

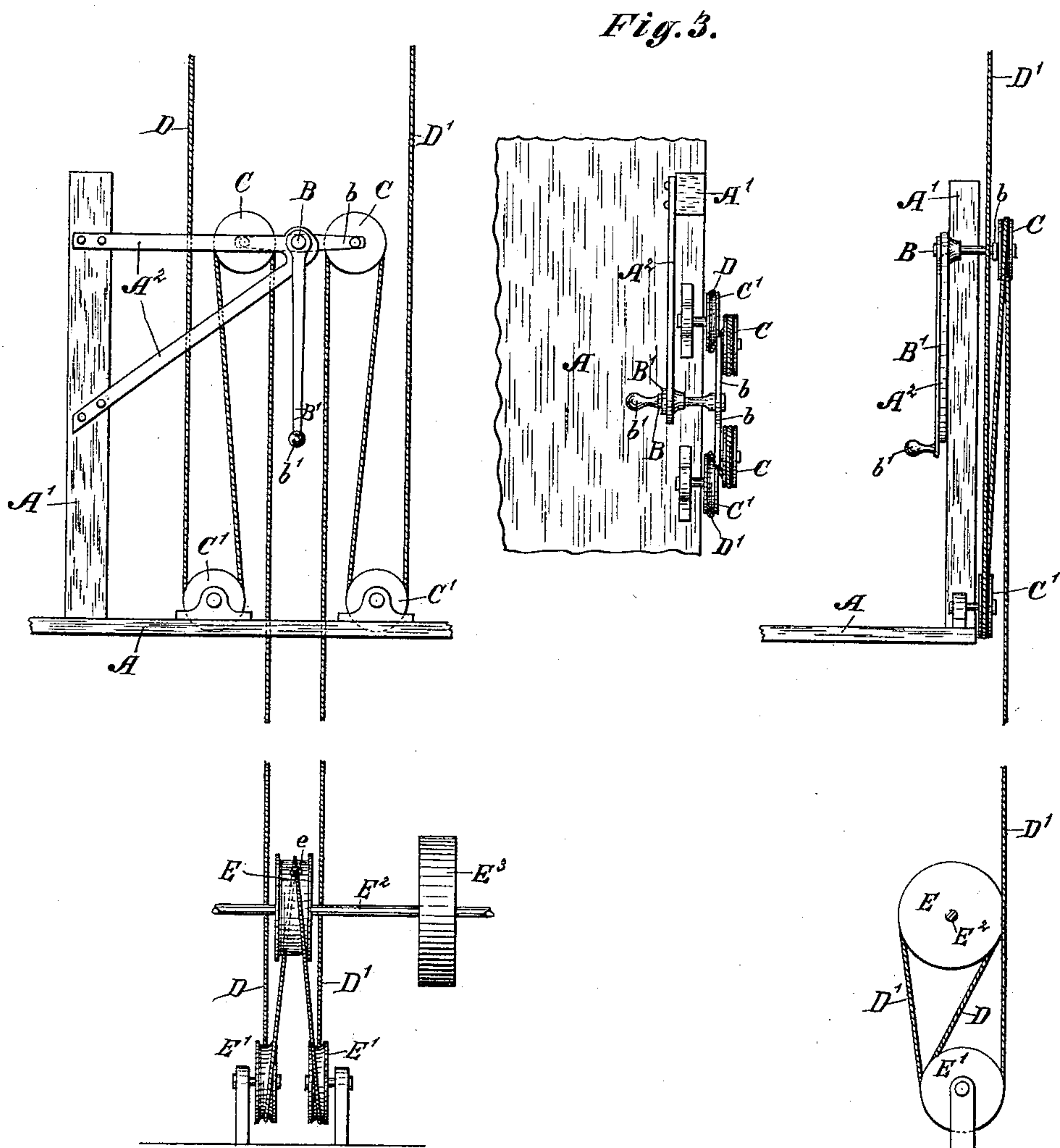
