

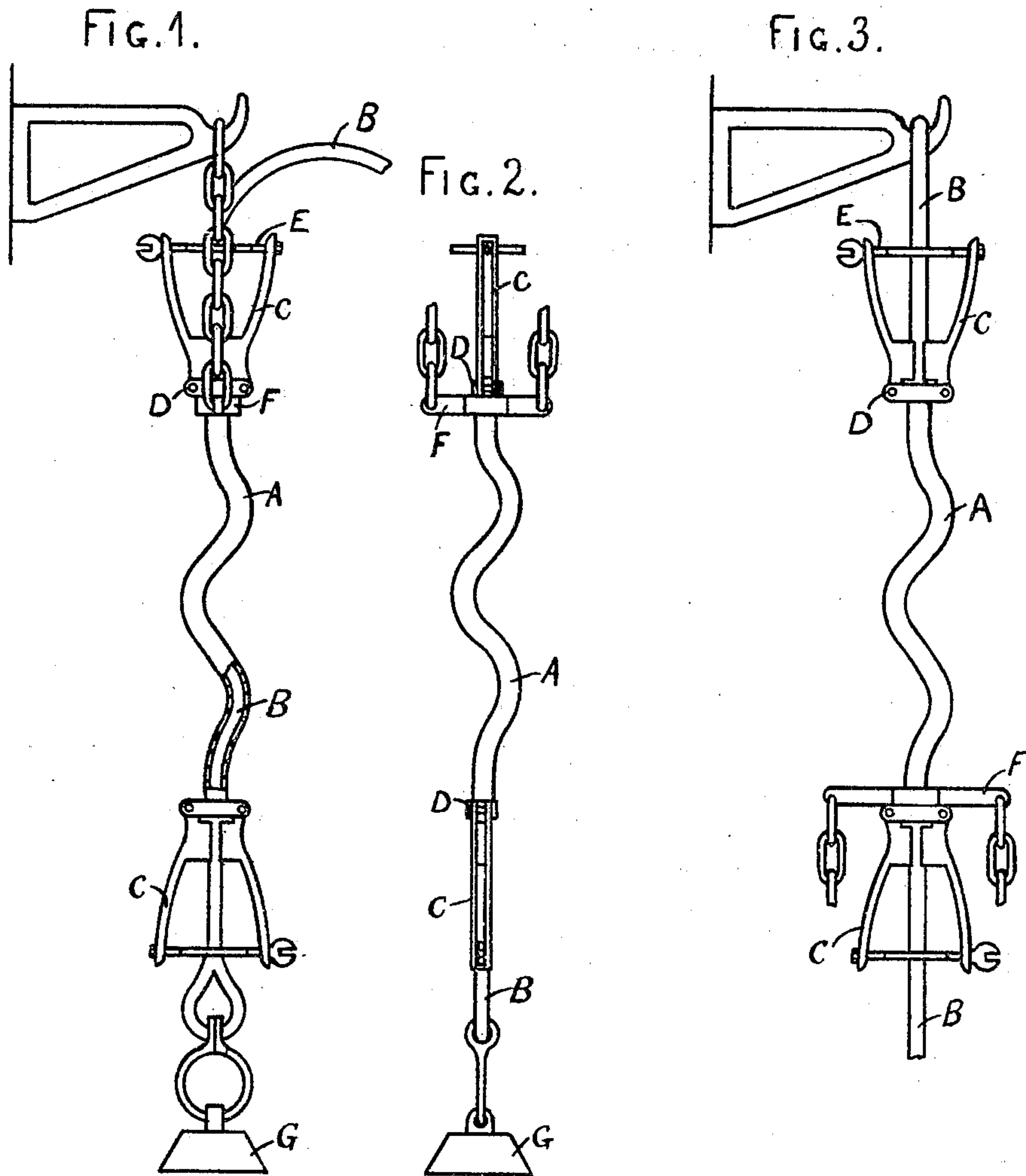
No. 801,783.

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T. GROVES.

APPARATUS FOR CONTROLLING THE DESCENT OF LOADS OR PASSENGERS.

APPLICATION FILED FEB. 10, 1905.



Witnesses  
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# UNITED STATES PATENT OFFICE.

THOMAS GROVES, OF LEAMINGTON, ENGLAND.

APPARATUS FOR CONTROLLING THE DESCENT OF LOADS OR PASSENGERS.

