(No Model.)

G. F. BETZ.

HORSE POWER.

No. 260,154. Patented June 27, 1882.

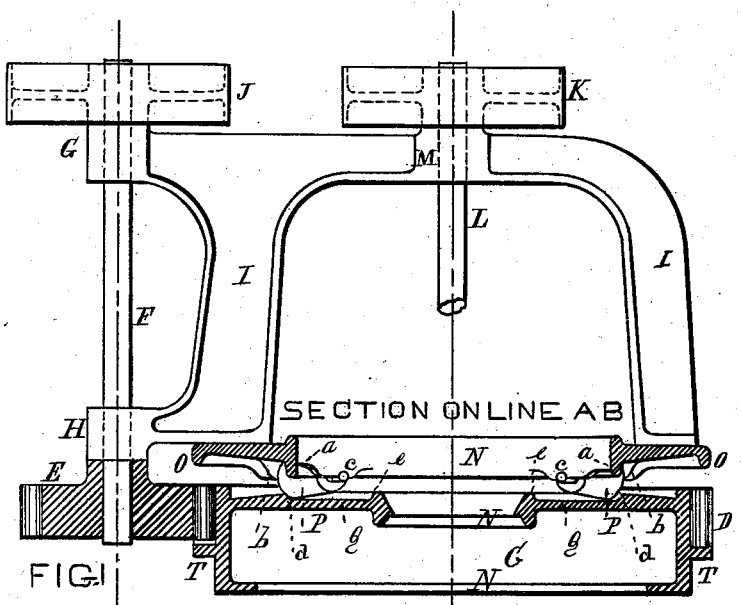

FIG. 1

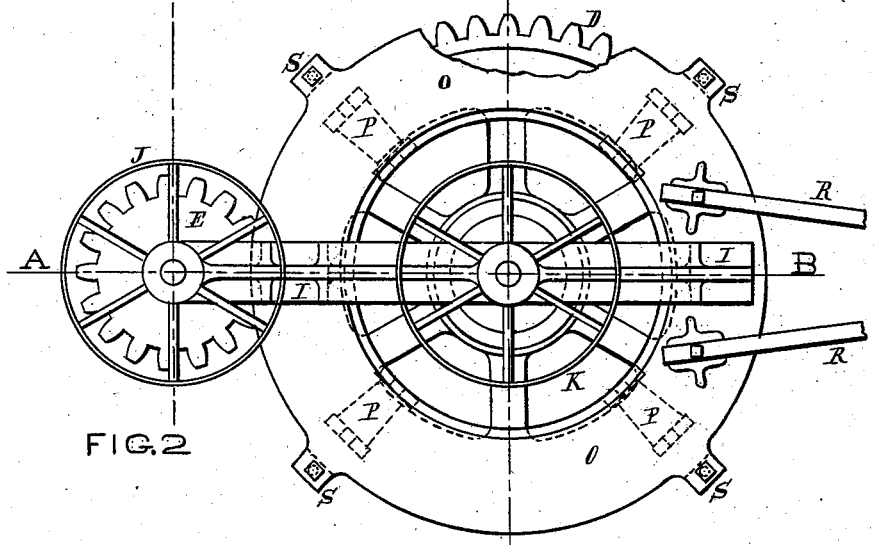

FIG. 2

WITNESSES

A. H. Van Cleve.

G. Kimball

INVENTOR

G. F. Betz

W. H. Burridge Atty.

UNITED STATES PATENT OFFICE.

GOTTLEAB F. BETZ, OF CLEVELAND, OHIO.

HORSE-POWER.

SPECIFICATION forming part of Letters Patent No. 260,154, dated June 27, 1882.

Application filed March 21, 1882. (No model.)

To all whom it may concern:

Be it known that I, GOTTLEAB F. BETZ, of Cleveland, in the county of Cuyahoga and State of Ohio, have invented a certain new and Improved Horse-Power; and I do hereby declare that the following is a full, clear, and complete description thereof.

The nature of my invention relates to horse-powers; and it consists in such construction and arrangement of the several parts as hereinafter set forth.

That the invention may be fully understood, reference will be had to the following specification and to the annexed drawings, making a part of the same, in which—

Figure 1 is a transverse vertical section in the direction of the line A B, Fig. 2, and Fig. 2 is a plan view of the machine.

Like letters of reference refer to like parts in the several views.

To the stationary base C, Fig. 1, is connected or integral therewith a gear-wheel, D, into which meshes the pinion E, which is keyed to the shaft F and journaled in boxes G H, connected with the rotating frame I.

To the upper end of the shaft F is keyed the pulley J, which is to be connected to the pulley K by a belt or other connection. This pulley K is secured to the shaft L, journaled at M in the frame I.

The shaft L may be extended above the pulley K or down through the central portion of the machine, as may be required, so as to convey power to a room or place above or below the machine, there being an annular opening, N, in the central portion of the machine, through plate O and the annular track Q and base C, to admit of free passage of the driving-shaft L, as seen in Fig. 1.

The frame I is secured to the annular top plate, O, on the under side of which are journaled anti-friction rollers P in boxes or bearings in the flanges *a b*. The journals at one end are seen at *c c*. The rollers revolve in the space between the flanges *a b*, and rest upon the annular track Q, secured to or integral with the gear D, upon which they traverse, and are prevented from moving out of the track in their movements by the projections or flanges *d e* surrounding the track Q.

The sweeps R are secured to the plate O, to which sweeps (which may be worked in either direction) the team for operating the machine is connected.

The gear D is stationary with the base C, and by the movement of the sweeps horizontally in a circular direction around the machine the plate O and frame I will move or turn correspondingly, carrying the pinion E, which, by its meshing into the stationary gear D, transmits a rotary motion to the pulley J through the shaft F.

From the pulley J motion is given to the pulley K by means of a belt or its equivalent, which is taken up by the shaft L and transmitted to a remote place above or below the machine, to be utilized as a motive power; or the power may be taken up directly from the shaft and used in close proximity.

To the lugs S are bolted or otherwise secured arms, which extend down and lap under the annular flange T, directly under the gear-wheel D. These arms move with the plate O as it revolves. By means of these arms lapping under the flange and the upper ends secured to the lugs S, the plate and frame with the rollers are so held in place as to prevent the upper section of the machine from separating or springing from the base.

By means of the rollers P, upon which frame I and plate O rest, the friction is so materially reduced as to cause the machine to operate with less power applied to the sweeps than in ordinary horse-powers to produce the same results.

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

In horse-power machines, the rotatory frame I and plate O, having the rollers P rotating in the annular track Q, and provided with a central opening, N, through the plate O, gear D, and base C, for the passage of the driving-shaft, in combination with the stationary gear D and pinion E, substantially as described, and for the purpose specified.

In testimony whereof I affix my signature in presence of two witnesses.

GOTTLEAB F. BETZ.

Witnesses:
JOSEPH H. DOW,
W. H. BURRIDGE.