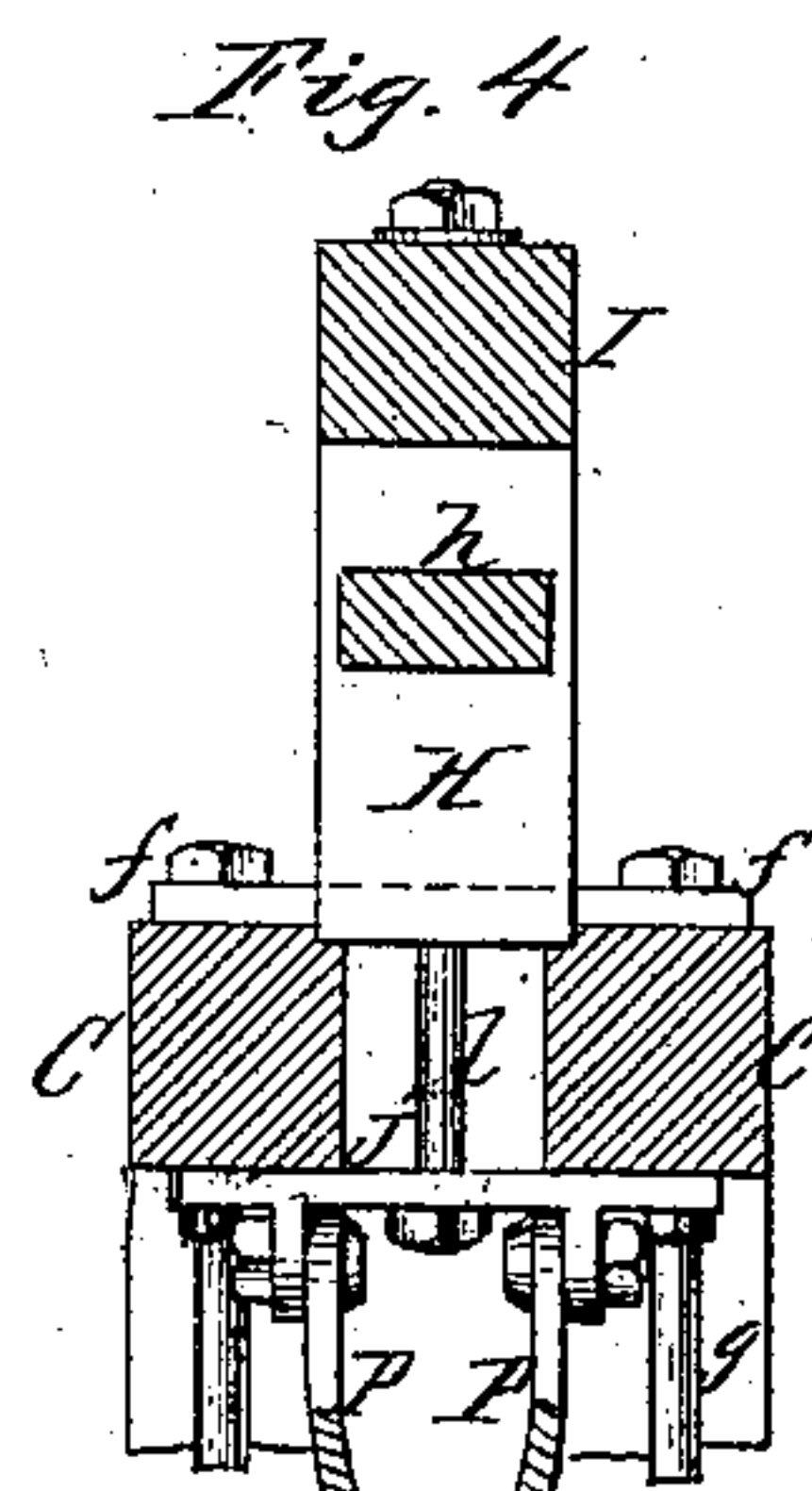
