

A. S. GOOCH.
ELEVATOR.

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945,034.

Patented Jan. 4, 1910.

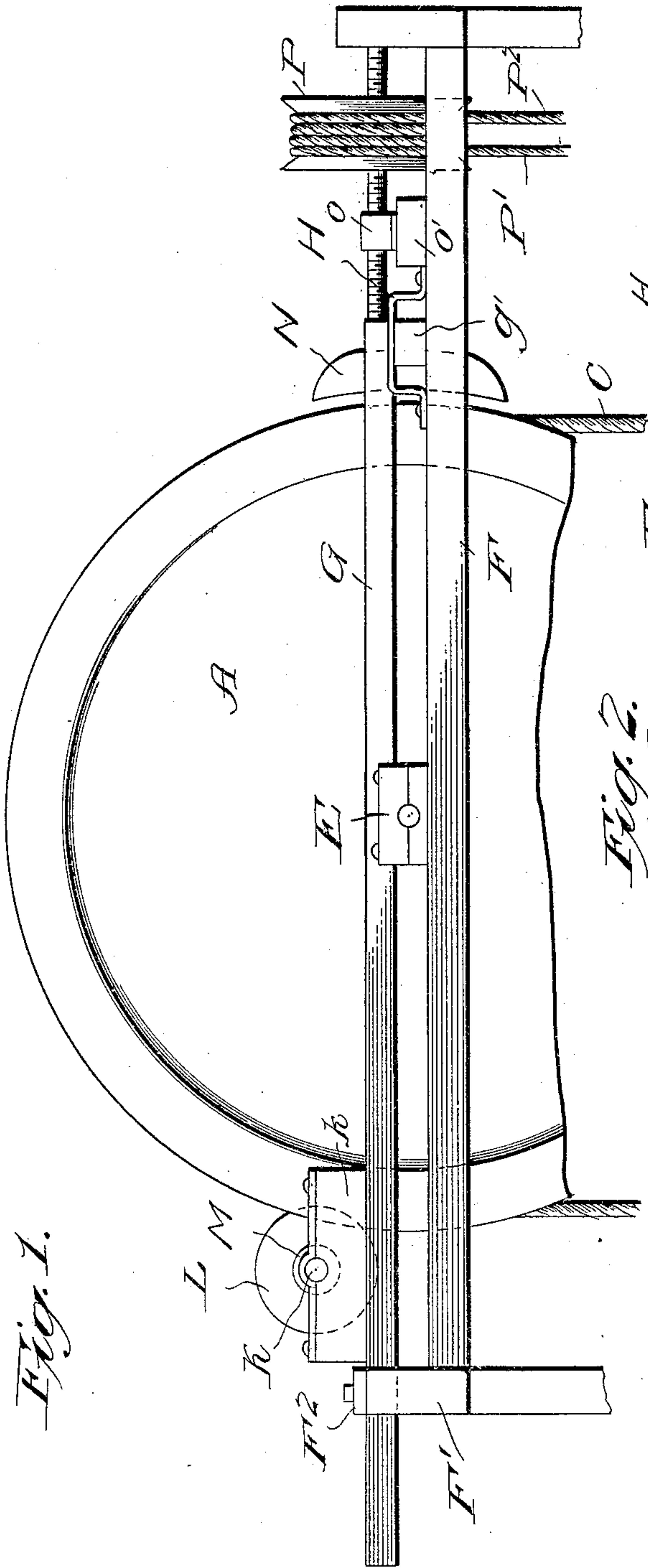


Fig. 1.

