

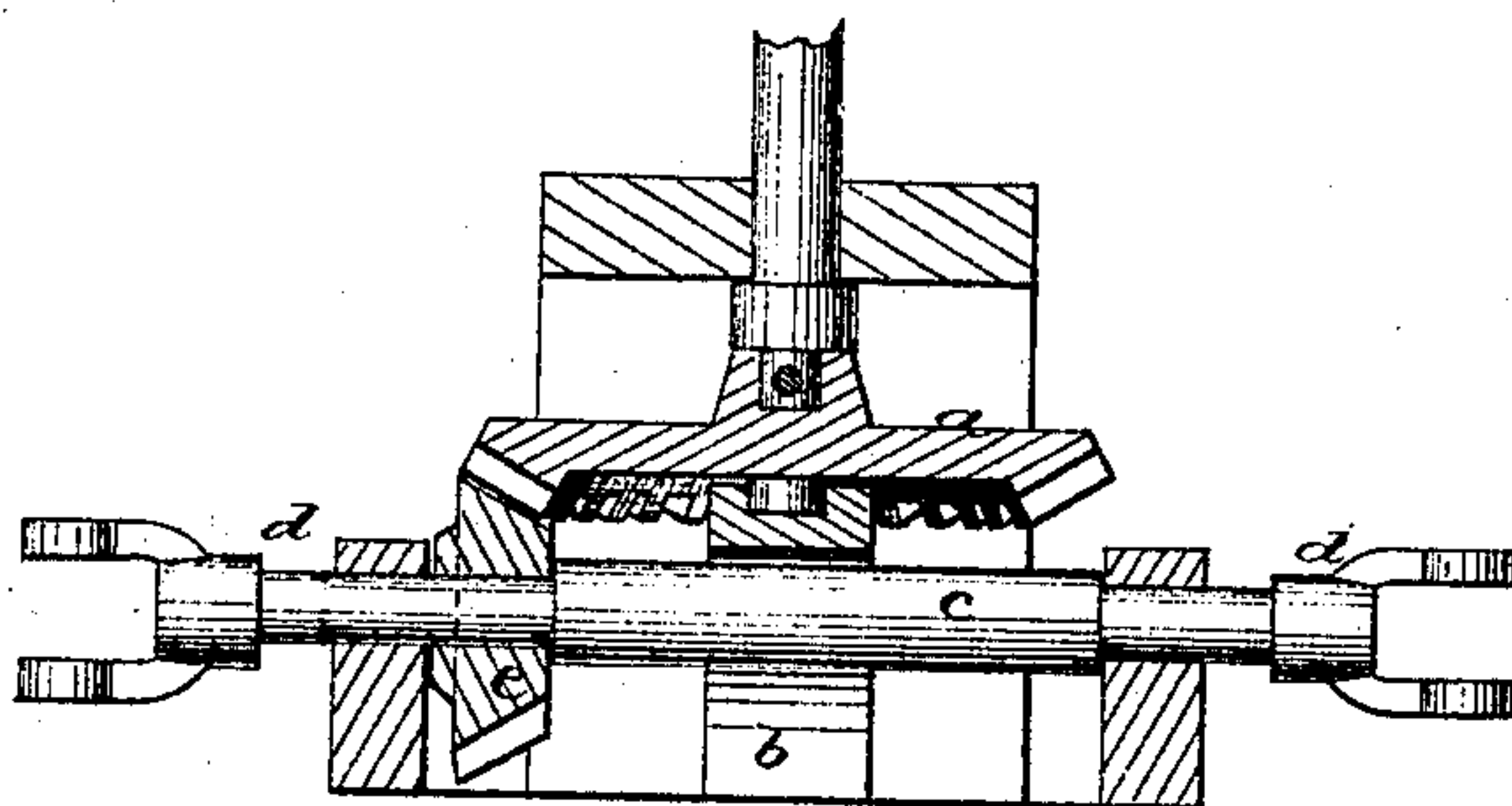
*R. W. Crouse,*

*Horse Power.*

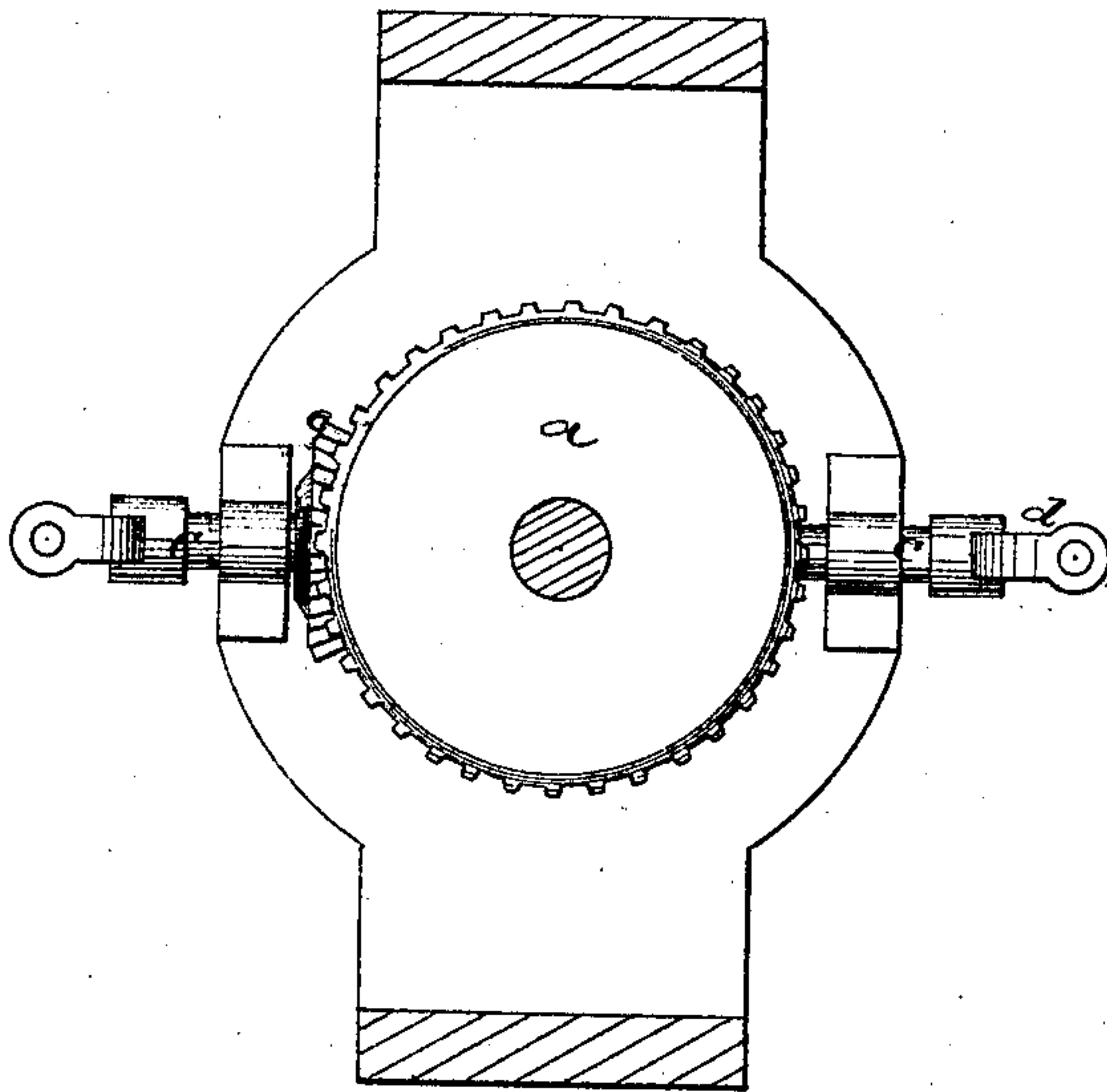
*No. 109114.*

*Patented Nov. 8. 1870.*

*fig. 1.*



*fig. 2.*



Witnesses:

*Victor Hagmann*

*C. A. Pettit*

Inventor:

*R. W. Crouse*

*per Munroe & Co.*

*Attorneys.*

# United States Patent Office.

RUFUS W. CROUSE, OF WESTMINSTER, MARYLAND.

Letters Patent No. 109,114, dated November 8, 1870; antedated October 29, 1870.

## IMPROVEMENT IN HORSE-POWERS.

The Schedule referred to in these Letters Patent and making part of the same

*To all whom it may concern:*

Be it known that I, RUFUS W. CROUSE, of Westminster, in the county of Carroll and State of Maryland, have invented a new and useful Improvement in Horse-Powers; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawing forming a part of this specification, in which—

Figure 1 is a transverse vertical section; and

Figure 2 is a plan view.

The invention is an improvement on that for which Letters Patent No. 95,440, dated October 5th, 1869, was issued to Diffendal and Hughes.

In their machine the bevel-pinion which turns the tumbling-shaft is so placed in connection with the main driving-pinion as to receive motion in the wrong direction, or that which runs the machine backward, unless the horse travels with the sun instead of against the sun, as horses usually travel when following a circle. As all horses very much prefer to travel against the sun, and do not work well when traveling with it, this peculiarity of the Diffendal and Hughes horse-power amounts to a defect, which it is the object of my invention to remedy.