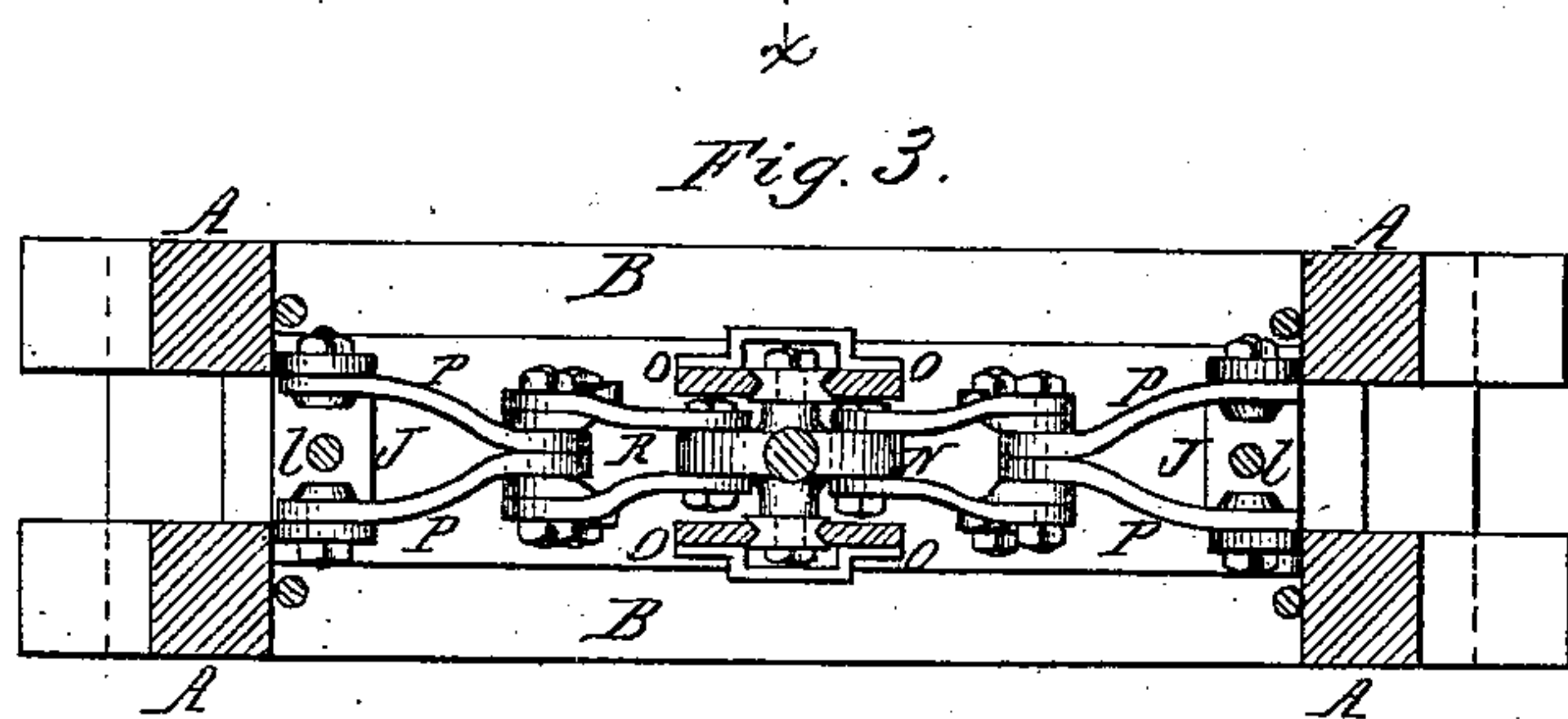
