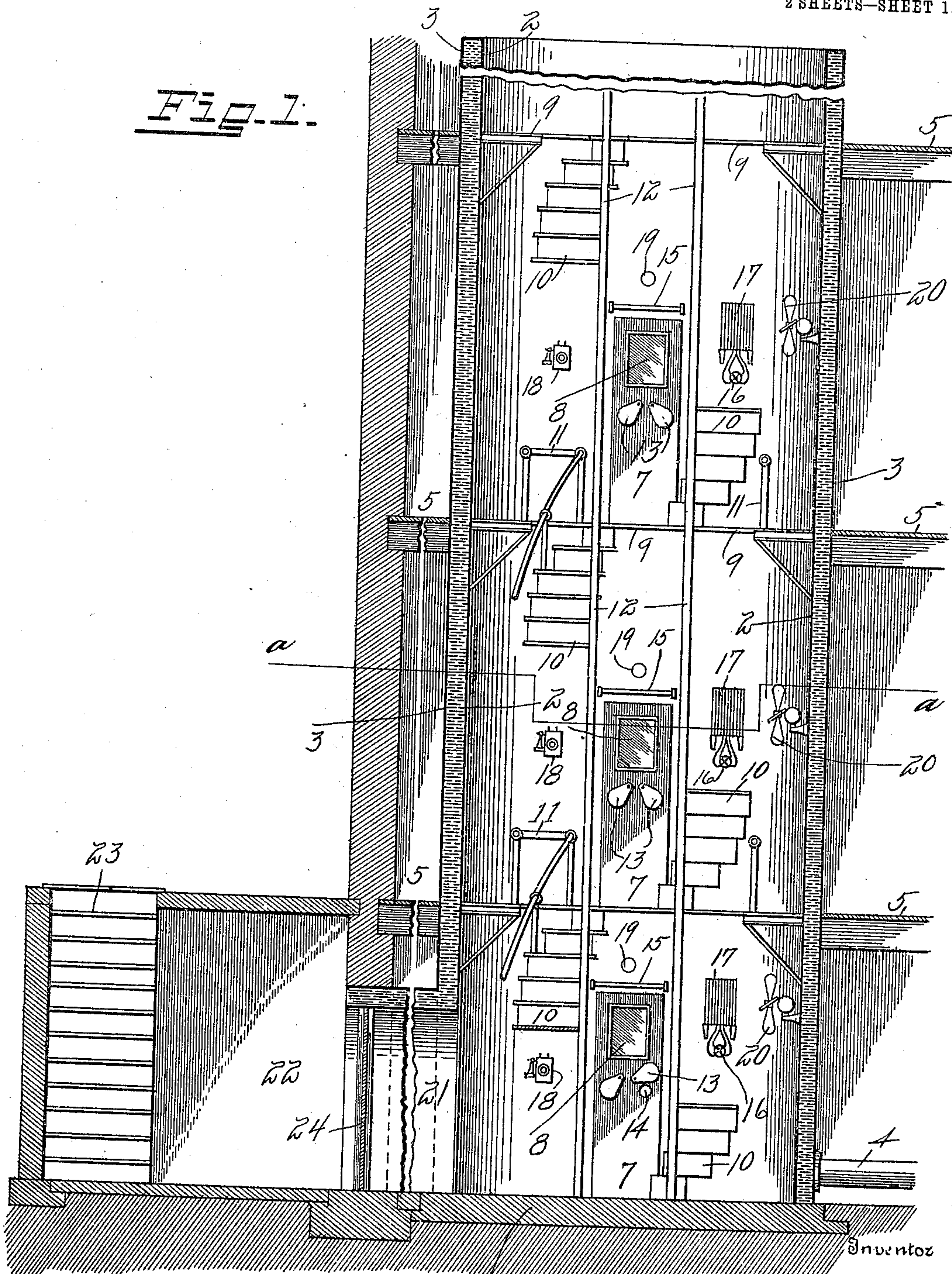


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APPLICATION FILED OCT. 4, 1909.

Patented Mar. 15, 1910.

