

(No Model.)

G. W. WIMPEE.

MOTOR.

No. 386,950.

Patented July 31, 1888.

Fig. 1.

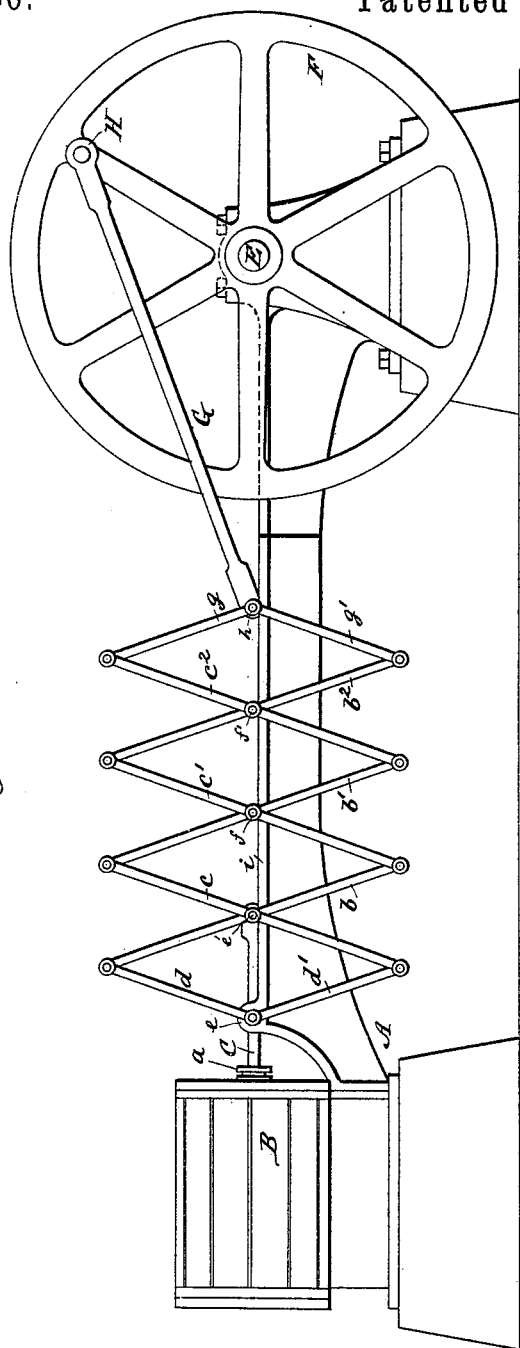
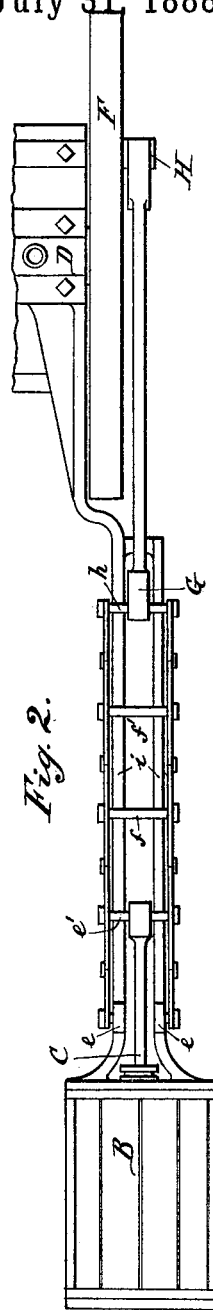


Fig. 2.



WITNESSES:

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# UNITED STATES PATENT OFFICE.

GEORGE W. WIMPEE, OF SUMMERVILLE, GEORGIA.

## MOTOR.

SPECIFICATION forming part of Letters Patent No. 386,950, dated July 31, 1888.

Application filed January 25, 1888. Serial No 261,887. (No model.)

*To all whom it may concern:*

Be it known that I, GEORGE W. WIMPEE, of Summerville, in the county of Chattooga and State of Georgia, have invented a new and  
5 Improved Motor, of which the following is a specification, reference being had to the annexed drawings, forming a part thereof, in which—

Figure 1 is a side elevation of my improved  
10 motor, and Fig. 2 is a partial plan view.

Similar letters of reference indicate corresponding parts in both views.

The object of my invention is to improve the class of motors employing reciprocating  
15 parts—such as pistons and piston-rods—by increasing the leverage of the piston and piston-rod by means of the mechanical device known as “lazy-tongs.”

My invention consists in the combination,  
20 with the reciprocating piston-rod of a steam or gas engine or water-motor, and the main crank and connecting-rod of the motor, of lazy-tongs or compound levers arranged to increase the throw of the connecting-rod, and thus permit  
25 of a longer crank and increased leverage.

I will describe my improvement in connection with a steam engine, although it is applicable to motors and machines of various kinds in which reciprocating motion is converted  
30 into rotary motion by means of a crank.

The body A of the motor supports a cylinder, B, containing a piston having a rod, C, projecting through a stuffing-box, a, in the front end of the cylinder in the usual way.

35 The body A is provided at its forward end with journal-boxes D for the crank-shaft E, and upon the shaft E is mounted a wheel, F, which may serve as a fly-wheel or a belt-wheel to the engine.

40 To the outer end of the piston-rod C are connected, by means of the cross-bar e', two pairs of crossed levers, b c, one pair upon each side

of the rod. The upper end of the levers b and the lower end of the levers c are connected by links d d' with ears e, formed on the body, 45 and the upper and lower ends of the levers b c are connected with two other pairs of levers, b' c', of the same kind, which are held in proper relation to each other by the cross bar f; and the levers b' c' are in a similar way connected with a pair of levers, b<sup>2</sup> c<sup>2</sup>, which are 50 connected together by the rod f'. The lower ends of the levers b<sup>2</sup> and the upper ends of the levers c<sup>2</sup> are connected by links g g' with the cross bar h, which receives one end of the connecting-rod G, the opposite end of the connecting-rod being received on a crank-pin, H, 55 projecting from the wheel F. The cross bars e' h and the rods f f' rest upon guides i, formed on the body A. The system of levers b c b' c' b<sup>2</sup> c<sup>2</sup> 60 and the links d d' g g' form the mechanical movement known as “lazy-tongs.” By means of this arrangement the motion of the piston is multiplied as many times as there are pairs of levers, thus permitting of using a very long 65 crank, which gives the piston an increased leverage, thereby increasing the power of the engine.

Having thus described my invention, I claim as new and desire to secure by Letters Patent— 70

In a motor, the combination, with the piston-rod C, the crank H of the steam-engine, and the connecting-rod G, of the crossed levers b c b' c' b<sup>2</sup> c<sup>2</sup>, connected together by cross-bars e' f f', the links d d', pivoted to the levers 75 b c and to a fixed support, the links g g', pivoted to the levers b<sup>2</sup> c<sup>2</sup> and to the connecting-rod G, and the guides i, substantially as herein shown and described.

GEORGE W. WIMPEE.

Witnesses:

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W. F. WIMPEE.