

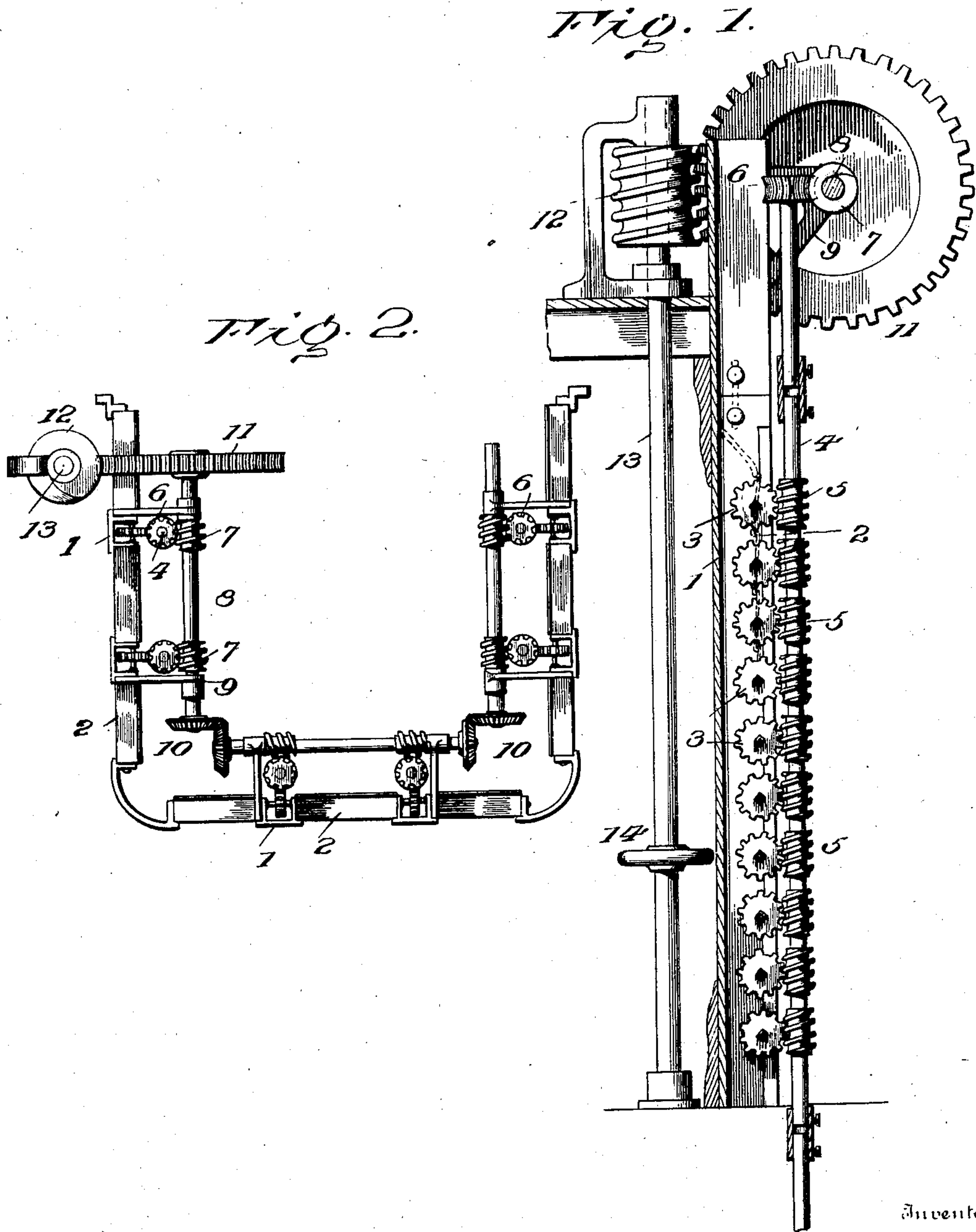
No. 734,604.

PATENTED JULY 28, 1903.

