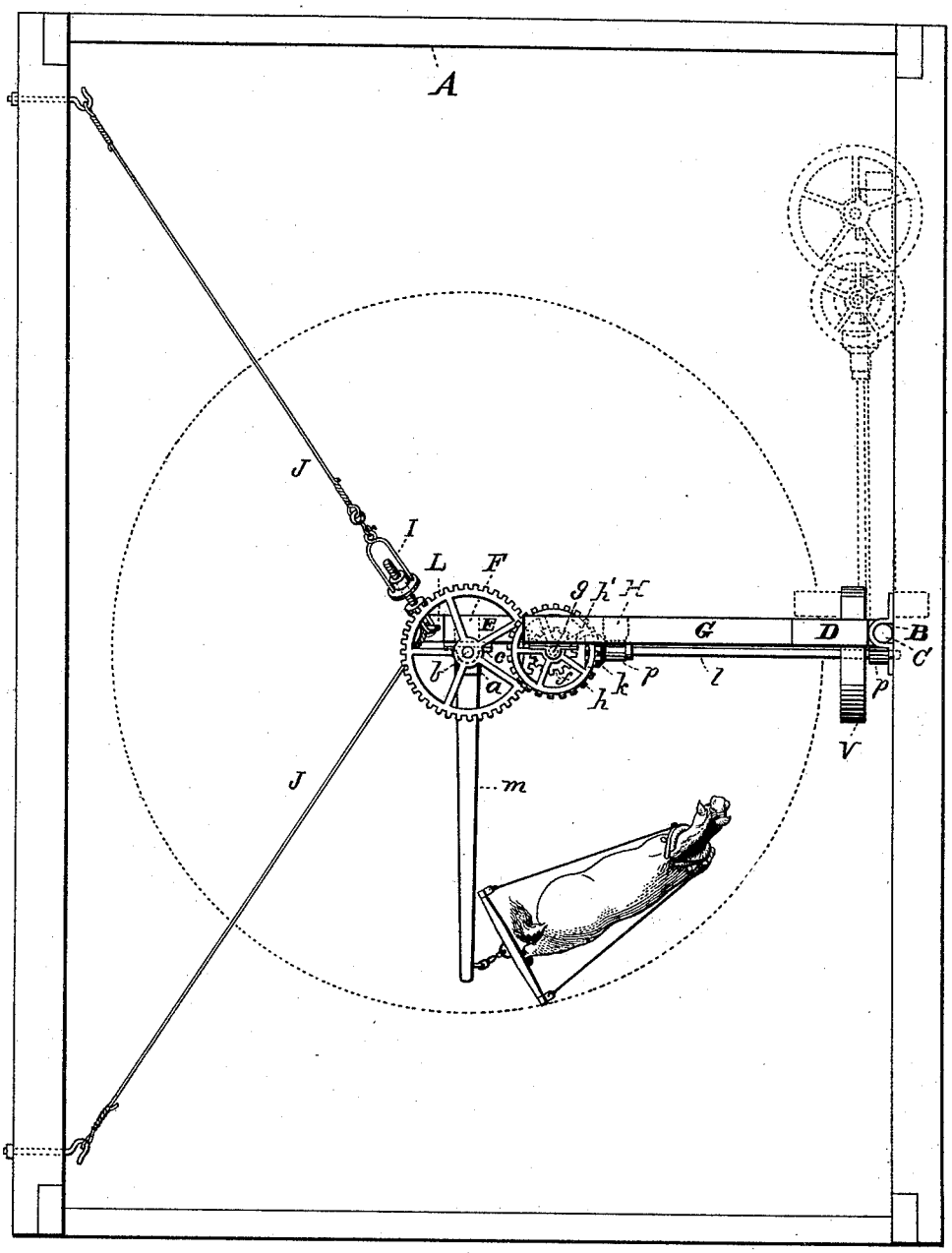
(No Model.) 2 Sheets—Sheet 1.

J. W. & F. E. WOOD.

HORSE POWER.

No. 418,102. Patented Dec. 24, 1889.

Fig. 1.



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(No Model.) 2 Sheets—Sheet 2.

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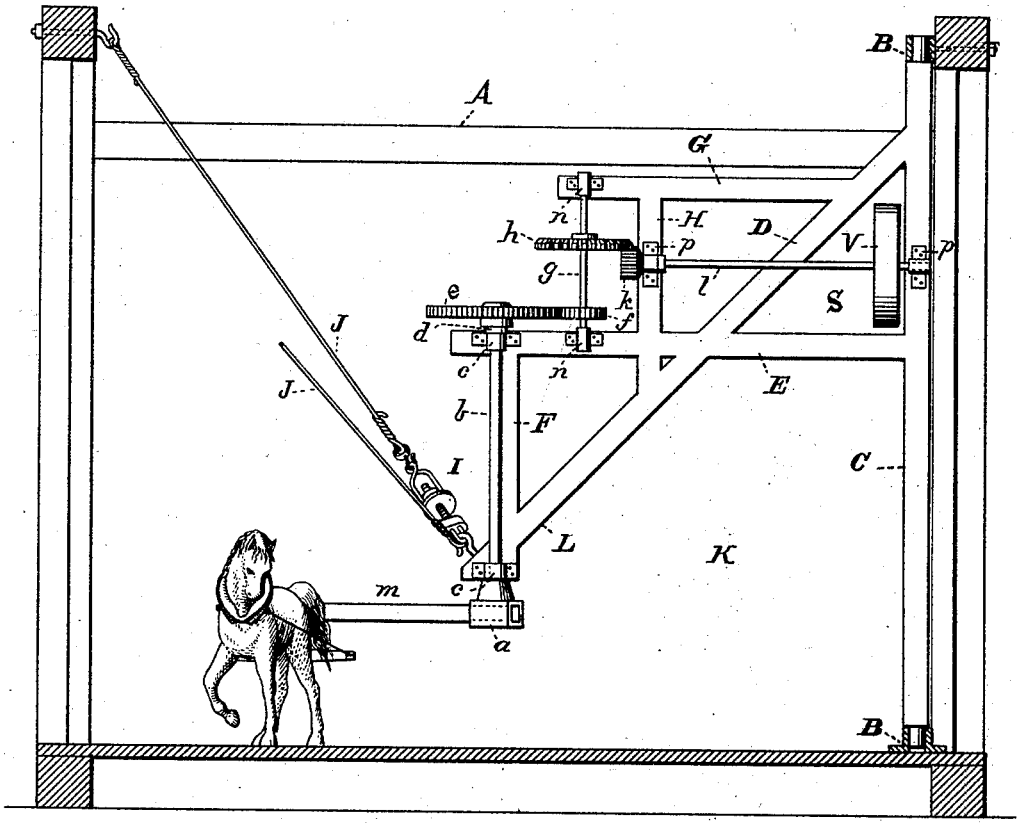
Fig. 2.



