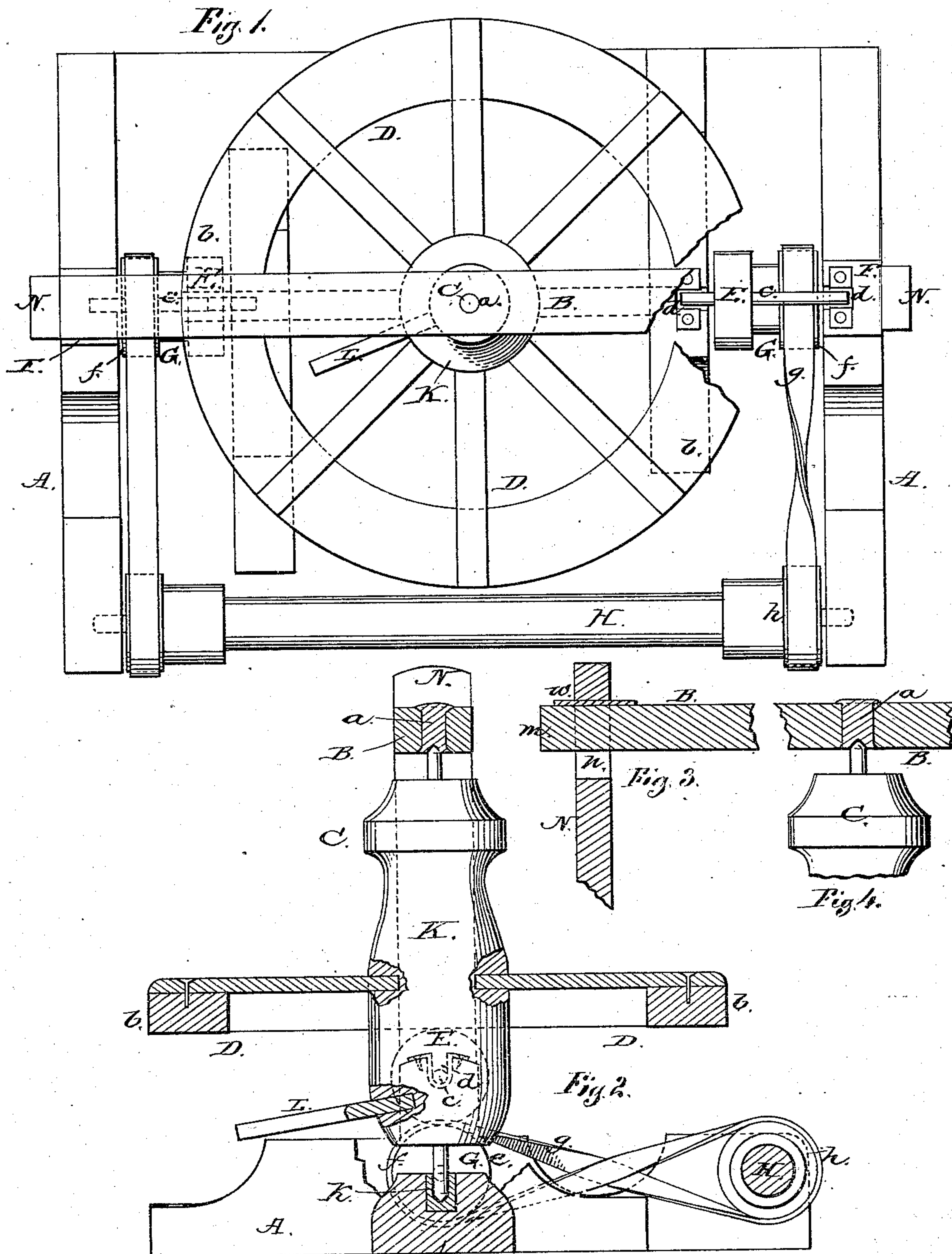


(Model.)

W. W. GARLAND.
Horse Power.

No. 232,484.

Patented Sept. 21, 1880.



WITNESSES:

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WILLIAM W. GARLAND, OF HENDERSON STATION, TENNESSEE.

HORSE-POWER.

SPECIFICATION forming part of Letters Patent No. 232,484, dated September 21, 1880.

Application filed August 14, 1880. (Model.)

To all whom it may concern:

Be it known that I, WILLIAM W. GARLAND, of Henderson Station, in the county of Madison and State of Tennessee, have invented a new and valuable Improvement in Horse-Powers; and I do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the annexed drawings, making a part of this specification, and to the letters and figures of reference marked thereon.

Figure 1 of the drawings is a representation of a plan view of this invention. Fig. 2 is a central vertical section of the same. Figs. 3 and 4 are details.

This invention has relation to horse-powers; and it consists in the construction and novel arrangement of the large drive-wheel above the horses, the diametrically-opposite rollers on which this wheel bears, having their journals in vertically-elongated bearings, the pulley-rollers under the bearing-rollers, and the shaft parallel with the pulley-rollers and connected thereto by suitable belting, all as hereinafter shown and described.

In the accompanying drawings, the letter A designates the frame of the horse-power, having a transverse beam, B, above, which is provided at its middle portion with a bearing, *a*, of suitable metal for the upper end of the spindle C of the main wheel D to work against. This main wheel is made of large size, its rim portion *b* being plane on its under side, and resting on the bearing-rollers E, which are arranged diametrically opposite to each other, as shown in the drawings. Each of these bearing-rollers is provided with a journal rod or shaft, *c*, which extends on each side into an elongated bearing-slot, *d*, arranged vertically in an abutment, F, of the frame. Below the bearing-roller is the pulley-roller G, which is provided at one end with a broad roller-bearing, *e*, upon which the bearing-roller E rests, and at the other end with a pulley-bear-

ing, *f*, to receive the belt *g*, which extends to a pulley, *h*, on one end of the drive-shaft H.

The pulley-rollers G are journaled in the blocks or abutments F of the frame, below the slot-bearings *d* of the bearing-rollers, and the journal-bearings are made very strong, because the weight of the wheel D and of the bearing-rollers E is supported thereby.

K represents the hub or body portion of the main driving-wheel D, to the lower portion of which, below the wheel, are attached the levers L, to which the horses are geared. The lower end of the spindle of this main wheel is let into an aperture, *k*, in a central block, *l*, around which the horses walk. The wheel rests on the bearing-rollers, and as it revolves turns them, they moving the pulley-rollers below.

The transverse beam B is formed with end tenons, *m*, which are seated in elongated mortises *n* in the framing-uprights N, and wedges *w*, or other keys, may be used to keep the central bearing, *a*, in contact with the upper end of the spindle of the main wheel, so as to permit uneven motion.

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

The horse-power having the over-beam B and its bearing *a*, the lower block, *l*, the slot-bearings *d* in abutments of the frame, the pulley-rollers G, journaled below, and the bearing-rollers E, journaled in said slot-bearings, and the main wheel D, resting by its opposite sides on said bearing-rollers, and having its upper spindle end in contact with the bearing *a* and its lower spindle end in the block *l*, substantially as specified.

In testimony that I claim the above I have hereunto subscribed my name in the presence of two witnesses.

WILLIAM W. GARLAND.

Attest:

E. B. FULLER,
J. A. McCULLEY.