

(No Model.)

S. C. SWETT.  
GRIP FOR ELEVATOR SHIFTING ROPES.

No. 444,556.

Patented Jan. 13, 1891.

Fig 1.

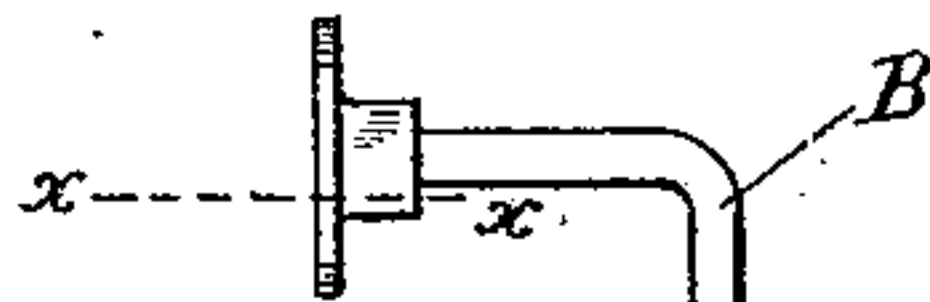
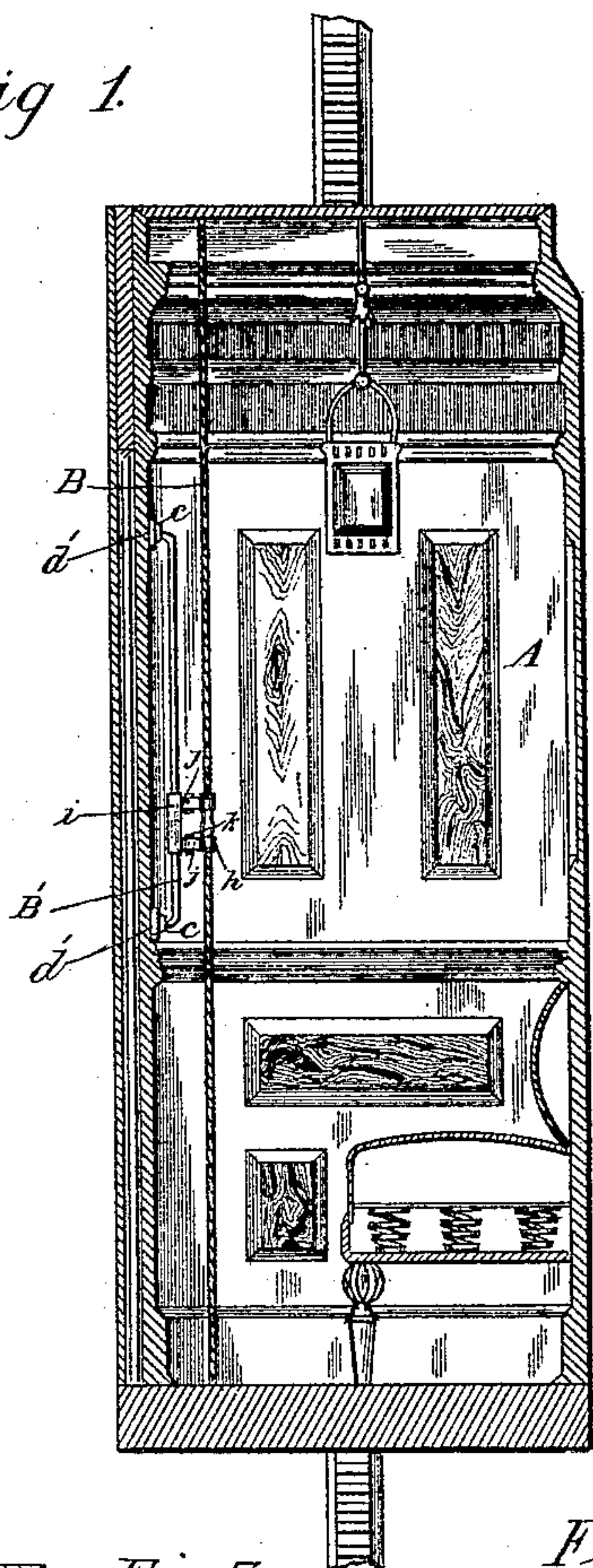


Fig. 2.

