

No. 728,588.

PATENTED MAY 19, 1903.

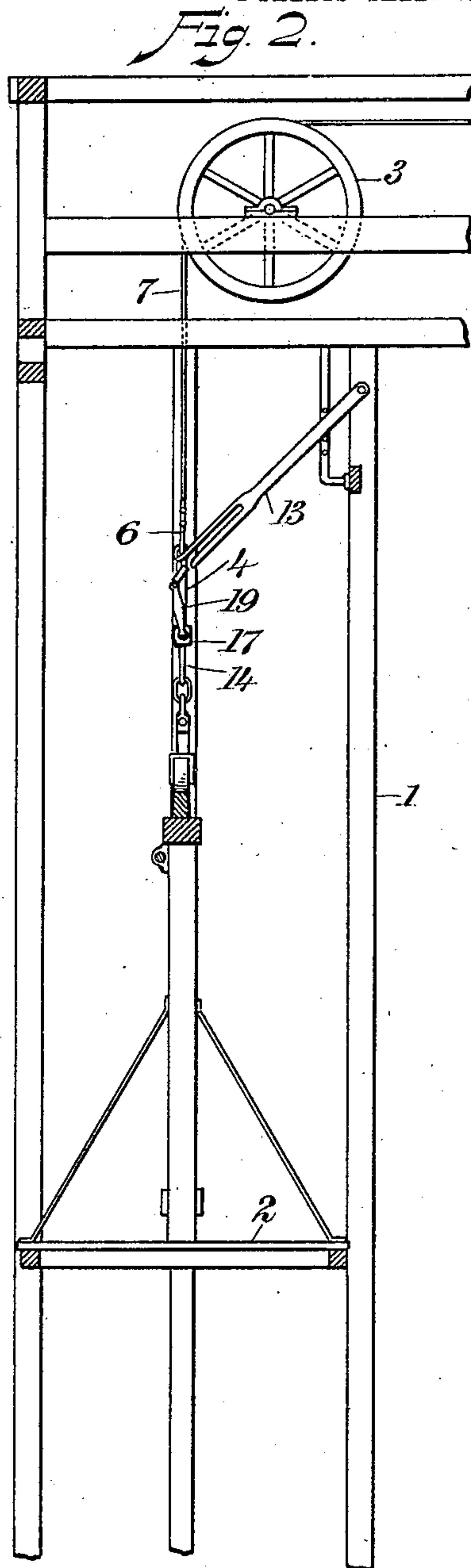
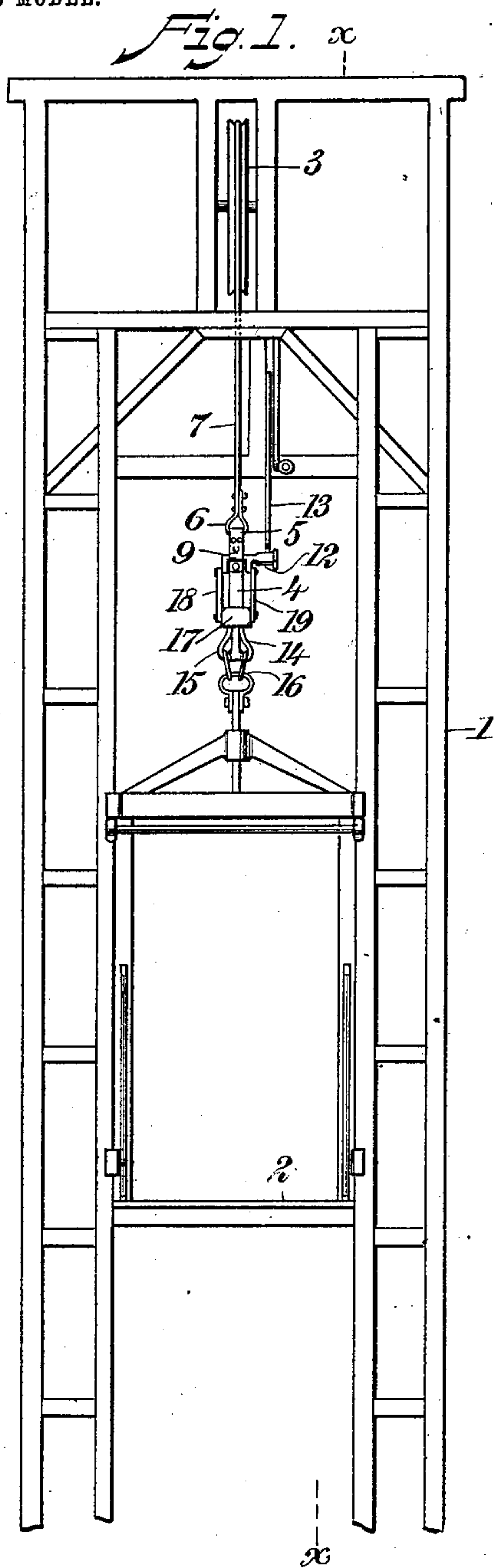
R. LE ROY.

