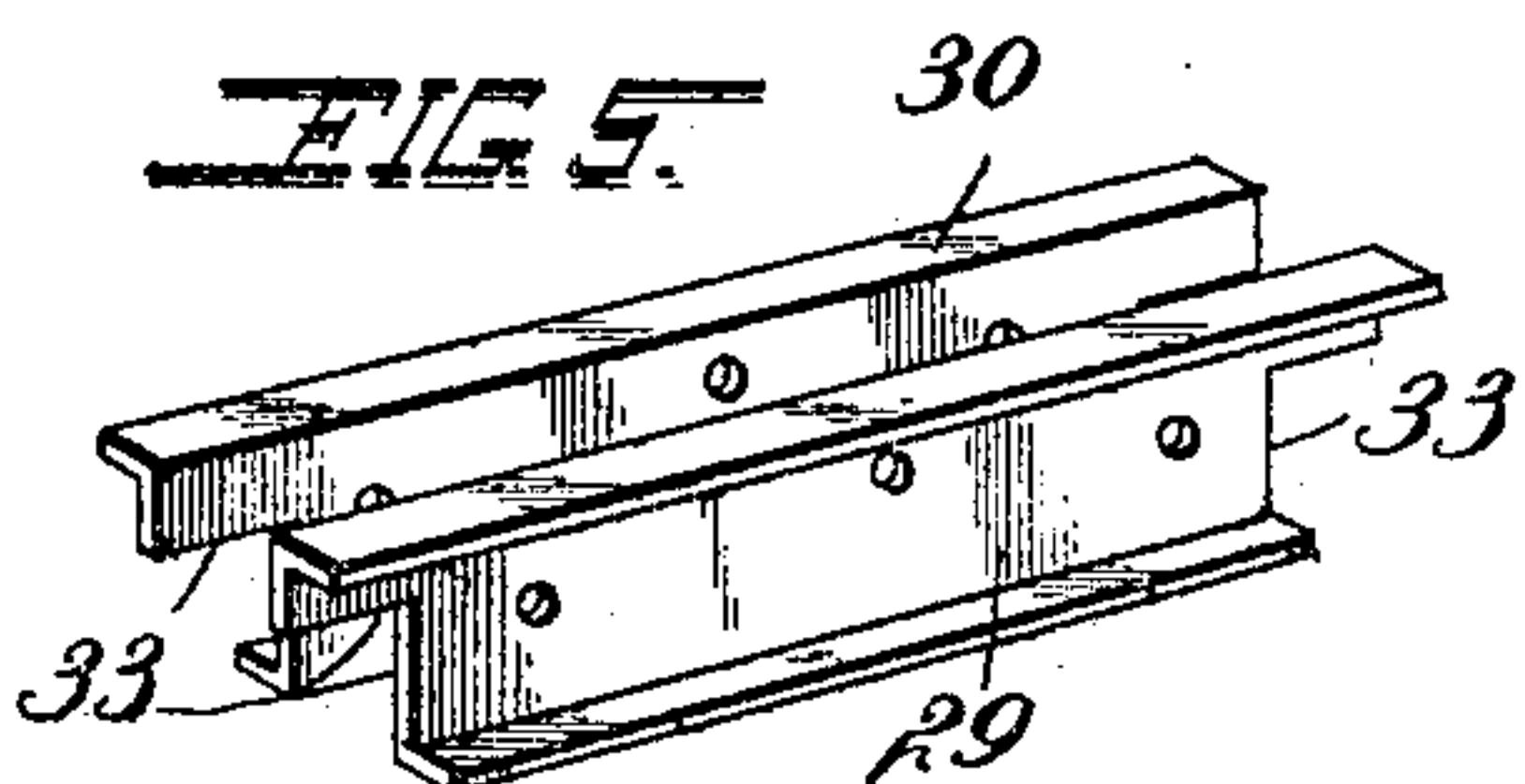
