Sheet 1-2 Sheets.

J. Fitzgerald,

Horse Power,

No. 4,579. Patented June 16, 1846.

Fig: 1

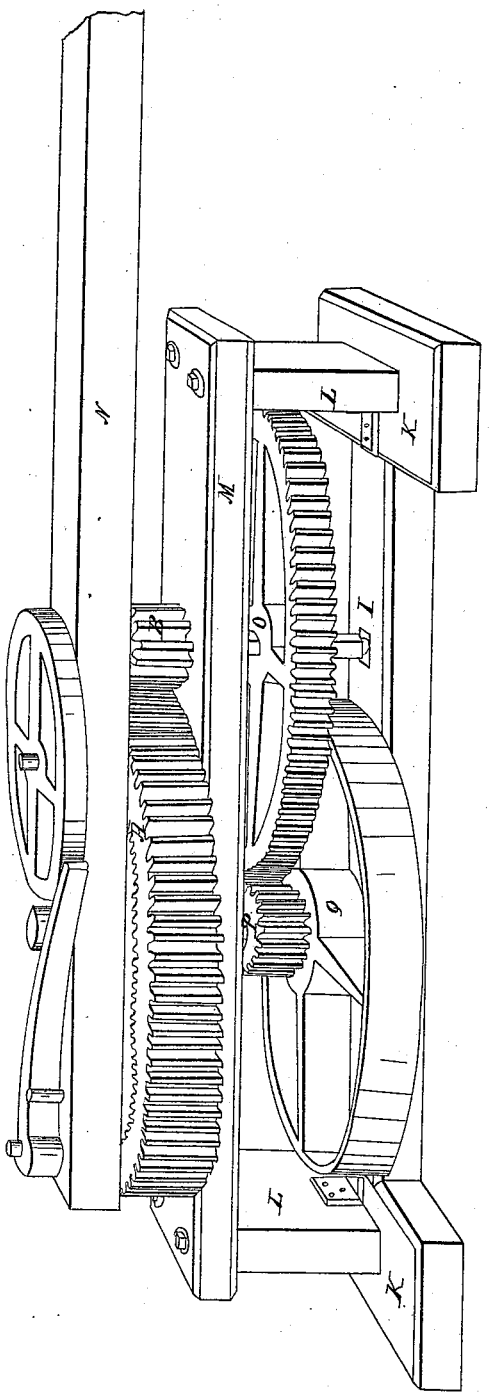

Fig: 5

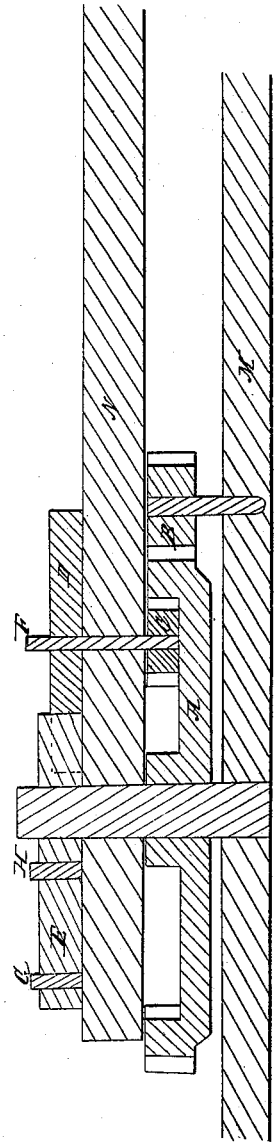

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Fig: 2

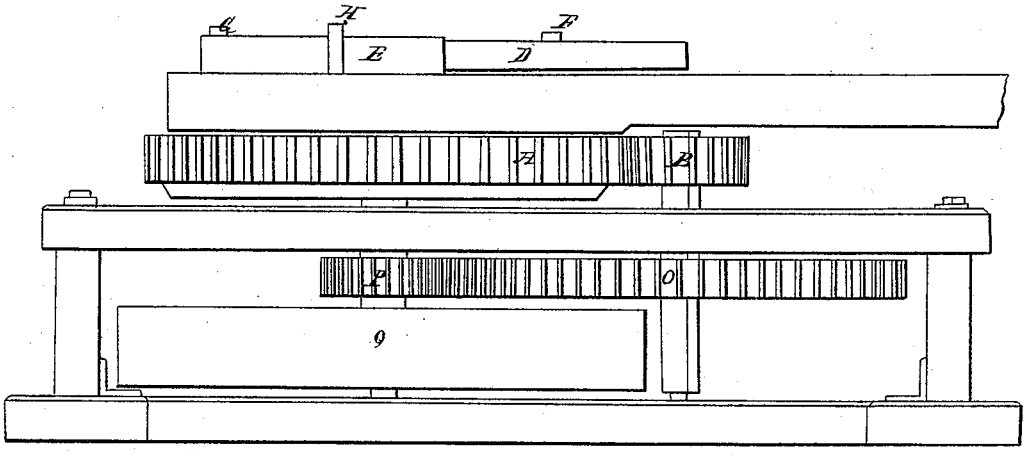
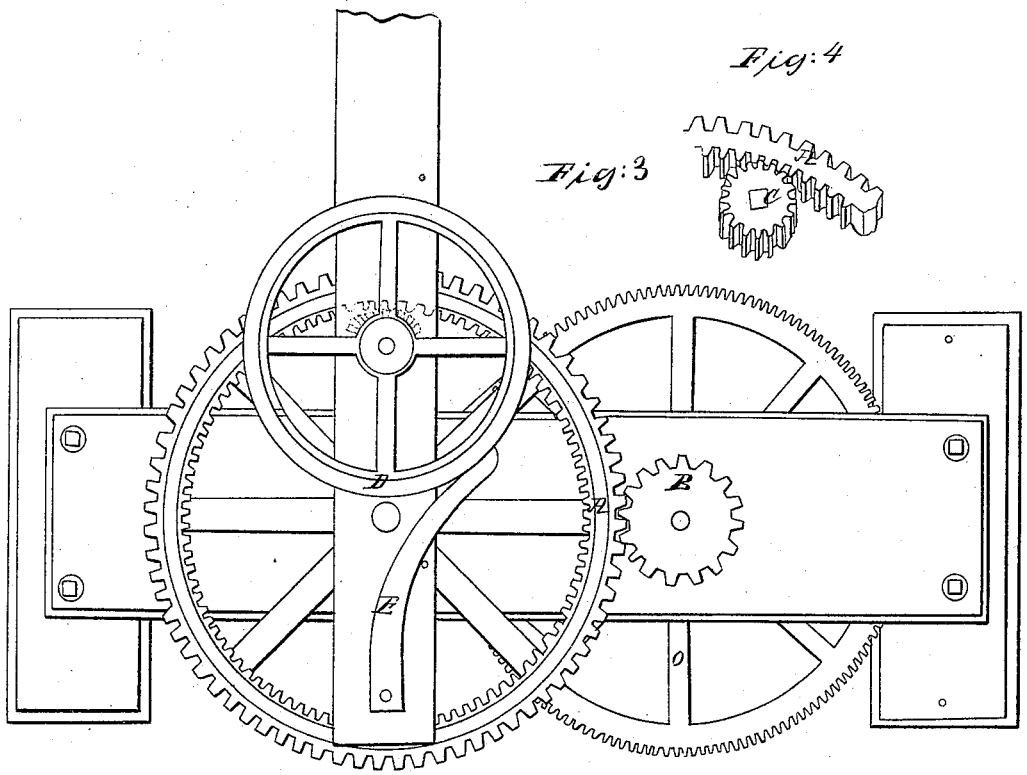


Fig: 4

Fig: 3



UNITED STATES PATENT OFFICE.

JESSE FITZGERALD, OF NEW YORK, N. Y.

HORSE-POWER.

Specification of Letters Patent No. 4,579, dated June 16, 1846.

To all whom it may concern:

Be it known that I, JESSE FITZGERALD, of the city, county, and State of New York, have invented a new and useful Improvement in Portable Horse-Powers; and I hereby declare that the following is a full and exact description thereof.

To enable others to make and use my invention I proceed to describe its construction and operation, reference being had to the annexed drawings which make part of this specification.

Figure 1 is a perspective view. Fig. 2 elevation. Fig. 3 plan. Figs. 4 and 5 diagrams to exhibit the works.

The frame of the horse power is made of planks in the usual way, that is, a bed piece (I,) with cross pieces (K) at the ends from which rise the uprights (L) with cap piece (M) upon them, secured with bolts. The main wheel sits above the cap piece and is made with cogs outside and inside of the rim, to make room for which inner cogs the arms of the wheel are set down. See Plate III.

The lever, N, is set upon the main wheel, A, the shaft of which passes through it. Through this a shaft, F; (see Plate III) is placed in a box. On the lower end of the shaft is fixed the pinion, C, which connects with the inner cogs of the main wheel, A. On the top of the shaft, F, is a wheel, D, against which presses with considerable friction the wooden spring, E. This spring hung at the end of the