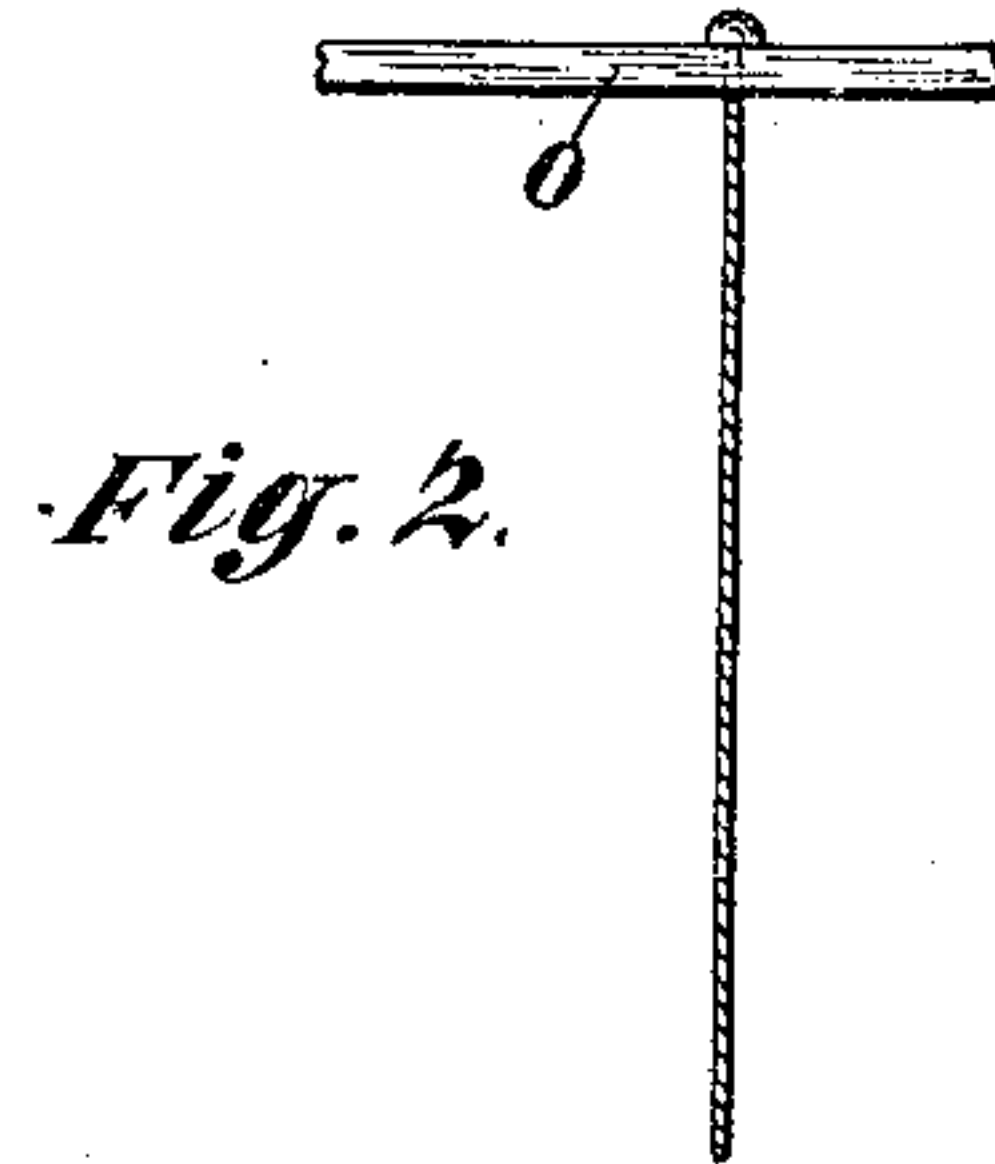