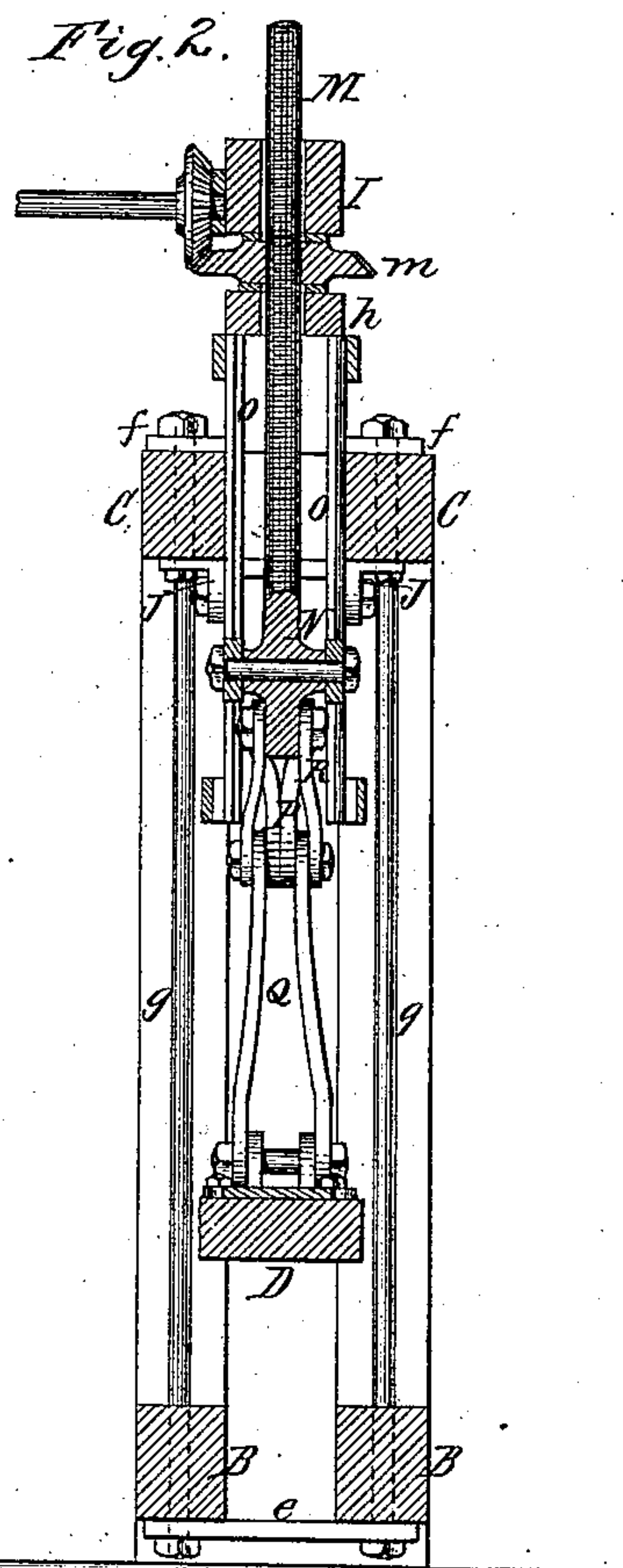