Another objection to the Diffendal and Hughes power is, that their tumbling-shaft extends beneath the main driving-pinion only far enough to sustain its bevel-pinion beneath one-side of the former, and, as the inner end of the shaft is, therefore, directly beneath the main driving-pinion, the coupling-box can only be applied to the outer end of the shaft.

My invention consists in a tumbling-shaft extend-

ing entirely across the space beneath the main driving-pinion, and bearing a coupling-box at both ends, so that connection may be made at either extremity; and a bevel-pinion placed on the tumbling-shaft in such connection with the main driving-pinion as to receive motion in the right direction when the horses are traveling with the sun.

In the drawing—

*a* is the main driving-pinion, mounted on the top of an arched bridge, *b*;

*c*, the tumbling-shaft extending beneath the arched bridge, and bearing a coupling-box, *d*, at each end; and

*e*, the bevel-pinion, on the tumbling-shaft, placed beneath the opposite side of the driving-wheel *a*, from the same pinion in the Diffendal and Hughes power.

Having thus described my invention,

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

The tumbling-shaft *c*, when extended entirely across the space beneath the driving-wheel *a*, in order that coupling-boxes may be placed on both ends of the shaft, and when used in connection with the bevel-pinion *e*, so placed in reference to the driving-wheel as to receive motion therefrom in the right direction for the machine while the horses are traveling against the sun.

To the above specification of my improvement I have set my hand this 21st day of March, 1870.

R. W. CROUSE.

Witnesses:

JOHN M. YINGLIY,  
E. F. REESE.