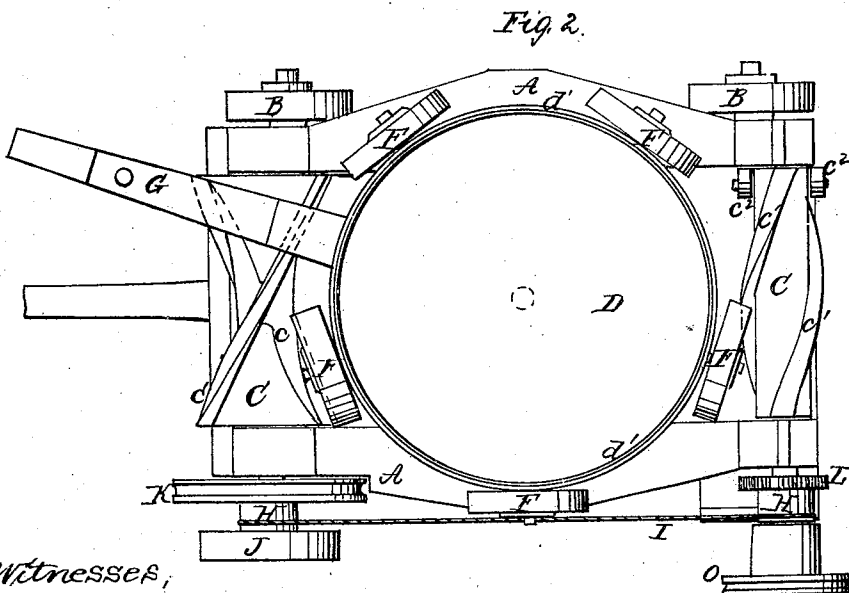
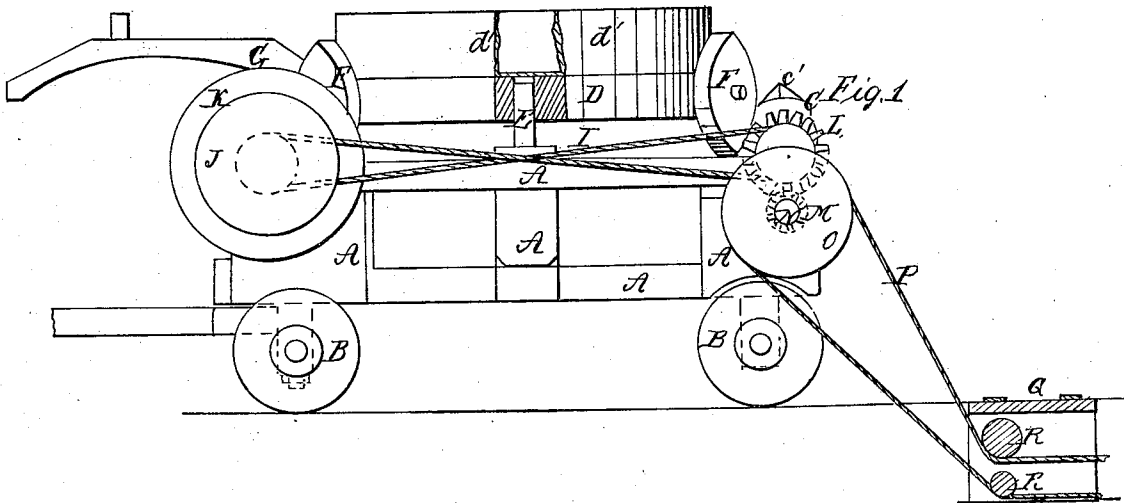


*C. F. Gay.*

*Horse Power.*

*N<sup>o</sup> 85,578.*

*Patented Jan. 5, 1869.*



*Witnesses,  
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# United States Patent Office.

CHARLES F. GAY, OF ALBANY, OREGON.

Letters Patent No. 85,578, dated January 5, 1869.

## IMPROVED HORSE-POWER.

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, CHARLES F. GAY, of Albany, in the county of Linn, and State of Oregon, have invented a new and improved Horse-Power; 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 drawings, forming part of this specification.

Figure 1 is a side view of my improved machine, part being broken away to show the construction.

Figure 2 is a top or plan view of the same.

Similar letters of reference indicate corresponding parts.

