

No. 734,605.

PATENTED JULY 28, 1903.

J. J. PLUCKER.  
FIREPROOF CASING.

APPLICATION FILED FEB. 11, 1903.

NO MODEL.

Fig. 1.

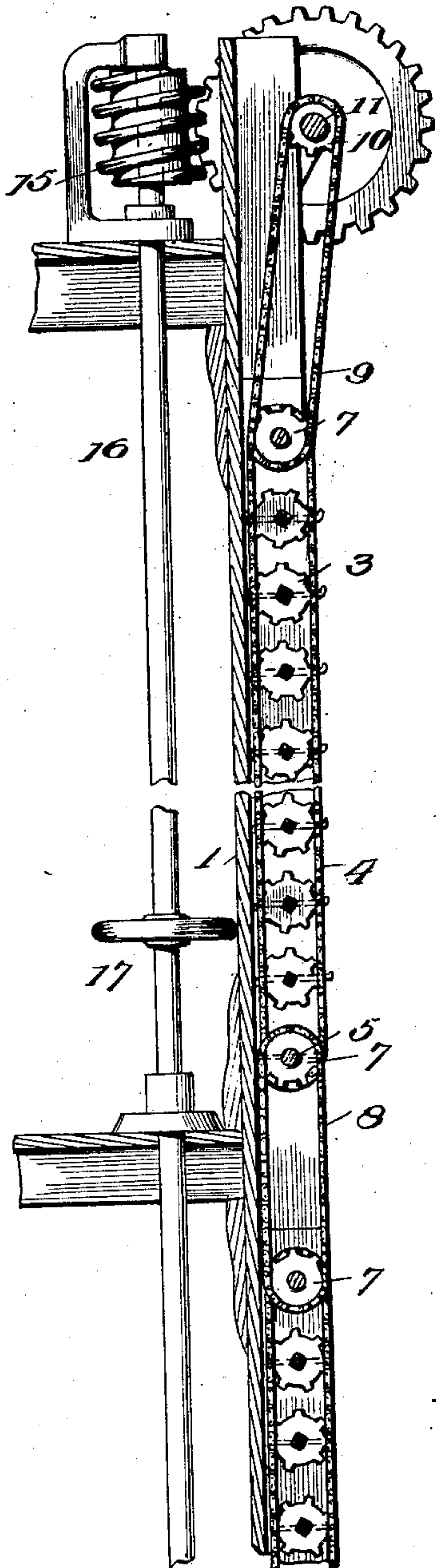


Fig. 2.

