

No. 734,606.

PATENTED JULY 28, 1903.

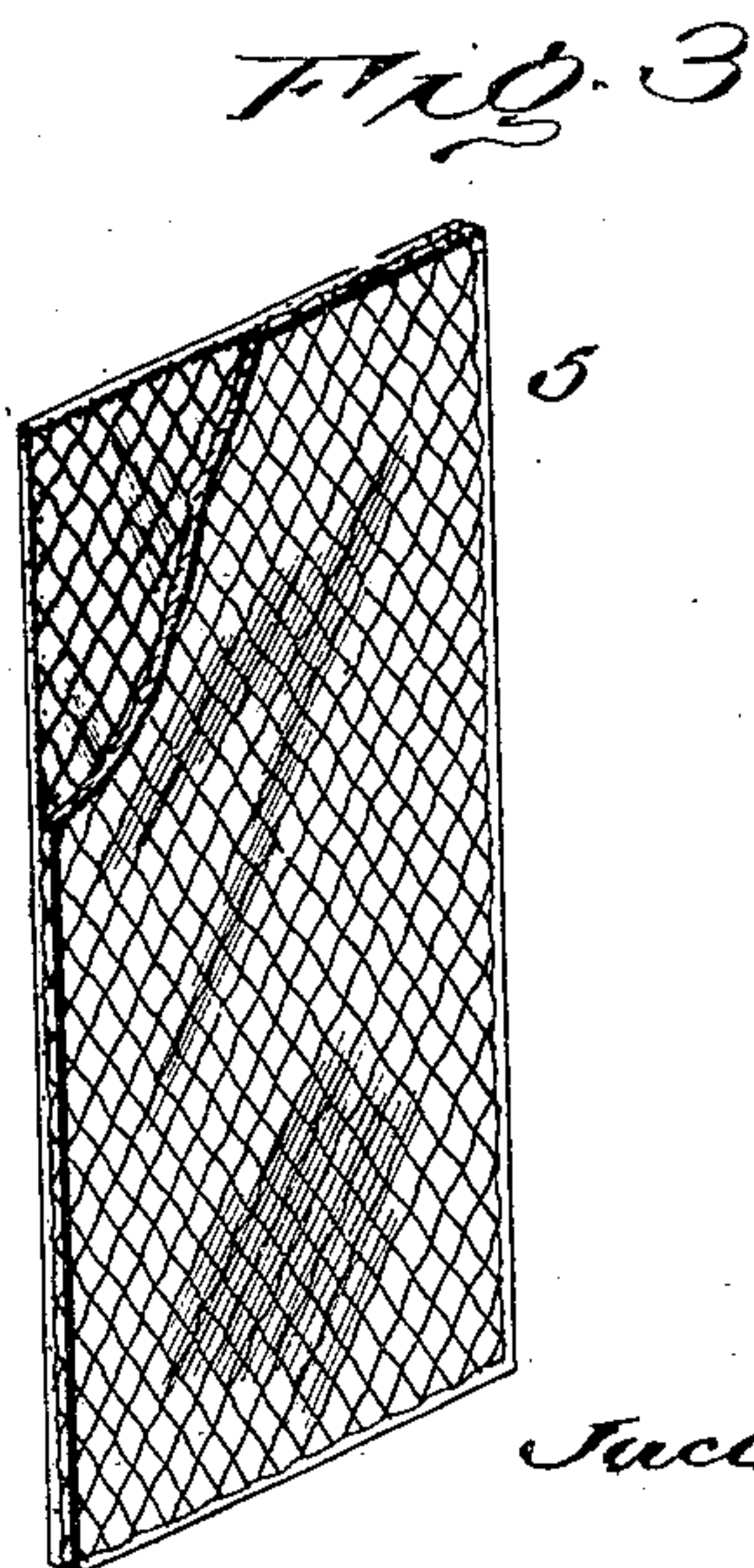