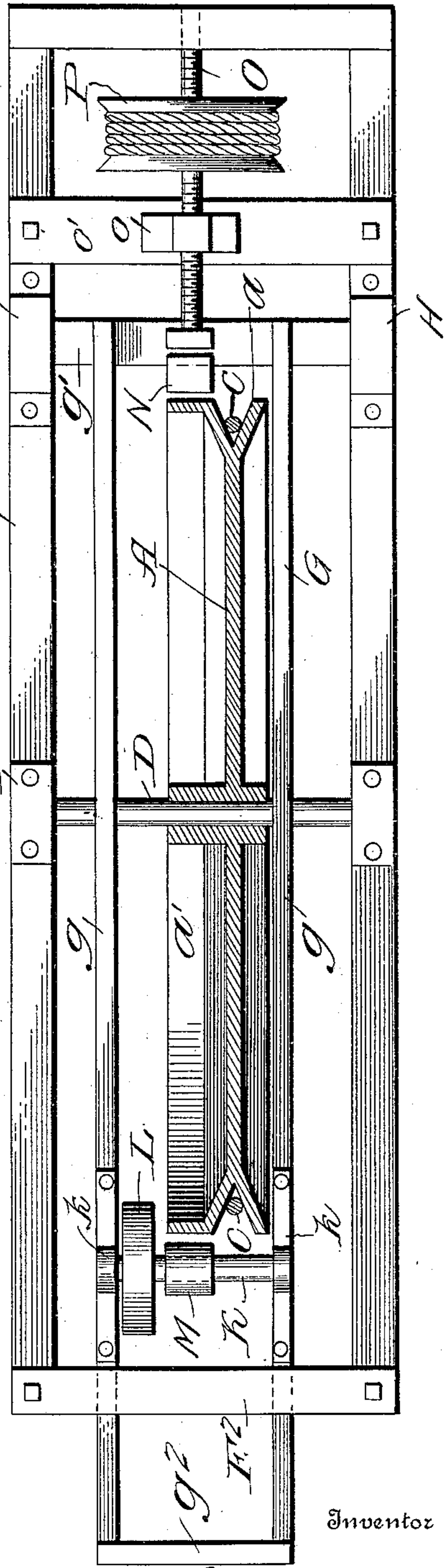


Fig. 2.

Witnesses

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ALPHONSO S. GOOCH, OF LITTLE ROCK, ARKANSAS.

ELEVATOR.

945,034.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, ALPHONSO S. GOOCH, of Little Rock, county of Pulaski, and State of Arkansas, have invented a new and useful Improvement in Elevators, of which the following is a specification.

This invention relates to improvements in elevators and more particularly to an attachment to the ordinary hand or manually operated elevators whereby the elevator may at the will of the operator and as conditions require be converted into a power operated elevator.

One object of the invention is the production of such an attachment that may be used with or connected to the ordinary hand operated elevators now in use, at small expense, and that will be productive of excellent results when in use.

In the accompanying drawings wherein similar letters of reference are used to indicate corresponding parts in each of the several views:—Figure 1 is a side elevation of my improvement attached to the upper portion of the usual elevator frame; and Fig. 2 is a plan view of the invention, the main wheel of the elevator being shown in section.

Broadly speaking, the device or attachment comprises a frame adapted to slide in the main frame of the usual elevator, said sliding frame carrying on one end a friction operating wheel and on the opposite end a brake-shoe. To one end of the frame is also connected a screw shaft adapted to be revolved by the operator and alternately or at will throw into action the friction wheel or brake-shoe thereby converting the elevator into a power driven one.

In the drawings, A indicates the usual wheel around which is passed the rope C for elevating and lowering the elevator by hand in the ordinary manner. The wheel A is formed with a groove or guide *a* to receive the rope C, and is provided with a flange or rim *a'* adapted to make frictional contact with the friction wheel as hereinafter to be described. Said wheel A is rigidly secured to the shaft D, mounted in bearings E, on the upper part of the main frame F of the usual elevator construction. The frame G is slidably mounted in the main frame F; said frame G consisting of the side pieces *g*, *g*, and end pieces *g'*, *g'*. The end piece *g'* is extended and slides on the frame F, being held in position by means of the straps or stirrups H. The side pieces *g*, *g*, pass

through and slide in guides or grooves in the part F' of the main frame, being retained therein by means of the top piece or plate F².