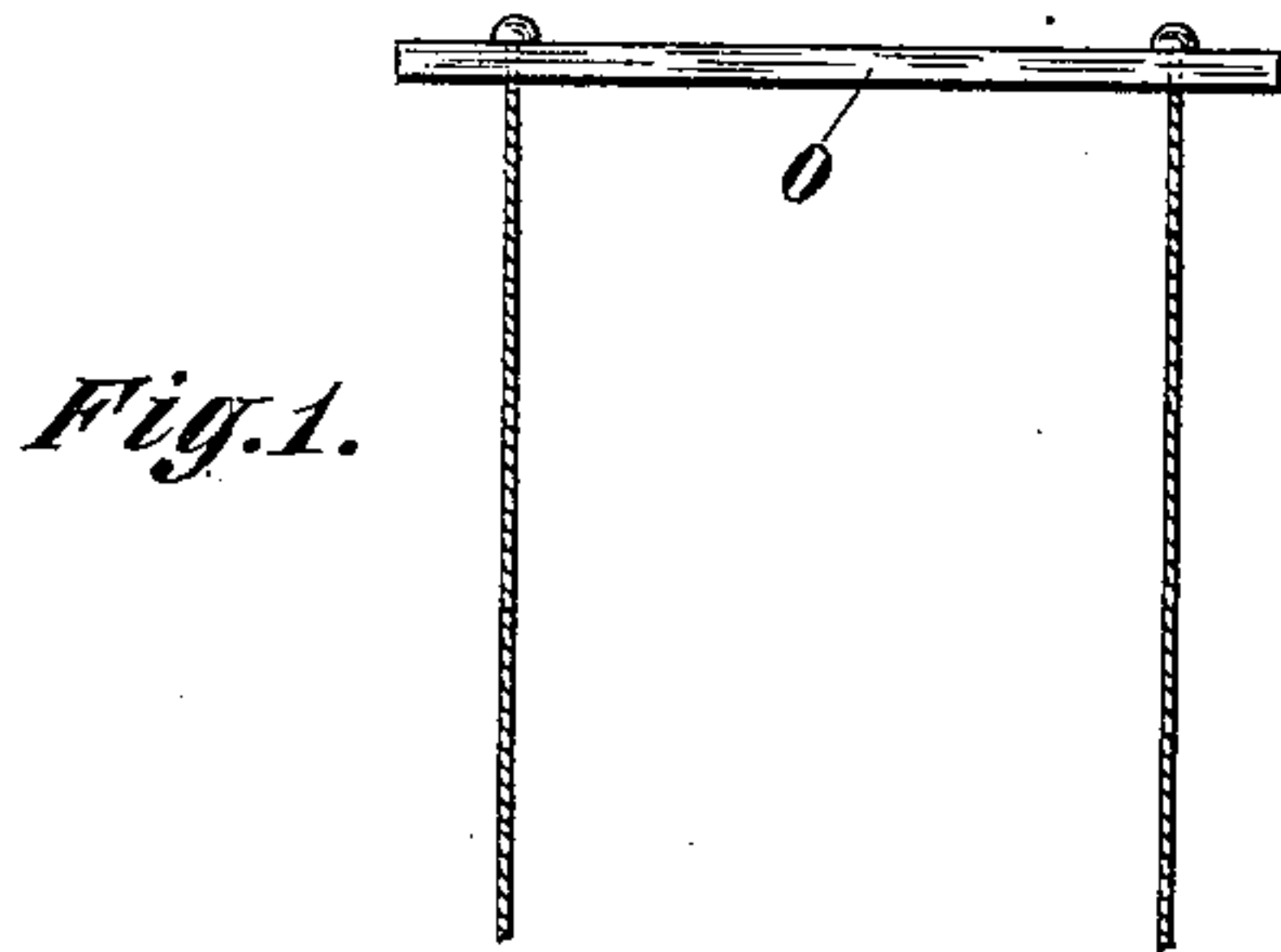
(No Model.)