2 SHEETS—SHEET 1.



Witnesses

M. L. L. L.
C. M. L. L.

1

E. Cahill

By

R. M. L. L.
his Attorney

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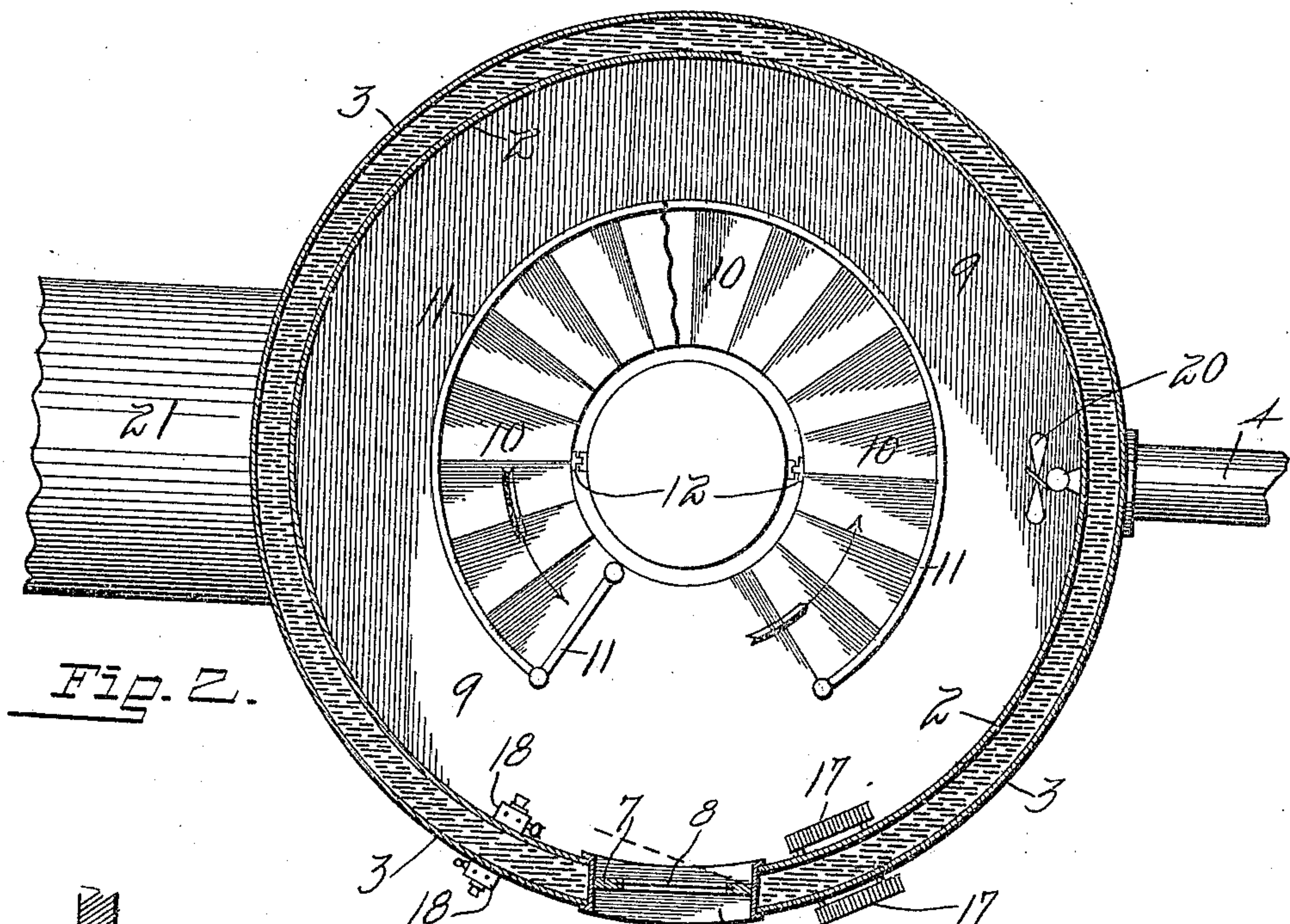


Fig. 2.