Near one end of the sliding frame G in bearings *h*, and adjacent the wheel A, is journaled the shaft K. Said shaft K carries rigidly secured thereto a driving wheel or pulley L, adapted to be connected by means of a belt or in any suitable manner to an electric motor, engine or other suitable apparatus for driving said wheel. On said shaft K there is also mounted the friction wheel M, adapted, in operation, to contact with the wheel A and impart motion thereto in operating the elevator. On end piece *g'* of the sliding frame G is secured the brake shoe N adjacent to the rim of the wheel A. Also secured to the end piece *g'* is the screw rod O. Said screw rod O is adapted to operate through the part *o*, properly screw threaded interiorly, said part *o* being securely fastened to the cross piece *o'* attached to the main frame. Rigidly mounted on the screw rod O is the rope pulley or sheave P, around which may be wound several times the ropes P', P² through the manipulation of which the brake shoe N or friction wheel M may be thrown into or out of engagement with the wheel A as desired.

From the foregoing description the operation of the attachment will be readily understood. As shown in Fig. 2 the elevator is in a position ready for the elevating or lowering of the car or elevator platform by hand. As is usual in this connection, all that is necessary is for the operator to draw down on the rope for raising the elevator and in the opposite direction for lowering same. Now if there is a heavy load on the car or for any other reason it is desired to utilize other than the manual operating means, all that is necessary is for the operator to draw down on one of the ropes P', P², such movement causing the sliding frame G, through the operation of the screw rod O, to move from left to right, thereby bringing the friction wheel M in contact with the flange or rim of the wheel A; motion having been imparted to the friction wheel M through the belt pulley or driving wheel L, the elevator car will be raised. Should it be desired to lower the elevator car by means of the friction wheel, all that is necessary is to reverse the direction of movement of the driving pulley L. Like-

wise, if the car is moving too rapidly the operator can readily throw the brake shoe into operation by the proper operation or handling of the rope P^2 passing down from the opposite side of sheave P.

It will thus be seen that I have provided an attachment which may be placed on the usual elevator whereby said elevator may be utilized as an ordinary hand or manually operated elevator or be converted into a power driven elevator at the will of the operator, and one in which the speed of the elevator may also be regulated as desired.

Having thus fully described my invention, what I claim as new and desire to secure by Letters Patent is:—

1. In an elevator, hand operated means for raising and lowering the elevator car, a main frame, a sliding frame mounted on said frame, power operated mechanism carried by said sliding frame and mechanism also carried by said sliding frame by the operation of which the power operated mechanism is caused to cooperate with the hand operated mechanism and thereby convert the elevator into a power driven elevator at the will of the operator.

2. In an elevator, hand operated means for raising and lowering the elevator car, a main frame, a sliding frame adjustable in said main frame, a shaft mounted on one end of said sliding frame, a driving pulley on said shaft, means carried by said shaft adapted to cooperate with the hand operated

mechanism, and mechanism carried by the opposite end of said sliding frame by the operation of which said means carried by the shaft is caused to cooperate with the hand operated mechanism and thereby convert the elevator into a power driven elevator at the will of the operator.

3. In an elevator, a hand operated wheel provided with a flange, a main frame, a sliding frame adjustable in said main frame, a shaft carried by said sliding frame, a driving pulley and friction wheel on said shaft, and means for adjusting said sliding frame whereby the friction wheel is caused to contact with the flange of said wheel and operate said wheel.

4. In an elevator, a hand operated wheel provided with a flange, a main frame, a sliding frame adjustable in said main frame, a shaft carried by said sliding frame, a driving pulley and friction wheel on said shaft, a brake shoe and screw shaft on the opposite end of the sliding frame, and means for revolving said screw shaft whereby the friction wheel or brake shoe is brought into contact with the flange of the wheel at the will of the operator.

In testimony whereof I hereunto set my hand this 22nd day of May, 1909, in the presence of two attesting witnesses.

ALPHONSO S. GOOCH.

Witnesses:

J. E. ENGLAND,

J. E. ENGLAND, Jr.