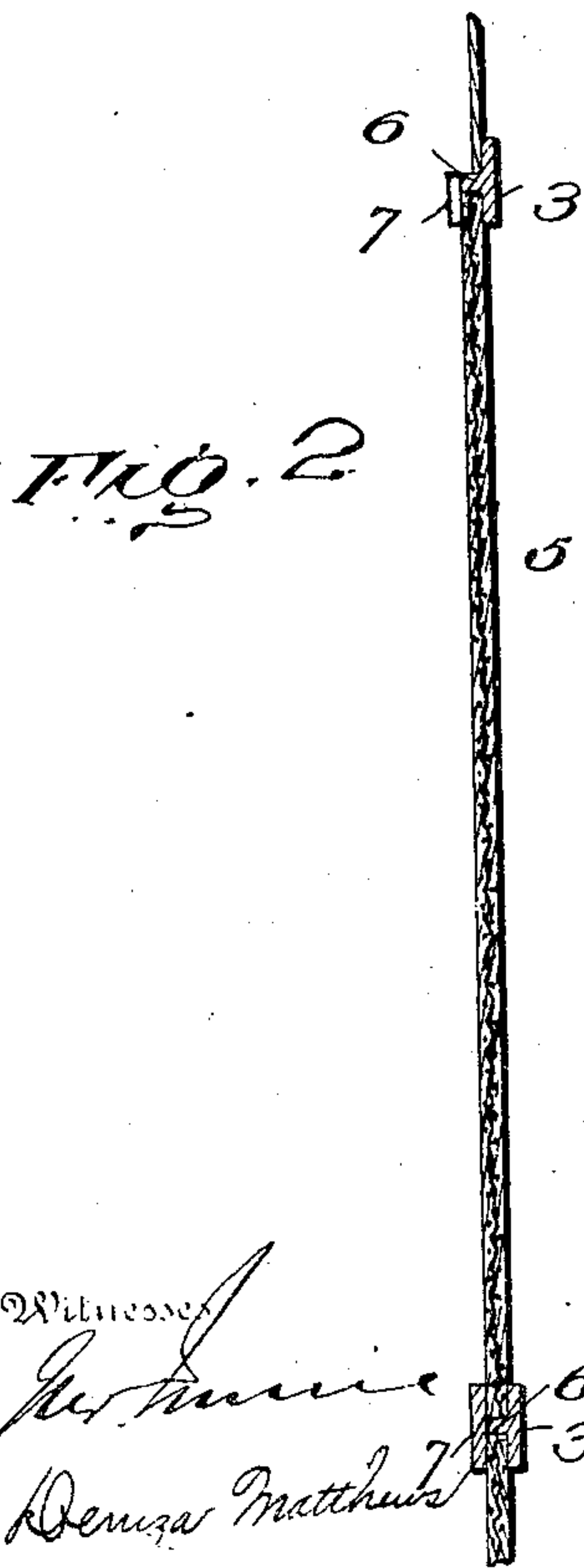
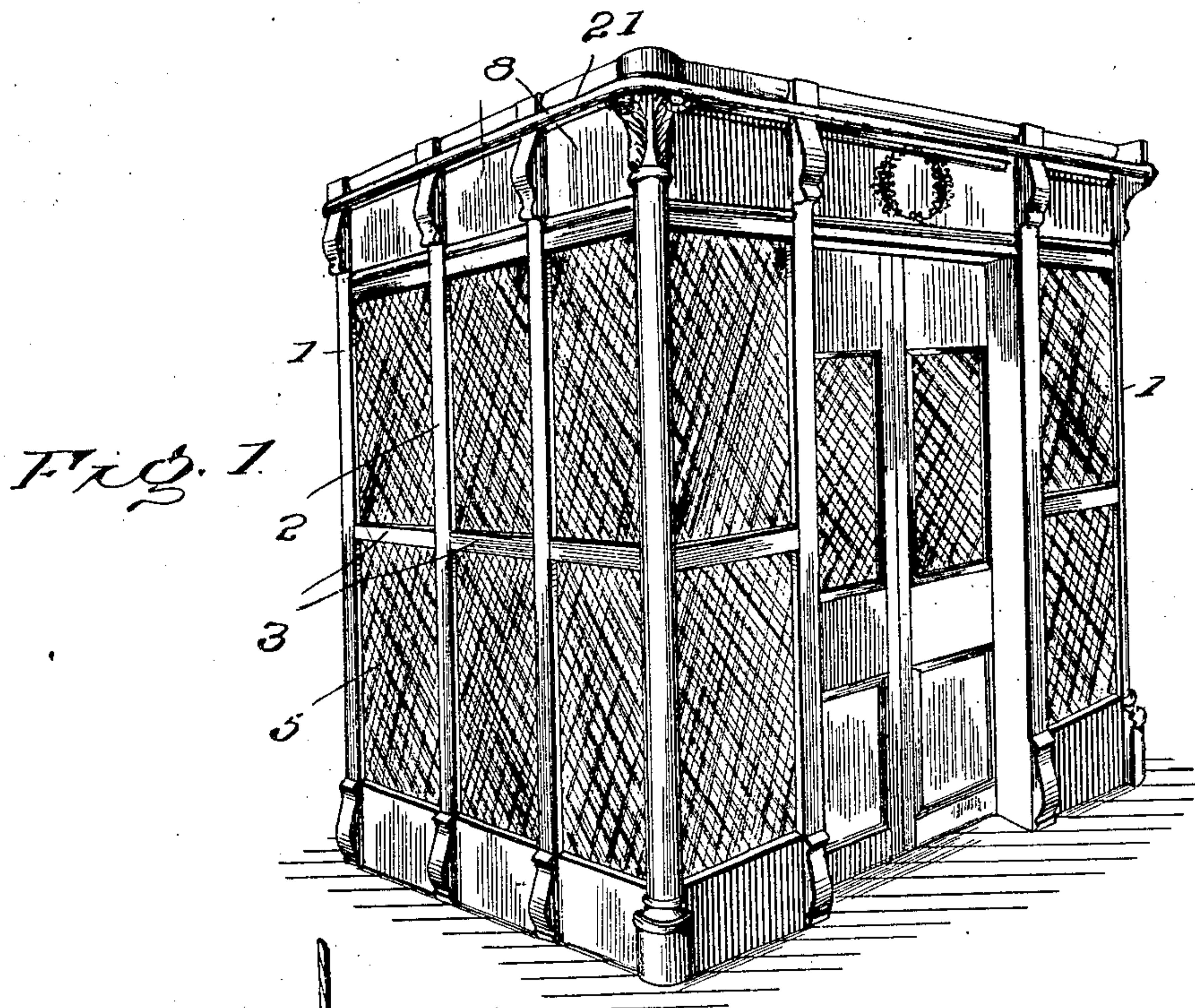
J. J. PLUCKER.