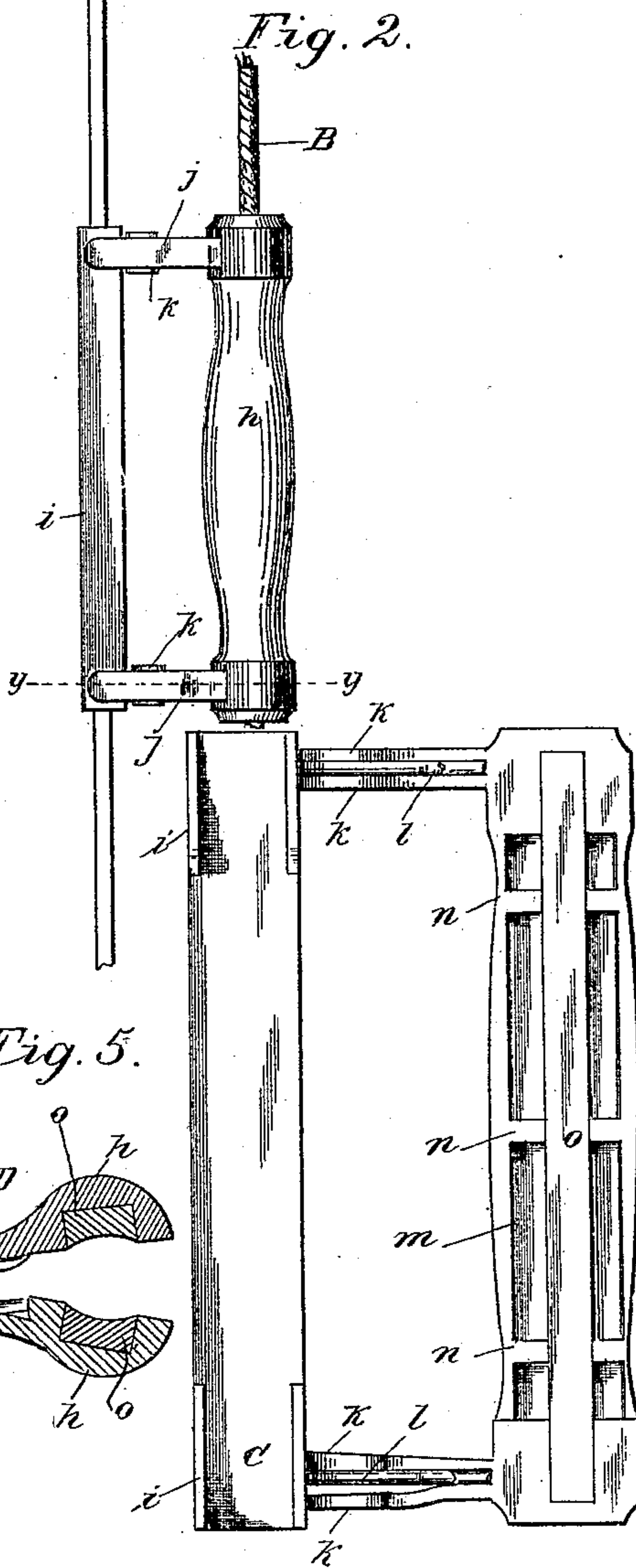


Fig. 5.