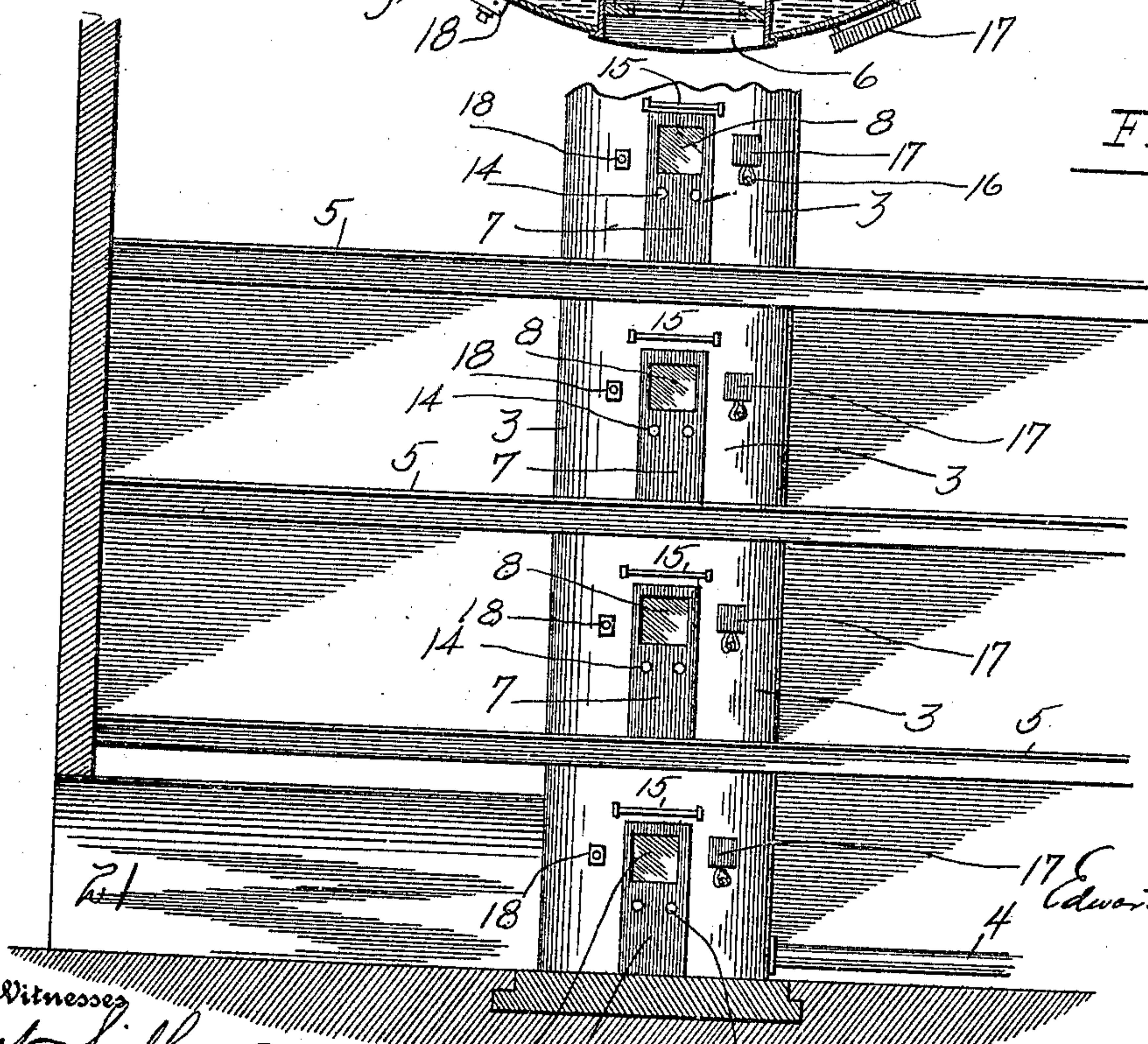


Fig. 3.

Witnesses
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UNITED STATES PATENT OFFICE.

EDWARD CAHILL, OF DAYTON, OHIO.

ELEVATOR-SHAFT CONSTRUCTION.

952,415.

Specification of Letters Patent. Patented Mar. 15, 1910.

Application filed October 4, 1909. Serial No. 520,987.

To all whom it may concern:

Be it known that I, EDWARD CAHILL, a citizen of the United States, residing at Dayton, in the county of Montgomery and State of Ohio, have invented certain new and useful Improvements in Elevator-Shaft Construction; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the figures of reference marked thereon, which form a part of this specification.

This invention relates to improvements in fire extinguishing towers or water columns, and is especially adapted to protect elevator shafts so that persons may escape from a burning building, and to afford a place of protection for firemen in fighting the fire.

The object of the invention is to provide a special construction for the protection of an elevator shaft and which consists in water jacketing the elevator shaft throughout its length in order that the occupant of a burning building may escape in safety.

In the accompanying drawings Figure 1 is a longitudinal sectional elevation of a portion of an elevator shaft extending from the basement or ground floor. Fig. 2 is a cross sectional view on the line *a-a* of Fig. 1. Fig. 3 is a side elevation of the elevator shaft showing the same with the water jacket extending from the basement through several floors of a building.