CASING OR HOUSING FOR ELEVATORS, STAIRWAYS, &c.

APPLICATION FILED APR. 4, 1903.

NO MODEL.

2 SHEETS—SHEET 1.



Witnesses

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Demas Matthews

By

Inventor
Jacob J. Plucker

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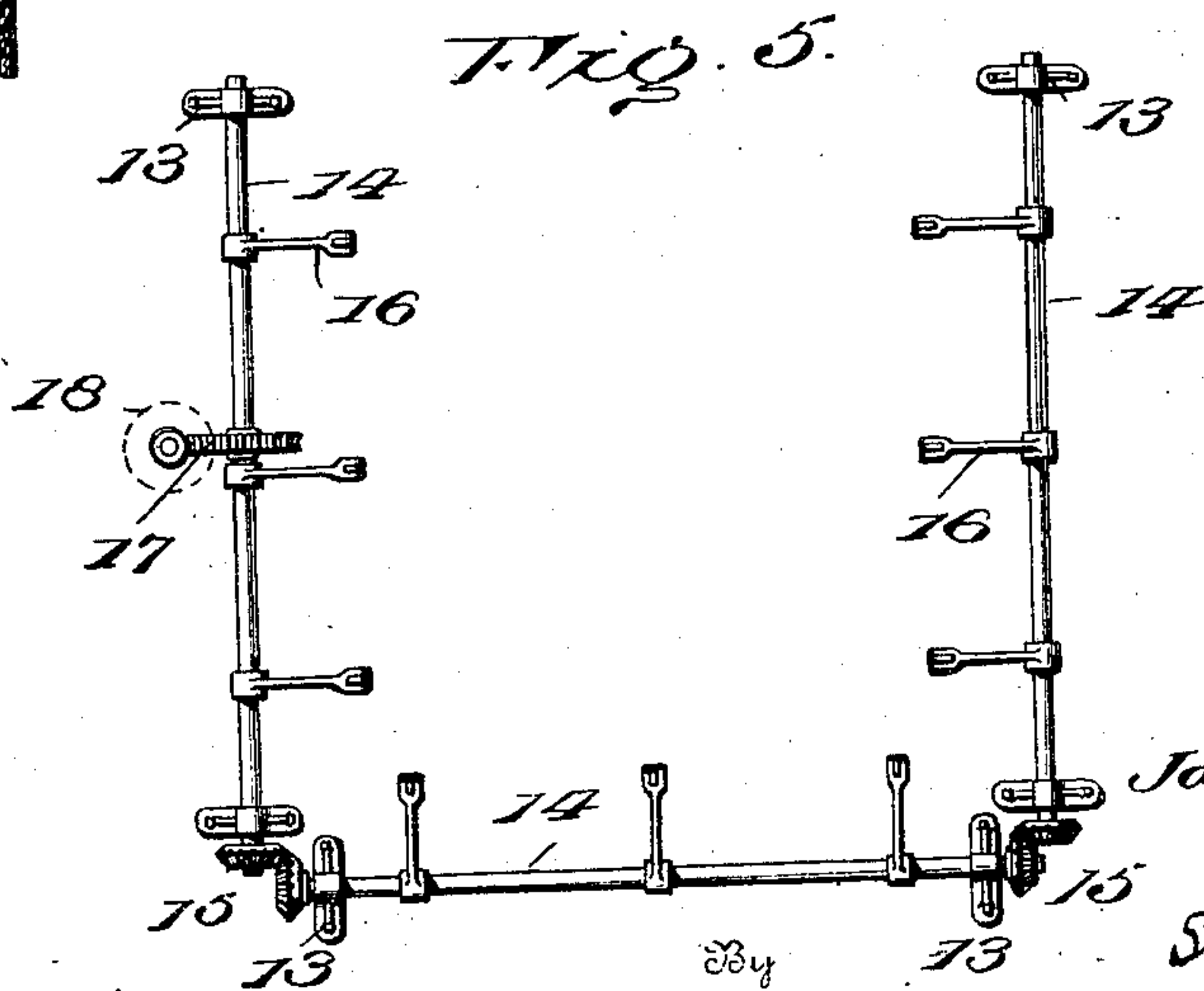
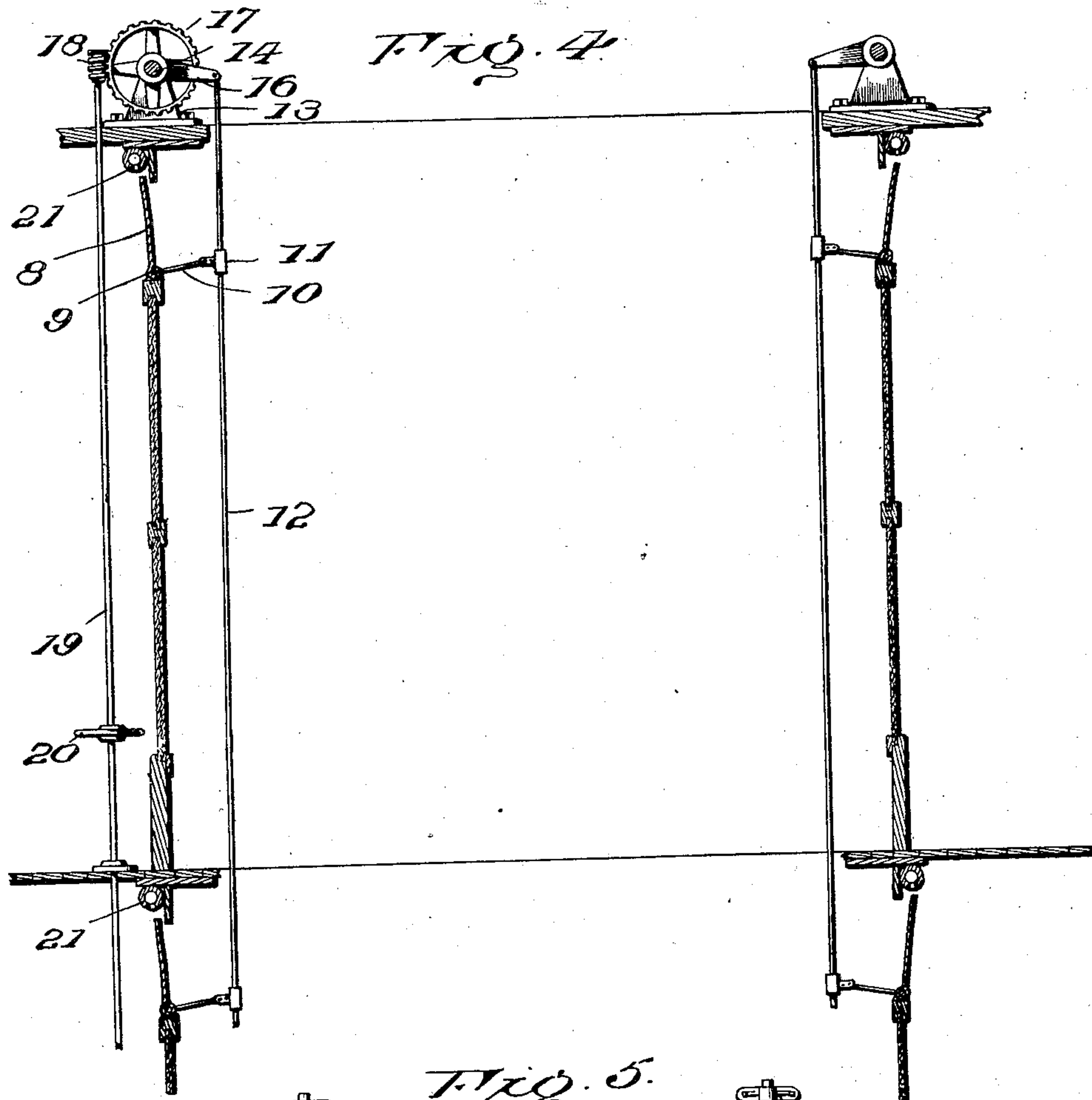
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APPLICATION FILED APR. 4, 1903.

