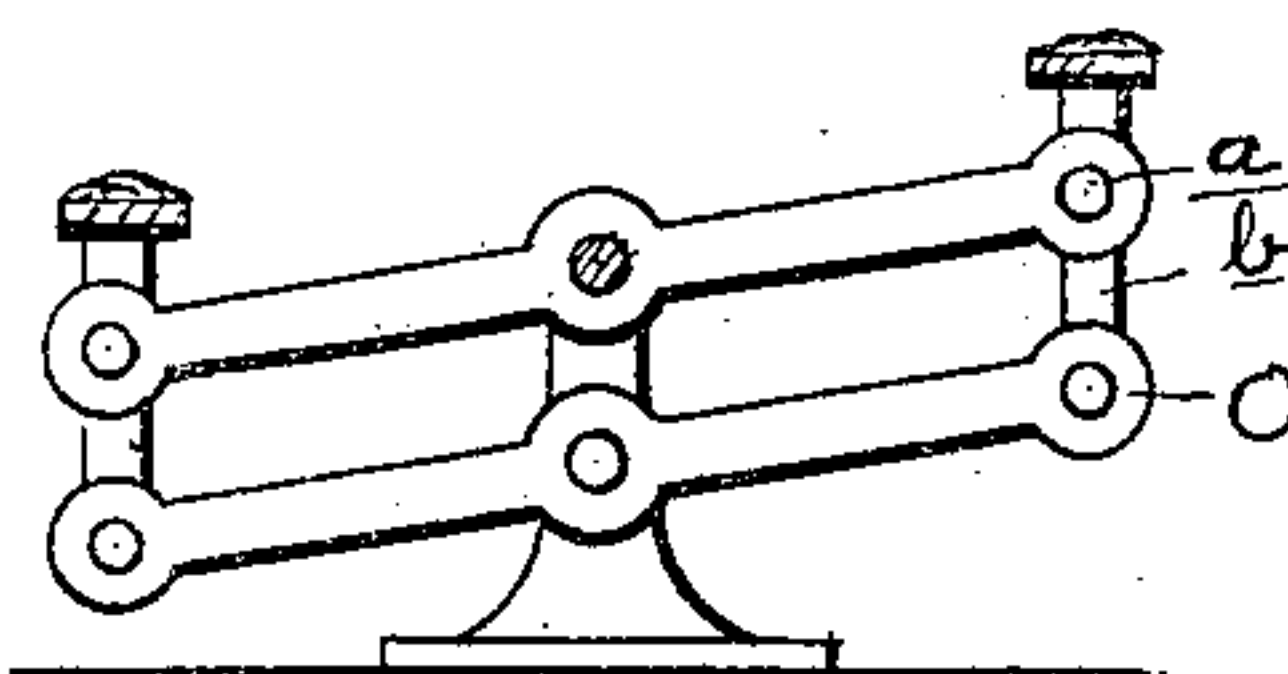
Patented Apr. 29, 1890.



Witnesses:

W E Gilbert  
P. M. Halbur

Fig. 3



Inventor:  
William W. Herr;

By James Whittemore

Atty

# UNITED STATES PATENT OFFICE.

WILLIAM W. HERR, OF LANSING, MICHIGAN.

## ATTACHMENT FOR PUMPS.

SPECIFICATION forming part of Letters Patent No. 426,814, dated April 29, 1890.

Application filed October 28, 1889. Serial No. 328,434. (No model.)

*To all whom it may concern:*

Be it known that I, WILLIAM W. HERR, a citizen of the United States, residing at Lansing, in the county of Ingham and State of Michigan, have invented certain new and useful Improvements in Attachments for Pumps, of which the following is a specification, reference being had therein to the accompanying drawings.

This invention relates to new and useful improvements in attachments for pumps; and the invention consists in the peculiar construction of a treadle-connection adapted to be attached to the handle of the pump, whereby the power of the operator may be exerted to the best advantage, so that a large volume of water may be pumped with the least possible exertion on the part of the operator from deep wells or from shallow wells with large pump-cylinders; and, further, the invention consists in the peculiar construction of a rock-shaft journaled upon the platform and connected to the handle of the pump, and of treadle-levers applied thereto, whereby the weight of the operator may be used as before mentioned, and, further, in the peculiar construction, arrangement, and combination of these various parts, and, further, in the peculiar construction of a movable fulcrum for said pump-lever, all as more fully hereinafter described.

The handle shown herein I have embodied in a separate application for patent filed December 14, 1889, Serial No. 333,807.

In the drawings which accompany this specification, Figure 1 is a side elevation of my improvement as applied to a pump. Fig. 2 is a plan view thereof. Fig. 3 is a cross-section thereof on line *x x* in Fig. 1. Fig. 4 is a perspective view from the under side, showing the manner of adjusting the fulcrum.