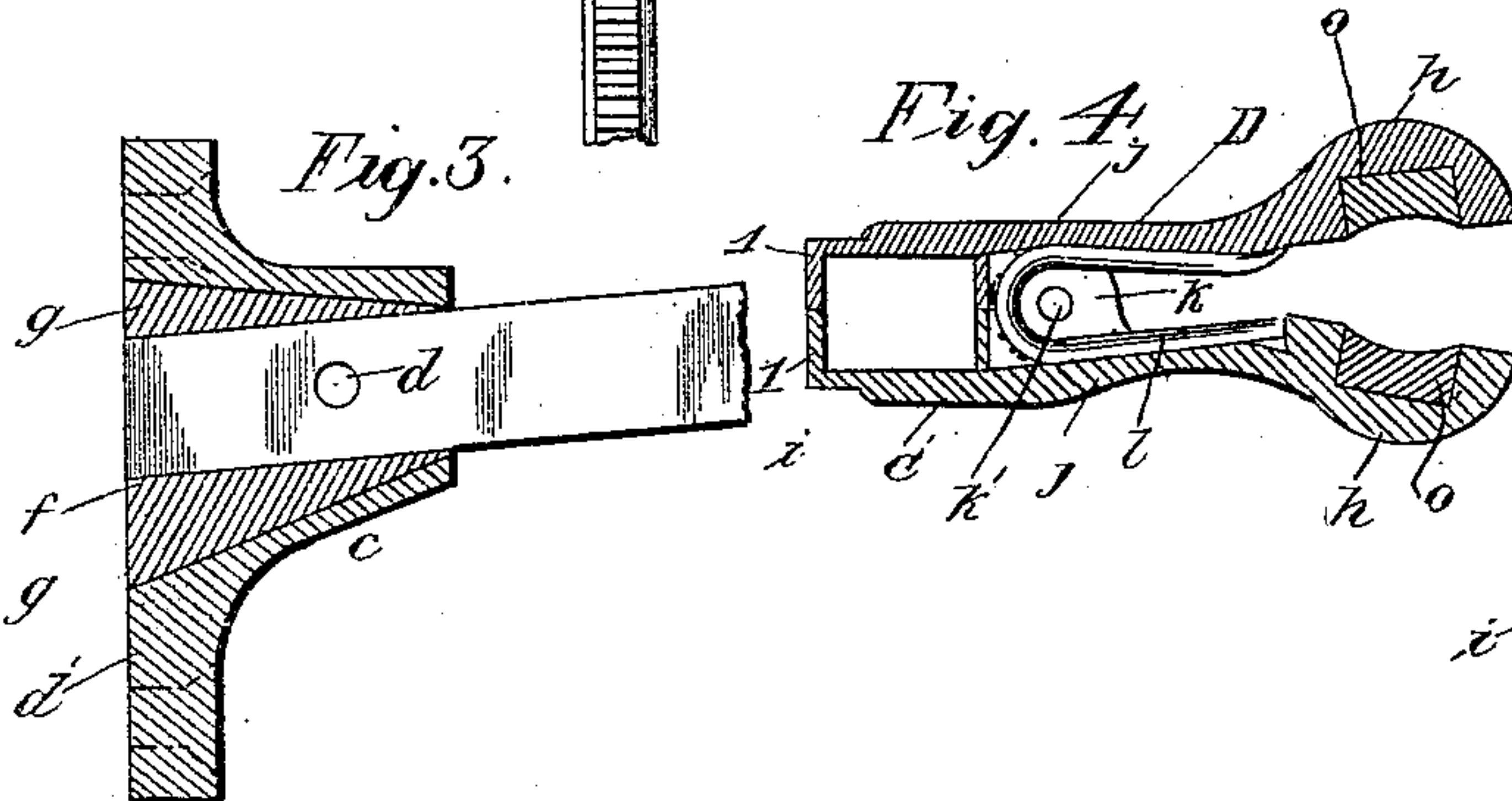


Fig. 3.

Fig. 4.

WITNESSES.

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# UNITED STATES PATENT OFFICE.

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## GRIP FOR ELEVATOR SHIFTING-ROPE.

SPECIFICATION forming part of Letters Patent No. 444,556, dated January 13, 1891.

Application filed August 2, 1890. Serial No. 360,810. (No model.)

*To all whom it may concern:*

Be it known that I, SULLIVAN C. SWETT, a citizen of the United States, residing at Washington, in the District of Columbia, have invented certain new and useful Improvements in Grips for Elevators; and I do hereby declare the following to be a full, clear, and exact description of the invention, which will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to various new and useful improvements in attachments for elevators, whereby the car may be readily started, stopped, and controlled.

The principal objects of my invention are to provide and produce a certain attachment for elevators, by which the operator within the car may have entire control of the valve-rope, and may operate the same as may be desired without the necessity of grasping the valve-rope with the hands, as at present.

The principal novelties in my improved attachment for elevators consist of a traveler or guide securely fastened within the elevator-car adjacent to the valve-rope and a grip or handle movable upon said traveler and adapted to grasp the valve-rope when it is desired and then to be moved up or down on the traveler, as the case may require, carrying the valve-rope with it to stop or to start the car in either direction.

Another novel feature of this invention is the use of a spring-clamp on the grip or handle just referred to and which is adapted to engage with the traveler when the grip or handle is out of engagement with the valve-rope, so that the grip will be locked and held in position on the traveler, but which is adapted to be disengaged from the traveler as soon as the grip or handle is caused to grasp the valve-rope, so that the grip or handle will be at liberty to be moved up or down, as above explained, all as will be more fully hereinafter described, and embodied in the claims.

For a better comprehension of my invention attention is invited to the accompanying drawings, forming a part of this specification, and in which—

Figure 1 is a sectional view, partly in ele-

vation, of an elevator-car, showing my invention attached thereto; Fig. 2, a side sectional view of my invention detached from the car; Fig. 3, a sectional view taken on the lines *xx* of Fig. 2; Fig. 4, a sectional view taken on the lines *yy* of the same figure; and Fig. 5, an elevation of one of the sections of the grip or handle.