CAGE AND CABLE RELEASING DEVICE.

APPLICATION FILED FEB. 26, 1903.

NO MODEL.

2 SHEETS—SHEET 1.



WITNESSES.

*Robert Head*  
*C. R. Ferguson*

INVENTOR

*Robert LeRoy*

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ATTORNEYS.

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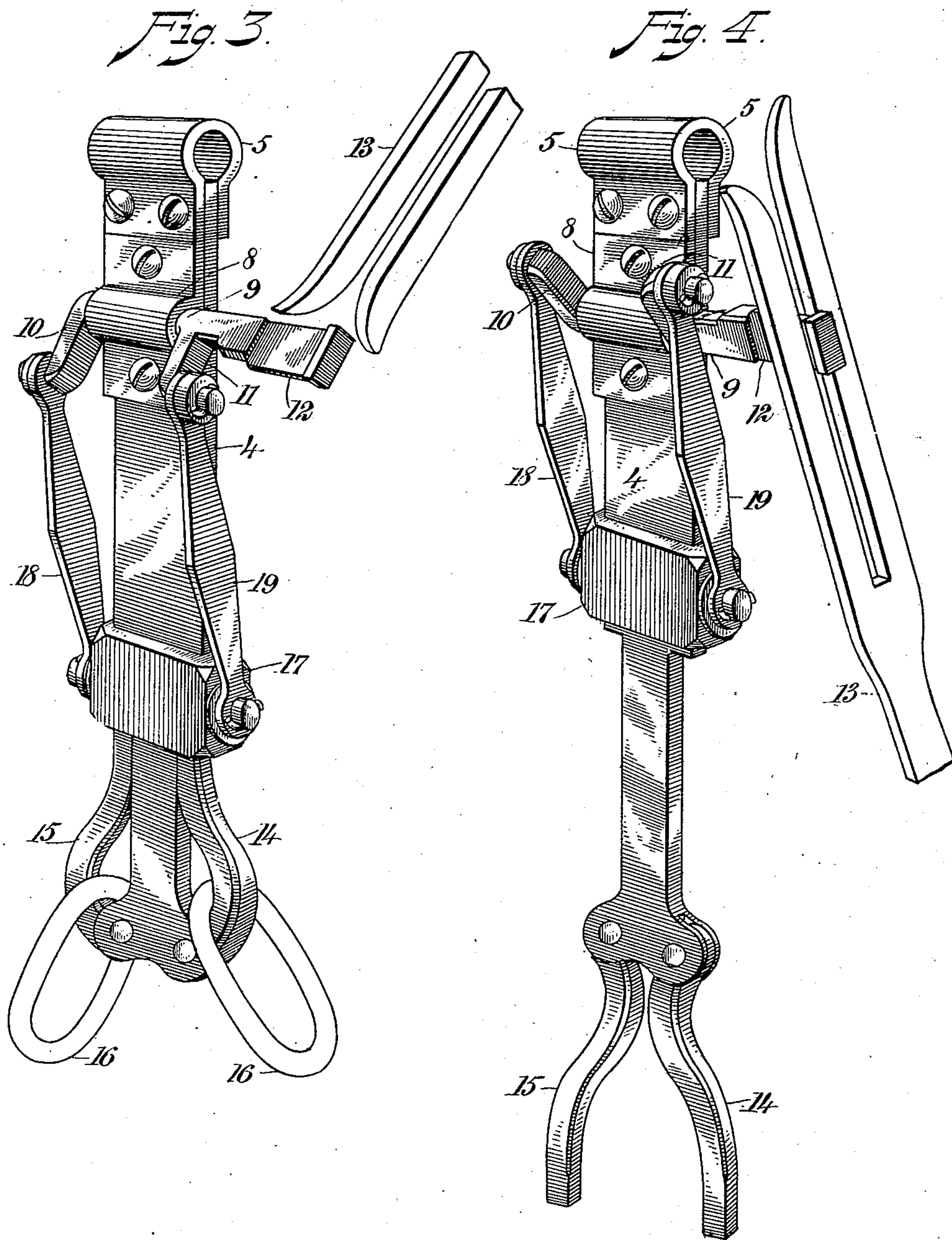
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WITNESSES:

*Robert Stead*  
*C. R. Ferguson*

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# UNITED STATES PATENT OFFICE.