No. 801,783.

Specification of Letters Patent.

Patented Oct. 10, 1905.

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*To all whom it may concern:*

Be it known that I, THOMAS GROVES, a subject of the King of Great Britain, residing at 15 Spencer street, Leamington, in the county of Warwick, England, have invented an Improvement in Apparatus for Controlling the Descent of a Load or Passenger, of which the following is a specification.

My invention relates to improvements in apparatus for controlling the descent of a load or passenger by the use of a single rope; and the objects of my invention are to provide apparatus which can be adjusted to the rope so as to permit of a gradual movement of one relative to the other. It facilitates the saving of life from the upper stories of buildings in case of fire or for use on shipboard where goods or packages require to be lowered into the hold or such like purposes. I attain these objects by the mechanism illustrated in the accompanying drawings, in which—

Figure 1 shows the apparatus supported from a bracket, in which case the rope slides through the bent or undulating tube. Fig. 2 is a side view of the apparatus; while Fig. 3 shows the rope attached to the bracket, whereby the apparatus slides down the rope.

The same letters indicate similar parts throughout the several figures.

A is a bent or undulating tube, preferably of metal, through which is threaded the rope B. At each end of the tube I provide brake-levers C, grooved on the inside to fit the rope B and pivoted to lugs D, fixed to the undulating tube A, the said brake-levers being adjusted to clutch the rope B by the screw E, so that the pivoted end of the levers bear against the rope B and arrest its descent.

The apparatus is supported by a cross-head F, Figs. 1 and 2, which is suspended from an eye or wall bracket by chains or the like, the lugs D resting on the cross-head F. The latter is provided with a central hole somewhat larger in diameter than the twisted tube, which is thus enabled to move therethrough in reversing the apparatus. There is a slack end at the top of the rope to be paid out in descent. The lower end of the rope is loaded with a weight G, causing considerable friction between the rope and the inside of the undulating tube A, through which the rope B passes. The brake-levers C at the upper end of the rope are gripped tightly in the hand of the person operating the apparatus. The hand-nut E is

unscrewed, and the weight G pulls the rope B through the undulating tube A, very slight pressure on the brake-levers C being necessary to check or regulate the descent. The rope B is of a suitable length to reach the ground or lower level from any desired height. When the load has reached its destination, the whole of the previously loose or slack rope will have been paid out through the apparatus. The descent of the load is thus controlled at the top. The apparatus is now reversed, the hook at the upper end of rope being brought to the lower end of apparatus by sliding undulating tube A through the cross-head F. The apparatus is now ready for letting down another load, the act of reversing the ends having transferred all the slack rope from the bottom to the top of the apparatus in readiness for another journey. By this means no time is lost in hauling up slack rope after each descent. Fig. 3 shows the rope fixed to a wall-bracket, the rope remaining stationary while the apparatus slides down. A basket or sling is attached to the cross-head F adjoining the lower brake-lever C for receiving the person to be lowered. The nut E is unscrewed and the rope pulled tight from below, which causes considerable friction between the rope and the inside of the undulating tube A because of the rope tending to arrange itself in a straight line, but is diverted therefrom by the undulating tube. The apparatus, with its load, is gradually lowered by slackening the pull of the rope, the slackening accelerating progression, while further pulling retards progression. Thus the descent is under the control of the operator below.

The same apparatus can be self-controlled by pressing the brake-levers toward each other, so as to grip the rope firmly and bring about sufficient friction for a gradual descent.

Having now particularly described the nature of my invention, what I claim, and desire to secure by Letters Patent, is—

1. In combination with a rope or cable, a rope-brake device comprising an undulating tube slidably receiving therein a rope or cable, and a brake device fitted to each end of the tube and consisting of a pair of adjustably-connected brake-levers clutching the rope beyond the ends of the tube.

2. In combination with a rope or cable, a rope-brake device comprising an undulating



tube to slidably receive a rope or cable, a  
brake device attached to each end of the tube  
and consisting of a pair of adjustably-con-  
nected brake-levers gripping the rope beyond  
5 the ends of the tube, and a hanger device ar-  
ranged on the tube and shiftable thereon be-  
tween the opposite brake attachments thereof.

In witness whereof I have hereunto set my  
hand in presence of two witnesses.

THOMAS GROVES.

Witnesses:

ARTHUR S. THOMPSON,  
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