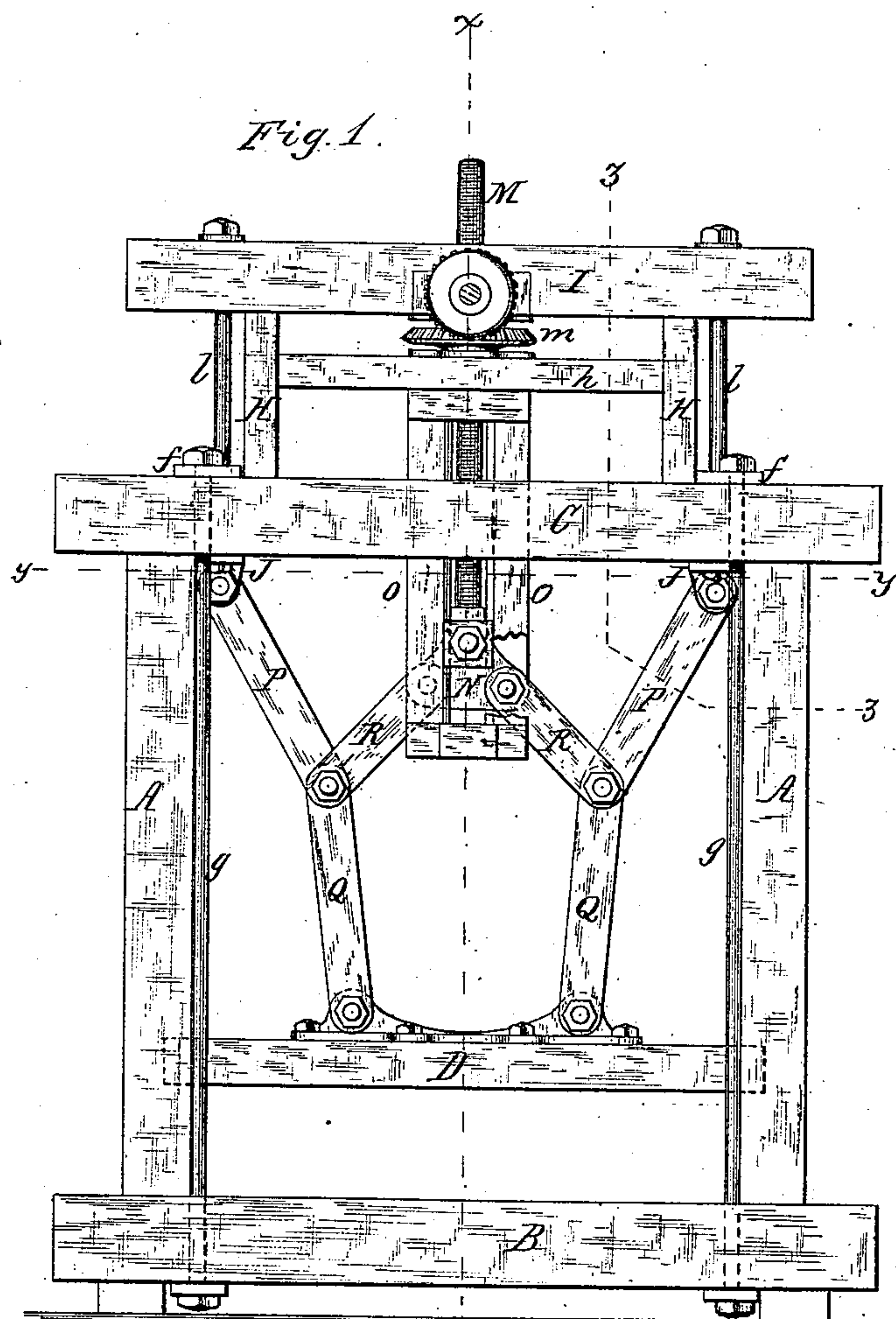