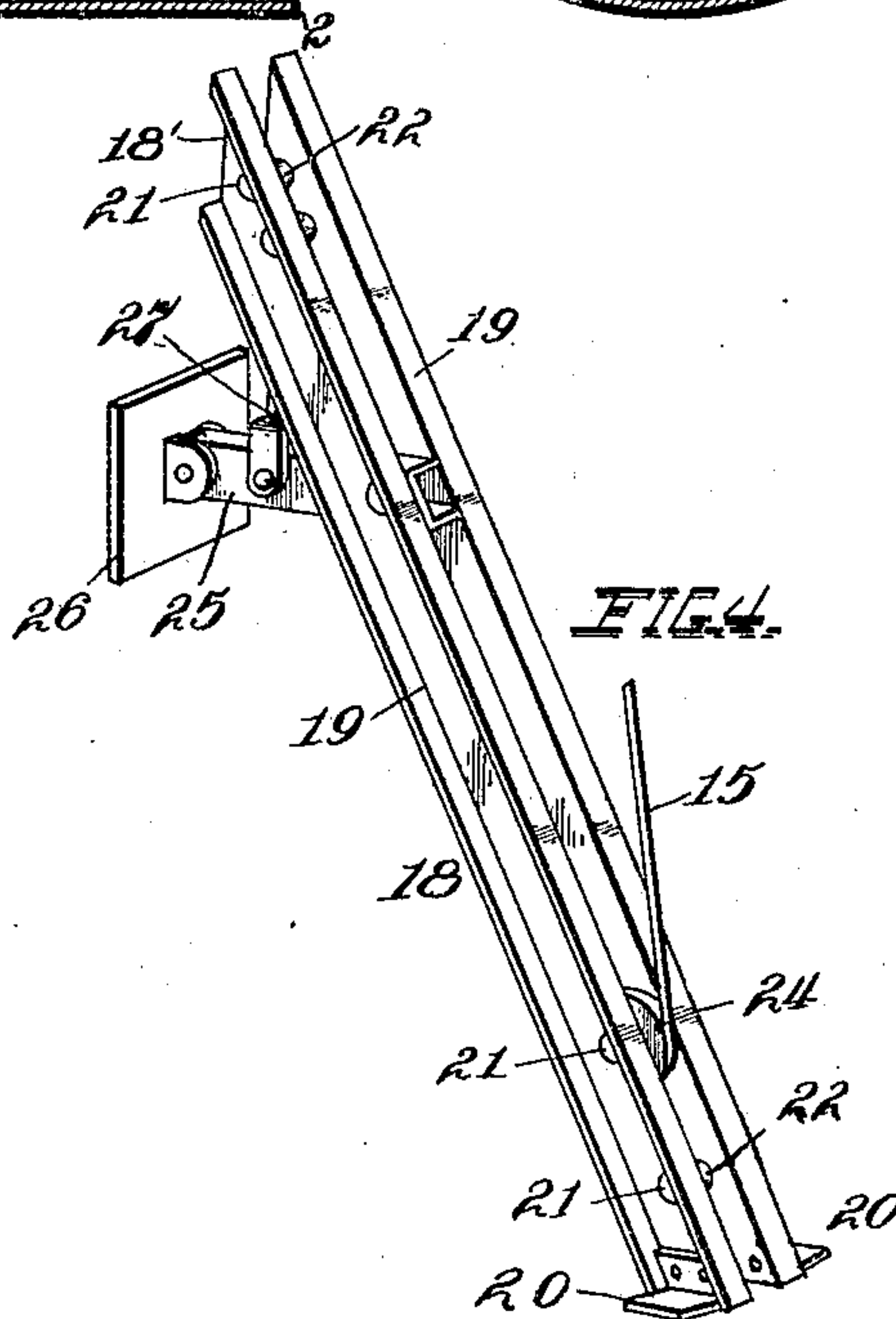