ROBERT LE ROY, OF PARK CITY, UTAH.

## CAGE AND CABLE RELEASING DEVICE.

SPECIFICATION forming part of Letters Patent No. 728,588, dated May 19, 1903.

Application filed February 26, 1903. Serial No. 145,148. (No model.)

*To all whom it may concern:*

Be it known that I, ROBERT LE ROY, a citizen of the United States, and a resident of Park City, in the county of Summit and State of Utah, have invented a new and Improved Cage and Cable Releasing Device, of which the following is a full, clear, and exact description.

This invention relates to improvements in devices for automatically releasing a cage in a gallows-frame from a cable should the cage be moved too close to the sheave or above the desired point for discharging loaded cars raised from a mine; and the object is to provide a releasing device of simple construction and not liable to get out of order.

I will describe a cage and cable releasing device embodying my invention and then point out the novel features in the appended claims.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar characters of reference indicate corresponding parts in all the figures.

Figure 1 is a front view of a cage and cable releasing device embodying my invention, showing the same in connection with a cable and cage. Fig. 2 is a section on the line  $xx$  of Fig. 1, and Figs. 3 and 4 are perspective views showing the releasing device respectively in closed and open positions.

Referring to the drawings, 1 designates a gallows-frame, movable in which is the cage 2, and arranged in the upper portion in the usual manner is the sheave 3. The releasing device connecting the cable with the cage comprises a body portion 4, having an eye 5 at its upper end to receive a ring 6, attached to the cable 7, and secured to the body portion is a strap 8, which forms a bearing for a shaft 9, having cranks 10 11 at opposite sides of the bearing, and at one end this shaft 9 is projected outward and flattened, as indicated at 12, to pass between the forked members of an operating lever or wrench 13, having swinging connection with the gallows-frame. This lever may be adjusted vertically in the frame, so as to regulate the particular position at which the cage should be released should it pass beyond a desired position for unloading.

On the lower end of the body 4 are pivot-

ally connected keeper-arms 14 15, and the lower portion of said body is reduced in thickness or recessed at its opposite sides, so as to receive the free end portions of the arms, or, in other words, permitting the outer edges of said arms to come flush with the edges of the body portions when said arms are in closed position. These arms are designed to engage with links 16, attached to the draw rod or ring of the cage. A locking-sleeve 17 for the arms is arranged to slide on the body portions. This sleeve 17 has link connections 18 19 with the cranks 10 11.

It is to be understood that the cage is provided with any ordinary safety-catches to prevent it falling should it become released from the cable.

In the operation should the cage be raised above the desired point or too close to the sheave the flattened projection 12 of the shaft 9 will engage between the forks of the lever 13, so that by a slight continued movement upward the said fork, which has a swinging movement, will rock the shaft 9, consequently throwing the sleeve 17 upward and out of engagement with the arms 14 and 15, and obviously the arms thus being released will fall by gravity or by pressure of the cage into the position indicated in Fig. 4, thus permitting the cable to continue over the sheave, and the safety-catches of the cage being brought into operation in the ordinary manner will prevent the cage from falling.

While I have described the invention in connection particularly with a cage and hoisting mechanism used in mining, it is obvious that it may be used in connection with elevators arranged in shafts of buildings or the like.

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

1. A cage-releasing device, comprising a body portion, arms mounted to swing on one end of the body, a sleeve movable on the body for engaging with said arms and locking the same in closed position, a crank-shaft having connection with the sleeve, and a lever on a fixed part for rocking the said crank-shaft to move the sleeve out of connection with the arms.

2. A cage-releasing device, comprising a

body portion, arms mounted to swing on the lower end thereof, a sleeve movable on the body portion for engaging with said arms, a shaft having a rotary movement in the body, 5 cranks on said shaft, link connections between said cranks and the sleeve, and a forked lever for rocking or turning said shaft.

3. The combination with a gallows-frame, a cage movable therein, a shaft and a cable, 10 of a releasing device between the cable and cage, comprising a body portion, arms mounted to swing on the lower end of said body portion and adapted for connection with the cage, a sleeve movable on the body portion 15 for engaging with said arms, a crank-shaft

on the body, connections between said crank-shaft and the sleeve, means for connecting the body to the cable, an extension on one end of said crank-shaft, the said extension having an angular portion, and a forked lever having swinging connection with the gallows-frame and adapted to receive said angular portion of the extension. 20

In testimony whereof I have signed my name to this specification in the presence of 25 two subscribing witnesses.

ROBERT LE ROY.

Witnesses:

HENRY SHIELDS,  
CHARLES W. MAIR.