NO MODEL.

2 SHEETS—SHEET 2.



Witnesses

John J. Plucker
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UNITED STATES PATENT OFFICE.

JACOB J. PLUCKER, OF PHILADELPHIA, PENNSYLVANIA, ASSIGNOR TO
CATHERINE A. PLUCKER AND HOWARD W. PLUCKER.

CASING OR HOUSING FOR ELEVATORS, STAIRWAYS, &c.

SPECIFICATION forming part of Letters Patent No. 734,606, dated July 28, 1903.

Application filed April 4, 1903. Serial No. 151,079. (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 Casings or Housings for Elevators, Stairways, &c., of which the following is a specification.

My invention relates to a casing or housing for elevators, stairways, light-shafts, and the like, and has for its object to produce a casing of such construction that light will be freely admitted to the interior of the casing and at the same time in case of fire in the building in which the casing is located the fire cannot get into the shaft or well and be communicated to the different floors of the building.

In the form of my invention illustrated in this application I have shown the same as applied to an elevator-casing; but it will be obvious that the same may be applied as well to inclose a stairway, a light-shaft, or other similar structure.

Referring to the drawings, wherein the same reference-numerals are used to designate the same parts wherever they occur, Figure 1 is a perspective view of an elevator-casing on one floor of a building constructed in accordance with my invention. Fig. 2 is a sectional view showing how the glass forming the walls of the structure is secured in position. Fig. 3 is a detail view, partly broken away, showing the form of glass which is used. Fig. 4 is a longitudinal sectional view showing the mechanism by which the ventilators for my casing are connected together and operated. Fig. 5 is a top plan view of the ventilator-operating mechanism.