lever by the bolt, G, and held firmly against the wheel by means of the pin, H. There are holes made in the lever, N, to vary the amount of friction upon the wheel, D, by changing the place of the pin, H. The object of the pinion and shaft, C, F, and the wheel and spring, D, E, is to permit the lever, N, to move around (in case of excessive strain) without turning the pinion, B, and consequently the other machinery. The wheel, D, will move with ease or with difficulty according to the pressure of the spring, E, (which for simplicity and economy I prefer to make of wood that iron may be better) and therefore when a restive horse is put to the power it is advisable to have the friction of the spring E but small so that the wheel, D, will turn, in which case, as before observed, the pinion, C, revolves in the inner cogs of A, and the lever passes around only partially moving the machinery.

The pin, H, may be made in the form of a wedge, so that when the machinery is well started, it may be driven in a little with a mallet and thus increase the friction as may be required for the effective operation of the machinery.

With regard to the other parts of the machinery, the cog wheel, O, (of the same size with the main wheel A) is placed on the shaft of the pinion B, below the cap piece, M, and connects with the pinion P, which runs loose on the lower part of the main shaft, and is connected with the band wheel, Q.

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

The combination of a pinion, C, and wheel D with the main wheel, A, for the purpose of producing friction (by means of the spring E or other pressure) sufficient to hold partially or entirely the lever in its place, for the object within described.

In witness whereof I have hereunto set my hand.

JESSE FITZGERALD.

Witnesses:

D. R. BACON,

CHARLES ROSS.