F. H. PRINCE.

ELEVATOR.

No. 335,239.

Patented Feb. 2, 1886.



Witnesses:

*Chas. J. Davis*  
*H. M. Munday*

Inventor:

*Fred H. Prince*  
*by Munday Evans & Adcock*  
*his attys*

# UNITED STATES PATENT OFFICE.

FREDERICK H. PRINCE, OF CHICAGO, ILLINOIS.

## ELEVATOR.

SPECIFICATION forming part of Letters Patent No. 335,239, dated February 2, 1886.

Application filed October 9, 1885. Serial No. 179,383. (No model.)

*To all whom it may concern:*

Be it known that I, FREDERICK H. PRINCE, a citizen of the United States, residing in Chicago, in the county of Cook and State of Illinois, have invented a new and useful Improvement in Elevators, of which the following is a specification.

This invention relates to the means whereby the engine-valve is operated from the car or platform in that class of elevators in which a running hold is maintained upon the valve-cables; and its nature is disclosed in the subjoined description and the accompanying drawings.

In the latter, Figure 1 is a side elevation of an elevator-car with its cable-connection to the valve-operating mechanism. Fig. 2 is a front elevation of the same. Fig. 3 is a plan of the car.

In said drawings, A represents the car or platform, and A' a standard at the side thereof. To this standard is attached a bracket, A<sup>2</sup>, and in the latter is the bearing of the pivot B, to which is secured at one end the operator's lever B', and at the other end a piece forming the arms b. Each of these arms carries a sheave, C, and, together with the operator's lever, forms what might be termed a "pivoted T-lever," the arms b constituting the rocking arm or cross-piece, and the lever B' the upright of the T. Upon or supported from the floor of the car are two stationary sheaves, C' C'. Each of the valve-cables D D' (which may be integral) extends from the top of the hoistway under sheaves C', thence over sheaves C, thence down to the bottom of the hoistway, where the two cables are secured to opposite sides of drum E by staples e or other device, which will prevent slipping on the drum. The cables may, if preferred, be passed under sheaves E', and thence up to the drum, as illustrated, or be conducted to the latter at a distance from the elevator shaft or way. From the drum E' motion is transmitted to the engine-valve in any usual way—as, for instance, by belt from the pulley E<sup>2</sup> on the drum-shaft E<sup>2</sup>.

The operation of the device is as follows: If the operator desires to start the car upward, he moves the lever B through its handle b', so the sheave C, over which the cable D runs, will be raised. This will draw upon that portion of the cable below the car, and consequently oscillate drum E' downward upon the side to which cable D is attached. To start downward, the lever is moved to the opposite side, thereby raising the sheave C, over which cable D' passes, and oscillating the drum E' in the opposite direction. If the engine is to be reversed, the operator moves the lever from one side to the other and past the center or normal position, and to stop it he simply returns the lever to its center or normal position. The movement upward may be obtained from cable D', and the downward from cable D, if that is more convenient. It will be noticed that each cable is made to yield to the other, as occasion requires, through the lowering of one of the sheaves C at the same time and to the same extent the other sheave C is raised; also, that the sheaves upon the car may be located outside of it, so the cables need not pass through the floor.

I claim—

1. The combination, with the car and valve-cables, of the devices for keeping a running hold on and operating said cables, consisting of the movable sheaves mounted on a rocking arm, and the operator's lever for actuating said arm, and the stationary sheaves C', substantially as specified.

2. The combination, with the valve-cables and car, of a pivoted T-lever, the sheaves mounted on the lever, and the stationary sheaves C', the lever and sheaves being mounted on the car, substantially as specified.

3. The combination, in an elevator, of lever B', pivot B, arms b', and sheaves C with cables D and D', substantially as specified.

FREDERICK H. PRINCE.

Witnesses:

H. M. MUNDAY,  
EDW. S. EVARTS.