In all of the above views corresponding parts are designated by the same letters of reference.

A represents an ordinary elevator-car, which may be of any suitable construction or design, and which is adapted to be started, stopped, and controlled by a rope B, which connects with the valve in hydraulic elevators or with the appropriate elements in other varieties of elevators.

As a general rule, elevators are started upwardly by moving the valve-rope in the other direction, and are stopped when so ascended by grasping the valve-rope and allowing the car to continue its upward direction until the valve is closed and the movement of the car is arrested. In descending the reverse of these movements takes place, as will be understood by those persons skilled in the art to which my invention relates.

The following description of my invention will be understood to be applied to elevators having the movements thus described; but it should be understood, however, that the invention may be used in all elevators wherein a rope is employed which passes down through the car, and by which the car is started, stopped, and controlled.

B' represents the guide or traveler before referred to, which consists of a metallic bar *a* bent over at right angles at its end, as will be observed. In order that the grip may be prevented from turning laterally on this guide or traveler, it is preferable to make the same rectangular in cross-section. Each end of this traveler is pivotally connected to a head-piece *c* by means of a pivoted pin *d*. Each head-piece *c* consists of a flat base portion *d'*, having screw-holes arranged around its edges, and a hollow rectangular body portion *f*, within which the right-angled arms of the traveler



are pivoted. By pivotally attaching the traveler or guide to the head-pieces *c* the proper angle of the same with relation to the valve-rope may first be obtained, and then the traveler or guide is securely held in that position by means of wedges *g g* driven in the body portion of the head-piece on each side of the bent-in ends of the traveler, as shown in Fig. 3. When this angle has been obtained, the traveler or guide is secured to the sides of the elevator adjacent to the valve-rope and parallel to the same.

The grip consists of two parts C D. Each part of the grip is provided with a semicircular portion *h*, which is grasped by the hand of the operator, and with a clamp portion *i*, which engages with the traveler or guide, and which is attached to the head *h* by means of short connecting-arms *j j*. Each of these connecting-arms *j* is provided with one or more integral ears *k*, which are adapted to engage with each other, and by which the sections C D are pivoted together by means of rivets *k'* or other device. In order that the clamp portion may be kept in normal engagement with the traveler or guide, I secure to the connecting-arms *j* of one section a small spring *l*, whose free ends will engage with the connecting-arms of the other section, and will by this means effect the desired result. In order that the grip may be prevented from becoming disengaged laterally from the guide or traveler, each clamping-piece is bent over at its top and bottom to form retaining-lugs *l*.

The semicircular body of each section of the grip is clasped with a hollow *m* on its inner face, which is provided with small ribs *n*, arranged at regular intervals. Embedded within the hollow of each section, between the ribs *n n*, is a strip *o* of some frictional material, such as leather, rubber, or analogous substance. This strip is made slightly concaved on its face, and the ends at each section are also concaved to allow for the passage of the valve-rope.

It will be evident that my improved device will operate as follows: When it is desired to move the valve-rope up or down, the two sections *c* and *d* are grasped by the op-

erator and brought together so as to firmly grip the valve-rope, which may then be moved up or down by the device. When the two sections *c* and *d* are brought together, the clamp will be disengaged from the traveler and the device may be moved freely up or down thereon, with the clamp acting in the nature of a guide. As soon as the device is disengaged from the rope the clamp will immediately grip the traveler and the device will retain its position thereon, so that it will be seen that in starting the car upwardly the device will travel from the top to the bottom of the guide, and will be locked in its lowest position, ready to be moved up again to cause the car to descend. By packing the inside of each section *c* and *d*, as explained above, a very secure grip will be had on the valve-rope and there can be little or no slipping, and all wear on the device will be reduced to a minimum. If it should happen, however, that any wear should occur in the device, it will be taken up by the packing, which may be replaced when worn. The ribs *n n* also improve the grip on the rope, and by making these ribs of some soft metal—such as brass—they will not injure the valve-rope, which is steel. The entire device may be made of cast metal and may be artistically finished by nickeling or other process.

It should be understood that my improved grip can be used in other connections than in elevators.

Having now described my invention, what I claim as new therein, and desire to secure by Letters Patent, is as follows:

The combination of an elevator-car, a shifting-rope passing through the same, a guide secured to the car, a grip composed of clamping-jaws adapted to engage the shifting-rope, and spring clamping-jaws adapted to engage the guide when the clamping-jaws are out of engagement with the shifting-rope, all substantially as described.

SULLIVAN C. SWETT.

In presence of—

LEONARD H. DYER,  
ARTHUR A. ERB.