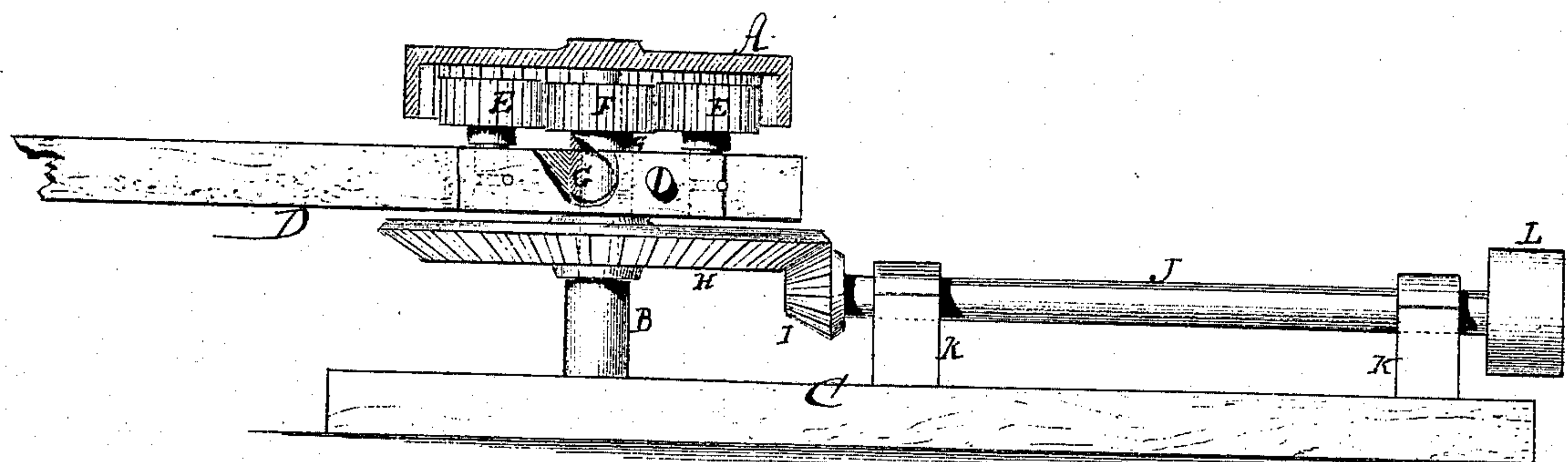


*C. H. Gifford,*

*Horse Power.*

*No. 99,555.*

*Patented Feb. 8. 1870.*



*Witnesses,*  
*A. W. Almqvist*  
*Edgar Tate*

*Inventor,*  
*C. H. Gifford*  
*By Wm. L.*

# United States Patent Office.

C. H. GIFFORD, OF POTSDAM JUNCTION, NEW YORK.

*Letters Patent No. 99,555, dated February 8, 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, C. H. GIFFORD, of Potsdam Junction, in the county of St. Lawrence, and State of New York, 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 thereof, which will enable others skilled in the art to make and use the same, reference being had to the accompanying drawing, forming part of this specification.

This invention relates to a new and useful improvement in horse-powers, for driving threshing-machines and other machinery, and for all purposes to which it is applicable; and

It consists in the construction, arrangement, and combination of parts hereinafter described.

The accompanying drawing represents a vertical longitudinal section of a horse-power, constructed according to my invention.

A represents a stationary internal gear-wheel, which is attached to the top of the central post, B.

C is the bed or platform, by which the post B is supported.

D is the driving-lever or sweep, to which the power or team is attached.

E E are driving-wheels, which mesh into the internal gear-wheel A, and revolve on studs in the lever D.

These driving-wheels also mesh into a central pinion, F, which is fast on the sleeve G of the bevel-wheel H. This sleeve passes through the lever D, and revolves on the stationary post B. The post is the fulcrum of the driving-lever.

The wheels E E are carried around, and engage with the internal gear A, and impart a velocity to the

central pinion F and bevel-wheel H, proportioned to the diameters of the wheels engaged, or about four, more or less, revolutions of the bevel-wheel H, to the horse's one.

Wheels of any other desired proportions may be used.

I is a bevel-pinion, on the line-shaft J. This shaft is revolved in boxes on the stands or pillow-blocks K K, on the bed or platform C.

The bevel-wheel H engages with the pinion I, and here the speed is increased in proportion to the difference in the diameters of the two wheels.

L is a pulley, on the end of the shaft J, from which motion is conveyed by a belt to drive the desired piece of machinery.

The driving-wheels E E may be made stationary, and the lever may be attached to the internal gear-wheel A, if desired, but I prefer the arrangement shown, as being best adapted to the purpose.

It will be seen that by this method of combining and arranging the wheels, the strain is equalized, and the power rendered strong and durable.

Having thus described my invention,

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

The arrangement of the wheel A, driving-wheels E E, centre pinion-wheel F, bevel-wheel H, and pinion I, in combination with the lever D, post B, and platform or bed C, substantially as and for the purposes herein shown and described.

C. H. GIFFORD.

Witnesses:

J. RAYMOND,  
ROBERT RODGERS.