My invention has for its object to furnish an improved horse-power, simple in construction, strong and durable, and which shall be so constructed as to greatly diminish the friction and increase the effective power of the machine; and

It consists in the construction and combination of the various parts, as hereinafter more fully described.

A is a strong platform, which I prefer to mount upon wheels, B, for convenience in moving it from place to place.

C are drums or cylinders, one or more of which are used, and the journals of which revolve in bearings attached to the platform A.

c' are spiral flanges, attached to or formed upon the faces of the drums or cylinders C, so as to make a half turn in passing from end to end of said cylinders.

The flanges c', and face of the cylinders C, are so formed as to furnish a smooth and level track for the wheels of the rotating platform, as the said cylinders change their positions under the action of the said wheels.

The cylinders C should be about ten inches in length by four inches in diameter.

D is a circular platform, which rotates about a pivoting-pin, E, attached to the central beam of the framework that supports the platform A, so as to project above said platform, and enter a socket in the centre of the said circular platform D.

To the outer edge or circumference of the platform D is pivoted a number of small wheels, F, which support the said platform, and roll along the level surface of the platform A.

G is a sweep, one or more of which may be used, according to the number of horses to be attached to the power, and which is attached to the said circular platform D, to revolve it about its pivoting-point.

As the platform D is rotated, the wheels F roll along the level surface of the platform A until they reach the cylinders C, when they roll along the track formed by the flanges c' of said cylinders, the weight of the platform D bearing upon the flanges c' of the cylinders C.

As the resistance to be overcome or the machinery

to be driven increases, or, in other words, as more power is required, additional weight must be placed upon the rotating platform D, so that the weight of said platform may always revolve the cylinders C, allowing the wheels to always roll forward in the same horizontal plane.

For convenience in adjusting the weight upon the platform D, said platform should be formed with an upwardly-projecting rim or flange, d', as shown in the drawings.

By this construction the tendency will be to crowd the cylinders longitudinally in the direction in which the wheels F are moving, pressing the ends of said cylinders against the frame or platform A.

To relieve the friction that would thus be caused, small friction-wheels, e', are pivoted to the ends of the said cylinders C, which bear against and roll upon the side of the said frame or platform, as shown in fig. 2.

To the ends of the journals of the cylinders C, when two cylinders are used, are attached band-pulleys, H, around which passes a band, I, which may be straight or crossed, according to the position of cylinders with reference to the wheels F, and which connects the two cylinders, so as to apply their united power to the machinery to be driven.

To the end of the journal of one or both the cylinders C is attached a fly-wheel, J, for giving steadiness to the motion.

K is a band-wheel, attached to the journal of one of the cylinders C, around which passes the band by which the power is applied to the machinery to be driven.

In case a more rapid motion is required, a gear-wheel, L, is attached to one of the journals of one of the cylinders C, the teeth of which mesh into the teeth of the small gear-wheel M, attached to the short-shaft N.

The shaft N revolves in bearings attached to the frame or platform A, and to its outer end is attached a band-wheel, O, to receive the band P, that applies the power to the machinery to be driven. I usually prefer to build the machine with both these arrangements attached, so that the rapidity of motion engendered may be regulated according to the character of the machinery to be driven.

Q is a pulley-box, in which are pivoted two pulleys or rollers B, around which the rope or band P passes, to guide said band, and keep its parts separate from each other.

This enables the band P to be led down into such a position that the horse or horses can pass over the said band without having their advance impeded by said band, the top of the box Q forming a part of the pathway in which the said horse or horses walk.

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

1. The combination of the pivoted circular platform D, wheels F, and spirally-flanged cylinders or drums

C, with each other and with the platform A, substantially as herein shown and described, and for the purpose set forth.

2. The combination of the band I and band-pulleys H with the cylinders C, substantially as herein shown and described, and for the purpose set forth.

3. The combination of the band-wheel K with one of the flanged cylinders C, substantially as herein shown and described, and for the purpose set forth.

4. The combination of the gear-wheel L, gear or pinion-wheel M, shaft N, and band-wheel O, with one

of the flanged cylinders C, substantially as herein shown and described, and for the purpose set forth.

5. The combination of the guide-pulleys R and pulley-box Q with the driving-band P, substantially as herein shown and described, and for the purpose set forth.

CHARLES F. GAY.

Witnesses:

P. P. HENDERSON,  
FRANK DALTON.