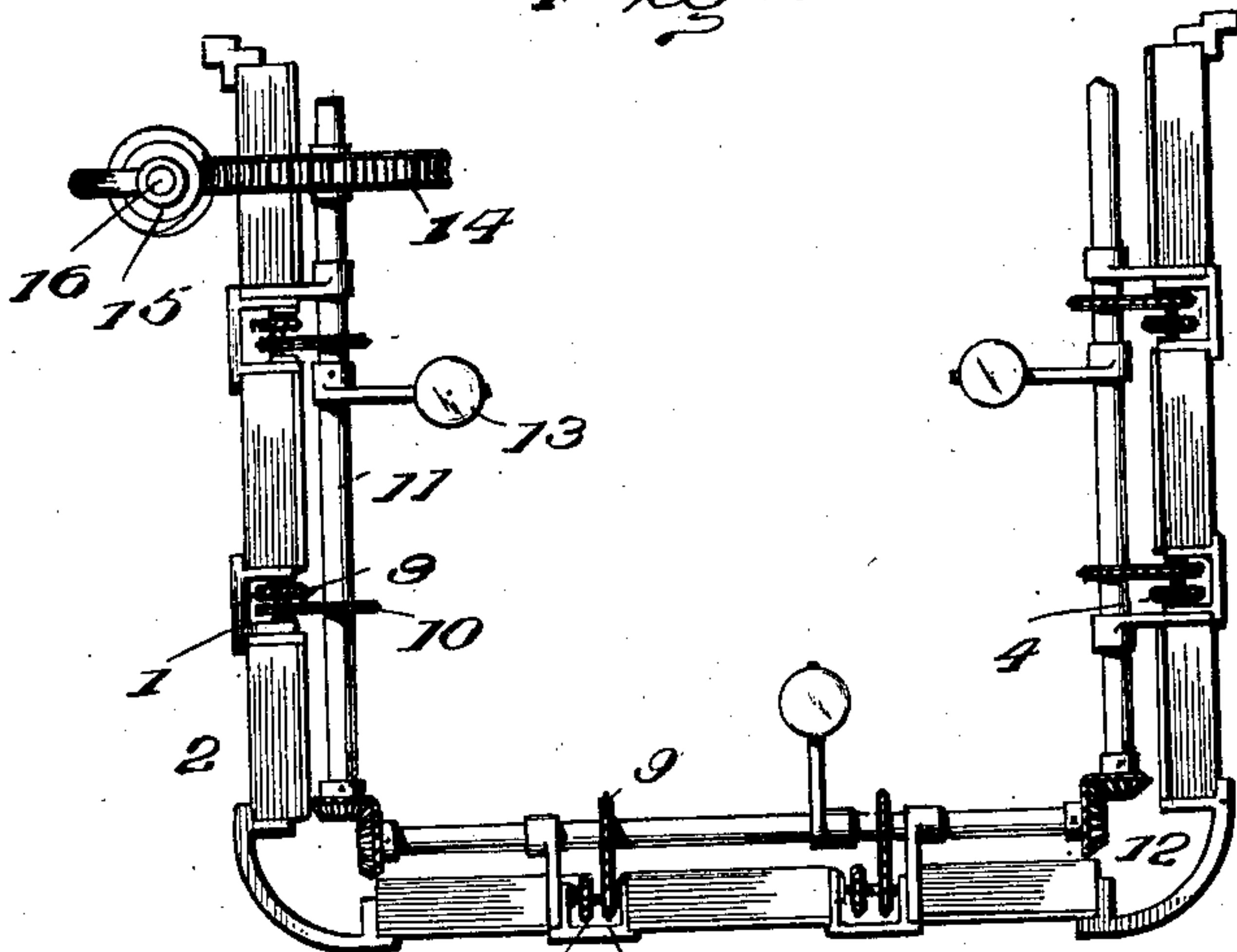
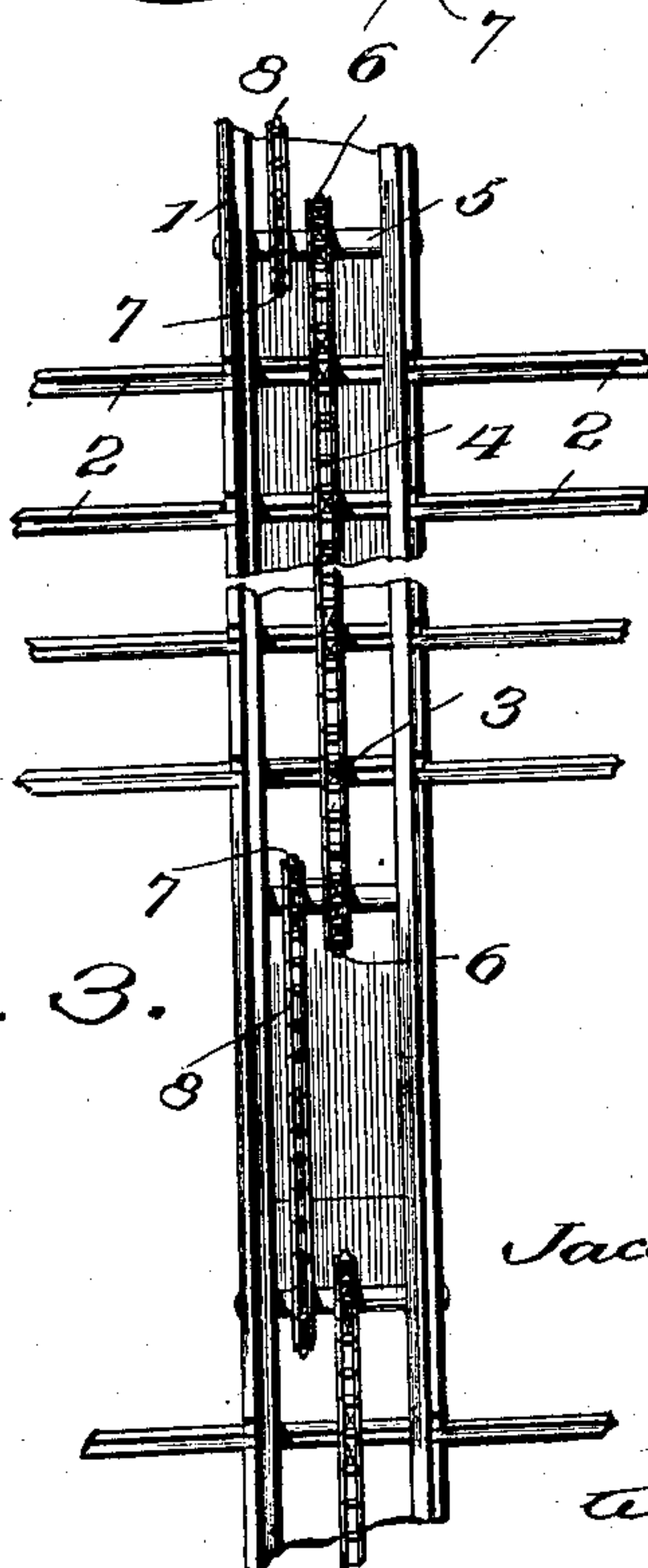