H. S. TOMPKINS.
Cider-Press.

No. 226,687.

Patented April 20, 1880.



Witnesses:

Chas. J. Buchheit
Edw. J. Brady

H. S. Tompkins Inventor.
By Wilhelm Dornier
Attorneys.

UNITED STATES PATENT OFFICE.

HENRY S. TOMPKINS, OF LA SALLE, NEW YORK.

CIDER-PRESS.

SPECIFICATION forming part of Letters Patent No. 226,687, dated April 20, 1880.

Application filed December 19, 1879.

To all whom it may concern:

Be it known that I, HENRY S. TOMPKINS, of La Salle, in the county of Niagara and State of New York, have invented new and useful Improvements in Cider-Presses, of which the following is a specification, reference being had to the accompanying drawings.

This invention relates more particularly to that class of presses in which the follower is operated with a comparatively slow movement—as, for instance, cider and wine presses; but it may, with advantage, be applied to all similar kinds of presses.

The object of the invention is to produce a simple, effective, and durable press which is easily operated by hand or power; and my invention consists of the particular combination and arrangement of parts whereby this object is attained, as will be hereinafter fully set forth.

In the accompanying drawings, Figure 1 is a front elevation of my improved press. Fig. 2 is a vertical section in line *x x*, Fig. 1. Fig. 3 is a horizontal section in line *y y*, Fig. 1. Fig. 4 is a fragmentary vertical section in line *z z*, Fig. 1.

Like letters of reference designate like parts in the several figures.

A A represent two pairs of upright posts, connected at the bottom by horizontal sills B B and at the top by horizontal cap-pieces C C, in such manner that a clear space is formed between each pair of posts A A, in which the follower D moves vertically. The two sills B B and caps C C are connected by transverse straps *e f*, respectively. *g g* are vertical tie-rods arranged on the inner sides of the posts A A, and passing through the sills B B, caps C C, and straps *e f*.

H H are two uprights supported upon and between the cap-pieces C C, which latter are mortised on their inner sides to form sockets for the reception of the lower ends of the uprights H H. I is a horizontal cap-piece resting upon the uprights H H, and *h* is a horizontal bridge-tree arranged between the uprights H H at a short distance below the cap-piece I.

J J are two fulcrum-blocks arranged under-

neath and between the cap-pieces C C, and in contact with the inner sides of the posts A A. *l l* are tie-rods connecting the upper cap-piece, I, with the fulcrum-blocks J J, and passing through holes in the cross-straps *f*.

M is the vertical actuating-screw, arranged centrally in the frame of the press, and passing through openings in the cap-piece I and bridge-tree *h*. *m* is a screw-nut, which is confined between the cap-piece I and bridge-tree *h*, so that by turning the nut *m* in one or the other direction a descending or ascending rectilinear movement is imparted to the screw M. The lower end of the latter is connected with a cross-head, N, which slides between two pairs of vertical guide-bars, O O, secured to the inner sides of the cap-pieces C C. The inner edges of the guide-bars O O may be made V-shaped, and the shoes of the cross-head be provided with correspondingly-shaped grooves, as represented in Fig. 3, to properly guide the cross-head and prevent its displacement.

P and Q represent the toggle-bars, arranged in two sets on opposite sides of the actuating-screw M. The upper bars, P, are pivoted with their upper ends to the fulcrum-blocks J J, and the lower bars, Q, are pivoted with their upper ends to the lower ends of the upper bars, P, and with their lower ends to the follower D.

R represents links which connect the cross-head N with the joint of the toggle-bars P Q, so that by raising or lowering the screw M both sets of toggle-bars are actuated simultaneously. Upon turning the screw-nut *m* in the proper direction the screw M is lowered and the links R are caused to press against the toggle-bars P Q in such manner as to tend to straighten the same. As the cross-head is lowered the angle at which the links R are placed with reference to the toggle-bars is gradually changed and approaches a right angle, thereby increasing in the same measure the effect of the screw upon the toggle-bars from the beginning toward the end of the downward movement of the follower. By reversing the rotating movement of the screw the follower is raised in an obvious manner.

The screw-nut *m* is constructed in the form

of a hand-wheel when the press is to be operated by hand, or in the form of a chain or other pulley when the press is designed to be operated by power.

5 I claim as my invention—

1. The combination, with the main frame A B C, of the uprights H, cap I, bridge-tree h, and fulcrum-blocks J, substantially as and for the purpose set forth.

2. The combination, with the main frame A B C, uprights H, cap I, bridge-tree h, and fulcrum-blocks J, of the central screw, M, cross-head N, guide-bars O, links R, and toggle-bars P Q, substantially as set forth.

HENRY S. TOMPKINS.

Witnesses:

JNO. J. BONNER,
EDW. J. BRADY.