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UNITED STATES PATENT OFFICE.

JOSIAH W. WOOD AND FRANK E. WOOD, OF BEAVER CENTRE, PENNSYLVANIA.

HORSE-POWER.

SPECIFICATION forming part of Letters Patent No. 418,102, dated December 24, 1889.

Application filed August 1, 1889. Serial No. 319,459. (No model.)

To all whom it may concern:

Be it known that we, JOSIAH W. WOOD and FRANK E. WOOD, citizens of the United States, and residents of Beaver Centre, in the county of Crawford and State of Pennsylvania, have invented certain new and useful Improvements in Horse-Powers; and we do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to letters of reference marked thereon, which form a part of this specification.

Figure 1 of the drawings is a representation of this invention and is a top view; Fig. 2, partly a side view and partly a vertical section.

This invention has relation to horse-powers; and it consists in the novel construction and combination of parts, as hereinafter set forth, and pointed out in the appended claims.

In the accompanying drawings, the letter A designates the frame-work of a building, which is provided with bearings B B for the upper and lower journals of the vertical shaft C, to the upper part of which is secured the oblique downward-extending brace-beam D, which is secured at about its middle portion to the horizontal bar E, the outer extremity of which is connected to the lower end of the oblique brace by the outer upright brace F. To the oblique brace are also secured the upper horizontal bar G above and parallel to the bar E and the vertical brace H. These bars form a frame-arm, and in connection with the shaft C a strong swinging frame, under which an interval or way is provided at K below the bar E, and between the vertical shaft C and the lower portion L of the oblique brace-beam D, to permit the passage of the horse when the frame is swung out for use.

The lower and outer end L of the oblique frame-arm D is provided with a hook or attachment for the ends of the bracing-guys J J, which are connected thereto when the horse-power is in position for use. When it is not required, the guys are detached and the swinging frame is turned back toward the side of the building out of the way. The guys may be provided with turn-buckles, one, however, being usually sufficient, as indicated at I.

The horse-power lever is indicated at *m*, said lever being shipped in a horizontal socket-bearing *a*, which is secured to the lower end of the upright gear-shaft *b*, which turns in bearings *c c* of the frame-arm F, said shaft having a shoulder at *d*, which rests on the upper bearing. The main gear *e* is secured to the upper end or portion of the shaft and engages a pinion *f* of the small parallel shaft *g*, which carries a crown-wheel *h*, engaging a pinion *k* on the end of the horizontal pulley-shaft *l*. Bearings for the shaft *g* and pulley-shaft *l* are provided at *n* and *p*. The pulley V is keyed on the shaft *l* near its inner bearing and near the vertical shaft C in the angular interval S between the vertical shaft C, the oblique brace-beam, and the horizontal bar E.

The construction affords sufficient room under the braced frame-arm for a horse-power lever of sufficient length for any ordinary work, and the swinging frame, although adapted to be turned back out of the way, nevertheless forms when in position and braced by the guys a strong and solid fulcrum-bearing for the lever.

Having described this invention, what we claim, and desire to secure by Letters Patent, is—

1. The combination, with a swinging braced frame, of a horse-power lever, its gearing, and shafting, substantially as specified.

2. The combination, with a swinging braced frame and its guys, of the horse-power lever, its gearing, and shafting, substantially as specified.

3. The combination, with the vertical shaft and the frame-arm secured thereto and having the oblique brace-beam extending outward and downward from said shaft, of the gearing and gear-shafting and the suspended horse-power lever, substantially as specified.

4. The combination, with the swinging frame having the oblique downward and outward extending frame-arm and the detachable bracing-guys, of the main gear, its shouldered shaft and socket, the parallel gear-shaft and its gearing, and the pulley-shaft, substantially as specified.

5. The swinging horse-power frame consisting of the vertical shaft C, the oblique downward and outward extending brace D, the main horizontal bar E, extending from the vertical shaft outward, the upper horizontal bar G, and the vertical braces, substantially as specified.

In testimony whereof we affix our signatures in presence of two witnesses.

JOSIAH W. WOOD.
FRANK E. WOOD.

Witnesses:
FRANK E. BEST,
W. M. GILLESPIE.