The elevator-casing shown in the drawings is composed of the uprights 1, one being located at each corner, and between these uprights are the portions 2, which are parallel to the uprights.

3 represents cross-ties uniting the portions 1 and 2. These cross-pieces form with the parts 1 and 2 frames, and in these frames are secured plates 5, which are composed of wired glass. Preferably, and as shown, the plates 5, of wired glass, are secured in their positions in the frames by rabbeting out one portion

of the frame, as shown at 6, and securing a bar 7 to the rabbet, whereby the glass will be held in its position.

In order to ventilate the shaft and to allow free egress and ingress of the air when the car is running inside the casing under ordinary conditions, I provide on each floor, preferably at the top of the casing, a series of ventilators 8, which are pivoted at their lower edges by the pivots 9 in the casing.

10 is an arm projecting out from the pivotal shaft 9 of each of the ventilators and is pivotally connected to a sleeve 11, carried by the vertical rods 12. These rods 12 extend from the top to the bottom of the casing, so that all the ventilators adjacent to each rod are connected together.

Mounted on the top of the casing in suitable brackets 13 are shafts 14, these shafts being geared together by means of the bevel-gears 15, so that the shafts will rotate in unison.

16 represents arms carried by the shafts 14, to which the upper ends of the rods 12 are connected and by which the rods are operated. Mounted on one of the shafts 14 is a worm-gear 17, with which the worm 18, carried on the vertical shaft 19, engages. The shaft 19 extends down on the outside of the casing through all the floors and on each floor is provided with an operating device, such as a wheel 20, by which the shaft may be rotated.

By the construction above described it will be seen that upon rotating the shaft 19 on any floor of the building it will, through the worm 18 and worm-gear 17, rotate the shafts 14, and these shafts will, through the arms 16, operate the rods 12, and these rods will, because of the connecting-arms 10, operate all the ventilators 8 to close the ventilators in case a fire should occur on any floor of the building and prevent the fire from entering the shaft. In order to keep the flames and heat away from the casing in case of fire, I provide at the corner on each floor a water-pipe 21, which is connected with a suitable water-supply pipe, and in the supply-pipe I place a suitable valve, which is operated when the ventilators are closed, as fully shown in my application, Serial No. 134,031, filed December 5, 1902.

It is to be understood, of course, that all

portions of the frame are made of steel, iron, or other suitable fireproof material, and the wired glass, which is secured in the frames, will not break when acted upon by fire. Consequently the casing will remain entirely fireproof, and if a fire should occur on one floor of a building in which the elevators or stairways were inclosed in a casing built as described the occupants of the floors above the fire could pass with perfect safety to the bottom floor of the building.

By making the structure of glass light is freely admitted to the shaft and at the same time the objections to the ordinary form of grill now in use in connection with elevator-casings are entirely obviated, as the casing being an inclosed fireproof structure prevents any spread of the fire to the other floors of the building through the shaft.

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

1. A shaft for elevators and the like, surrounded by a fireproof casing consisting of a suitable fireproof frame and plates of wired glass secured in the frame.

2. A shaft for elevators and the like surrounded by a fireproof casing, ventilators in the casing to admit air to the shaft and means

connecting all the ventilators together, whereby they may be operated in unison.

3. A shaft for elevators and the like surrounded by a fireproof casing consisting of a suitable fireproof frame and plates of wired glass secured in the frame, of ventilators in the casing to admit air to the shaft and means connecting all the ventilators together whereby they may be operated in unison.

4. A shaft for elevators and the like surrounded by a fireproof casing, of pivoted ventilators in the casing to admit air to the shaft and means connecting all the ventilators together, whereby they may be operated in unison.

5. A shaft for elevators and the like consisting of a suitable fireproof frame and plates of wired glass secured in the frame, of pivoted ventilators in the casing to admit air to the shaft and means connecting all the ventilators together whereby they may be operated in unison.

Signed by me at Philadelphia, Pennsylvania, this 1st day of April, 1903.

JACOB J. PLUCKER.

Witnesses:

ANDREW V. GROUPE,
RALPH H. GAMBLE.