Fig. 3.



Witnesses

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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. 734,605, dated July 28, 1903.

Application filed February 11, 1903. Serial No. 142,886. (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 or 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 and designated as "Case F."

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 a building and to which the shutter-operating rods are connected. Fig. 3 is a detail view showing how the connection between the different sets of shutters and the operating mechanism is made.

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, the gears in this instance being in the form of sprocket-wheels.

4 designates sprocket-chains which run around the sprocket-wheels 3 of each set of shutters and connect the shutters together, so that all the shutters of each set operate simultaneously.

5 designates shafts mounted intermediate the sets of shutters, and secured to these shafts are the sprocket-wheels 6, around which the sprocket-chains 4 pass, and the shafts are also provided with sprocket-wheels 7, the sprocket-wheels 7 being connected together by means of the sprocket-chains 8, and by means of these chains motion is communicated from one set of shutters to the other from the top to the bottom of the building. Around the sprocket-wheel 7 of the upper-

most shaft 5 runs the sprocket-chain 9, which engages a sprocket-wheel 10 on each of the shafts 11. The shafts 11 are geared together by means of the beveled gearing 12, so that the shafts rotate in unison.

13 designates counterweights on the shafts 11 to cause them to operate more easily when the shafts are operated to close the shutters.

Mounted at the end of one of the shafts 11 is a gear 14, with which meshes a worm 15, carried on the vertical shaft 16, which extends from the top to the bottom of the casing on the outside of the casing, and on each floor this shaft is provided with a hand-wheel or similar device 17 for operating the same.

From the construction just described it will be seen that by turning the shaft 16 by means of the hand-wheel 17 the shafts 11, through the worm 15 and the gear 14, will be rotated, and these shafts will, through the sprocket-chains 9, communicate their rotation to the shafts 5, carrying the sprockets 6. These sprockets, through the chains 4, will operate the sets of shutters and 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, sprockets on the shutters, sprocket-chains connecting the sprockets on the shutters, and means for operating the sprocket-chains, whereby all the shutters may be opened and closed simultaneously.

2. In an elevator or similar shaft, the combination with a series of posts surrounding the shaft, sets of movable shutters interposed between the posts, sprocket-chains connecting the sprockets of each set of shutters together, a second set of sprocket-chains connecting the different sets of shutters together, and means for operating the shutters whereby all the sets of shutters will be opened and closed simultaneously.

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

JACOB J. PLUCKER.

Witnesses:

WAYNE P. RAMBO,  
EMMONS RAMBO.