A is a pump-head of any desired construction, having the handle B. This handle may be pivoted in the usual manner upon the pump-head itself, or it may be pivoted upon the adjustable fulcrum C, consisting of upright arms pivoted at D to the platform, and secured by means of the pivot-pin D', passing through the lugs E, which depend from the adjustable end lever, which is secured upon the pump-handle D in its adjusted position

by means of the set-screw F, the adjustable lever being of such shape as to be adapted to be sleeved upon the handle B, the cross-bars G and G' forming guides on the lower side.

H is a pin secured, after the parts are engaged as above described, in the lower side of the handle B in the rear of the cross-bar G' to prevent the accidental separation of the parts.

I is a rock-shaft journaled in the standards J and J', which extend upwardly from the base K. This rock-shaft is provided at its forward end with the crank-arm L and at its other end with the cross-head M, which is provided at its end with the treadles N. These treadles I preferably secure to the cross-head pivotally by means of the pivots *a*, and so construct the parts that the plane of these treadles is almost on the horizontal, so that the foot of the operator may not be turned in the use of the device. This may be accomplished in a number of ways; but I preferably do it by securing an auxiliary cross-bar O pivotally upon the standard J' and secure the lower end of the treadle-arms *b* in the ends of the auxiliary cross-bar O.

P is a connecting-rod secured at its upper end in the lugs P' on the adjustable portion E' of the handle. It is evident that in using this device with an ordinary pump-handle this may be pivotally connected to the handle in any suitable manner. At its lower end this connecting-rod is secured to the end of the crank-arm L.

Q is a spiral spring sleeved upon the rock-shaft I, secured at one end to the standard J and at the other end to the nut R, which is loosely sleeved upon the shaft and provided upon its inner face with the serrations or teeth R', which engage with similar serrations or teeth upon the stationary abutment on the shaft. The tension of this spring acts downward upon the crank L, and may be increased or diminished by turning the nut R to the right or left, the tension of the spring Q holding the serrations or teeth into engagement with the teeth on the stationary abutment S to prevent its turning out of its adjusted position. I preferably arrange suitable spanner-holes S' in the nut R for turning it, although this may be effected by making a



hexagon or square nut and turning it by means of a wrench. It is obvious that while I show this peculiar construction of bringing the spring-pressure to bear downward upon the crank L, and through the connection P upon the lever of the pump, any construction which acts downwardly with its tension upon the connecting-rod P will effect the desired end.

The parts being thus constructed and arranged, they are intended to operate as follows: The adjustable hand-lever E' is moved in or out the desired distance to be easily operated by the person doing the pumping. The operator now steps upon the treadles N and N', bearing with his weight first upon the treadle N', and at the same time raising with his hands the pump-handle. The effect of this would be to lower the plunger of the pump and raise the connecting-rod P, and with it the crank L and treadle N, to which are connected the ends of the spring Q, acting against the resiliency of the spring. The operator now transfers his weight upon the treadle N, pulling downward with his hands upon the pump-handle, raising the plunger of the pump, in which he is aided by the spring tending to resume its normal position.

It will be seen that by means of the treadle-lever b being connected to both the cross-head M and the auxiliary cross-heads O the face of the treadles are always maintained in a horizontal position, thereby preventing any inconvenient twisting of the feet of the operator.

Should the tension of the spring not be proper, it may be increased or diminished to suit the operator by turning the crank-handles S' to raise or lower the center of the spring.

What I claim as my invention is—

1. In combination with a pump and its

handle, a rock-shaft journaled below said handle having a crank-arm thereon, a rod connecting the handle with the crank-arm, a cross-head rigidly secured on the shaft, and a spring on the shaft stationarily secured at one end to a suitable standard and adjustably secured to the shaft at its outer end, substantially as described.

2. In combination with a pump and its handle, a rock-shaft journaled below said handle, a rod connecting the handle with a crank on said shaft, a treadle-bar or cross-head at the other end of said shaft, and a spring sleeved upon the shaft and stationarily secured at one end and at the other end secured upon the adjustable nut R, engaging against the stationary abutment S', substantially as described.

3. In combination with a pump and its handle, the adjustable fulcrum C, pivotally secured upon the platform at its lower end and at its upper end in the ears E of the sliding hand-lever E', the cross-bars G and G', the set-screw F, and the pin H, substantially as described.

4. In combination with a pump and its handle, a treadle attachment adapted to be secured thereto, consisting of the following elements: the base K, having standards J and J', rock-shaft I, having crank L, cross-head M, and treadles N and N', the auxiliary cross-head O and treadle-bars b, the spring Q, nut R, abutment S, and connecting-rod P, the parts being arranged to operate substantially as and for the purpose described.

In testimony whereof I affix my signature, in presence of two witnesses, this 17th day of October, 1889.

WILLIAM W. HERR.

Witnesses:

ED. MCBREARTY,  
P. M. HULBERT.