Throughout the following specification similar reference characters will denote or indicate corresponding parts in the several views of the drawings.

Extending from a suitable foundation 1 are inner and outer metallic shells 2 and 3, which extend throughout the height of a building and surround the elevator shaft and provide a water jacket which extends through the several floor structures of the building and is sealed at all points. The space thus provided between the shells 2 and 3 is always filled with water from a supply pipe 4, which enters said water column at its lower end and communicates with the city water mains. This water column or jacket insulates the heat from the interior of the elevator shaft and affords protection to the escaping occupant of a building as well as to the firemen who may

fight the fire from the interior of the elevator shaft. The water column or jacket thus provided by the continuous shells 2 and 3 may extend upwardly through any number of floors 5 depending upon the height of the building, and at each of said floors a suitable opening 6 is provided in which swings a fire proof door 7 having a window of wire glass through which the fire on the interior of the building and on the exterior of the elevator shaft may be observed by persons within the said shaft. The water column or jacket at the points where the openings 6 are arranged, is sealed by the casing as shown in Fig. 2.

On the interior of the shell 2 are a suitable number of floors 9 which lie flush with the floors 5 of the building, and are connected by winding stairways 10 provided with hand rails 11 extending throughout the length of the elevator shaft. Inclosed by the circular stairways 10 are a suitable number of vertical bars 12 which form the usual guides for any suitable form of elevator (not shown). The fire proof doors 7 are provided with a suitable number of openings 14 which are provided with pivotal wickets 13 which normally cover said openings. In the case of fire water may be played thereon from the interior of the shaft by projecting the hose nozzle through said opening or openings.

Above each of the fire proof doors 7 is a sprinkler pipe 15 of the fusible type, which is connected to the space between the shells 2 and 3 or the water chamber and receives water therefrom. The water jacket shells 2 and 3 are also provided with fire hydrants 16 attached to hose 17 held in suitable racks on the several floors and ready for immediate use. Also on the interior of the water jacket or on the walls of the elevator shaft, telephones 18 are provided which serve as means of communication, and electric lights 19 which serve to illuminate the interior of the shaft as well as electric fans 20 which serve to relieve the excessive heat. Access is obtained to the interior of the shaft through the doors 7, or in case the entire shaft is surrounded by fire, access may be had through a passage 21, which extends from the lower end of the shaft through to the street and enables the firemen to enter the shaft to ascend to suitable points from which they may operate. The passage 21 is provided with a water jacket which is a con-

tinuation of the water jackets surrounding the shaft. When the building is provided with a cellar, the passageway 21 may lead to a casement 22 provided with steps 23 as shown in Fig. 1, or if the water column terminates at the ground floor, the passageway may lead to the outside of the building as shown in Fig. 3. This passage way referred to is constructed of inner and outer shells and is a continuation of the water column or jacket. As shown in Fig. 1, a door 24 closes said passage way.

While I have shown and described a circular form of water jacket, it will be readily understood that the water column or jacket is not limited to this particular form.

Having described my invention I claim—

1. In a device of the character specified, inner and outer concentrically arranged shells which provide a water jacket surrounding and extending the length of an elevator shaft, fire proof doors arranged at the various floors of the building in which said elevator shaft is located, and providing means of ingress and egress to and from said elevator shaft, said fireproof doors having protected sight openings for the observation of the interior of the building, and fire-nozzle openings, door casings providing seals for the water jacket at such points of ingress and egress, and a laterally extended passage affording an entrance to said elevator shaft at the base of the water jacket, said passage

being also provided overhead with a water jacket which communicates with the water jacket of the elevator shaft, and a pipe extending from the city water mains and communicating with the base of the water jacket.

2. In a device of the character specified, inner and outer cylindrical shells surrounding an elevator shaft and providing a water jacket extending from the bottom to the top of said elevator shaft, a series of doors arranged in said shells and affording means for obtaining ingress and egress to and from the elevator shaft, said doors having protected sight openings through which the interior of the building may be observed, and openings through which hose-nozzles may be projected from the interior of the shaft, suitable casings at each of such openings providing for sealing the water jacket at such points, a series of hydrants communicating with the water jacket through the inner and outer shells and providing means for the attachment of hose on either side of the water jacket, and a laterally extended passage affording an entrance to the elevator shaft at the base of the water jacket.

In testimony whereof I affix my signature, in presence of two witnesses.

EDWARD CAHILL.

Witnesses:

MATTHEW SIEBLER,
R. J. McCARTY.