J. J. PLUCKER.  
FIREPROOF CASING.

APPLICATION FILED FEB. 11, 1903.

NO MODEL.



Inventor

Jacob J. Plucker

Witnesses

J. J. Plucker  
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# UNITED STATES PATENT OFFICE.

JACOB J. PLUCKER, OF PHILADELPHIA, PENNSYLVANIA, ASSIGNOR TO  
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## FIREPROOF CASING.

SPECIFICATION forming part of Letters Patent No. 734,604, dated July 28, 1903.

Application filed February 11, 1903, Serial No. 142,885. (No model.)

*To all whom it may concern:*

Be it known that I, JACOB J. PLUCKER, a citizen of the United States of America, and a resident of 6820 Paschall avenue, Philadelphia, Pennsylvania, have invented certain new and useful Improvements in Fireproof Casings, of which the following is a specification.

This invention relates to certain new and useful improvements in fireproof casings for elevator and similar shafts, and the particular form shown in this application is a modification of the structure shown in my application, Serial No. 142,884, filed of even date herewith.

Referring to the drawings, wherein like parts are designated by the same reference-numerals wherever they occur, Figure 1 is a vertical section showing the mechanism for operating the shutters. Fig. 2 is a plan view of the shutter-operating mechanism, which is mounted above the ceiling of the top floor of the building and to which the shutter-operating rods are connected.

1 designates the posts in which are pivoted the shutters 2, the adjacent ends of the shutters being connected together by means of shafts, to the opposite ends of each of which two shutters are rigidly secured. Each of the shafts carries a gear 3, which is fast on the shaft and mounted between the pair of shutters secured to the ends of the shaft, as fully described in my pending application above referred to.

4 designates vertical shafts, which are provided with a series of worms 5, adapted to mesh with the gears 3. Each shaft 4 is provided on its upper end with a pinion 6, these pinions meshing with worms 7 on horizontal shafts 8, mounted in supporting-brackets 9 and located above the ceiling of the top floor of the building. These shafts 8 are geared together by means of the beveled gears 10, so that they rotate in unison. Mounted on one of the shafts 8 is a gear 11, and with this gear meshes a worm 12, carried by a shaft 13, which extends down the outside of the elevator-casing and on each floor is provided with a suitable hand-wheel 14 or other operating device. From this construction it will be seen that when the shaft 13 is turned by the hand-

wheel 14 on any floor it will, through the worm 12 and the gear 11, rotate the shafts 8, and these shafts in turn, through the worms 7, will rotate the vertical shafts 4, which will operate, through the worms 5 and the gears 3, to open or close all the shutters of the casing simultaneously.

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

1. In an elevator or similar shaft, the combination with a series of posts surrounding the shaft, sets of movable shutters interposed between the posts, vertical shafts parallel to the posts, worms on the shafts adapted to mesh with gears on the shutters, and means for operating all the shafts in unison, whereby all the sets of shutters may be opened and closed simultaneously.

2. In an elevator-shaft, the combination with a series of posts surrounding the shaft, sets of movable shutters interposed between the posts, gears on the shutters, a vertical shaft parallel with the posts, a worm on the vertical shaft meshing with the gears on the shutters, a pinion on the end of the vertical shaft, a horizontal shaft provided with a worm, and means for operating the horizontal shaft, whereby all the sets of shutters may be opened and closed simultaneously.

3. In an elevator or similar shaft, the combination with a series of posts surrounding the shaft, sets of movable shutters, interposed between the posts, gears on the shutters, vertical shafts parallel with the posts, worms on the shafts meshing with the gears on the shutters, pinions on the upper ends of the shafts, a series of horizontal shafts at the top of the elevator-shaft, the horizontal shafts being provided with worms meshing with the pinions on the top of the vertical shafts, and means for operating the horizontal shafts, whereby all the sets of shutters may be opened and closed simultaneously.

Signed at Philadelphia this 5th day of February, 1903.

JACOB J. PLUCKER.

Witnesses:

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