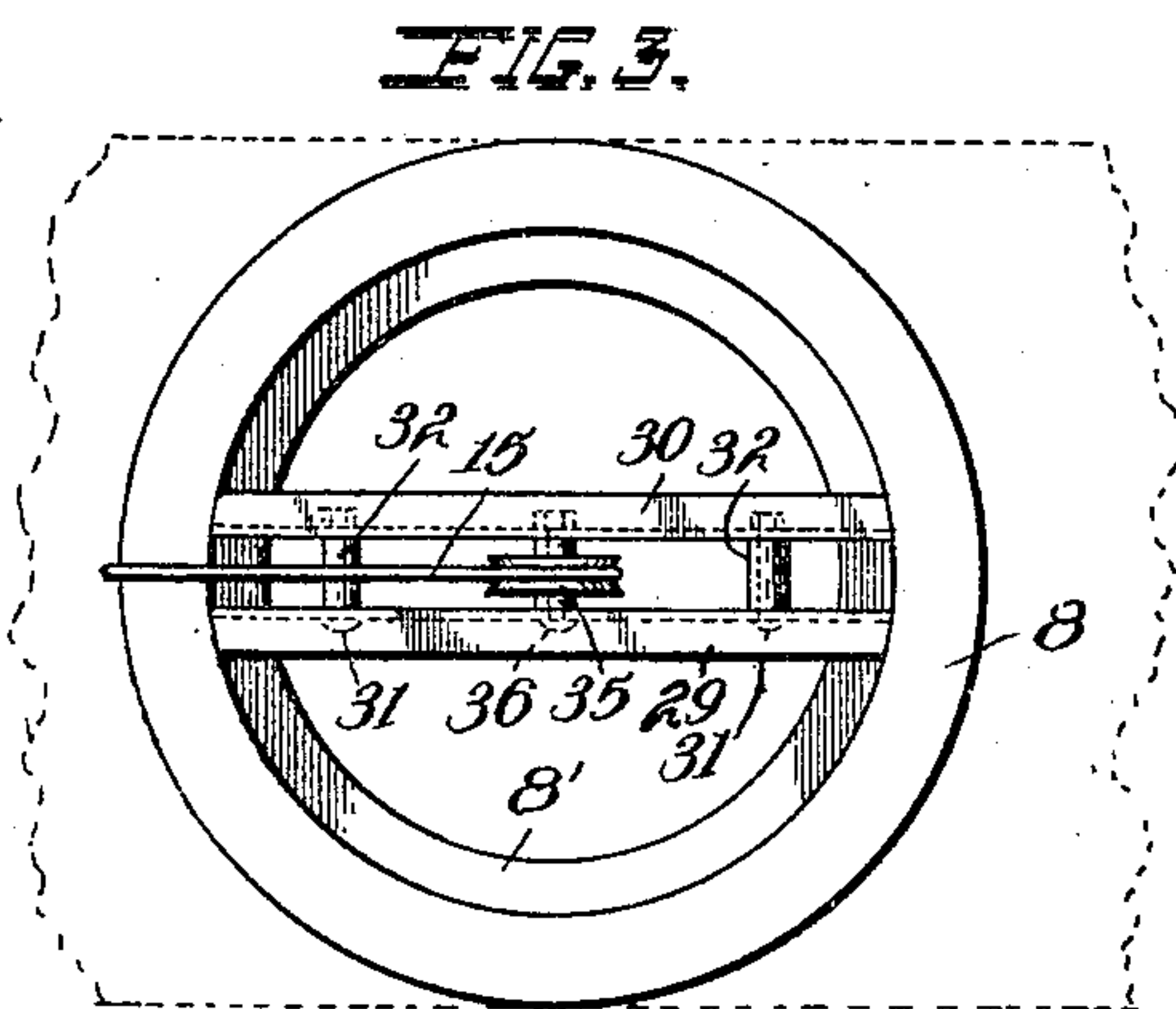
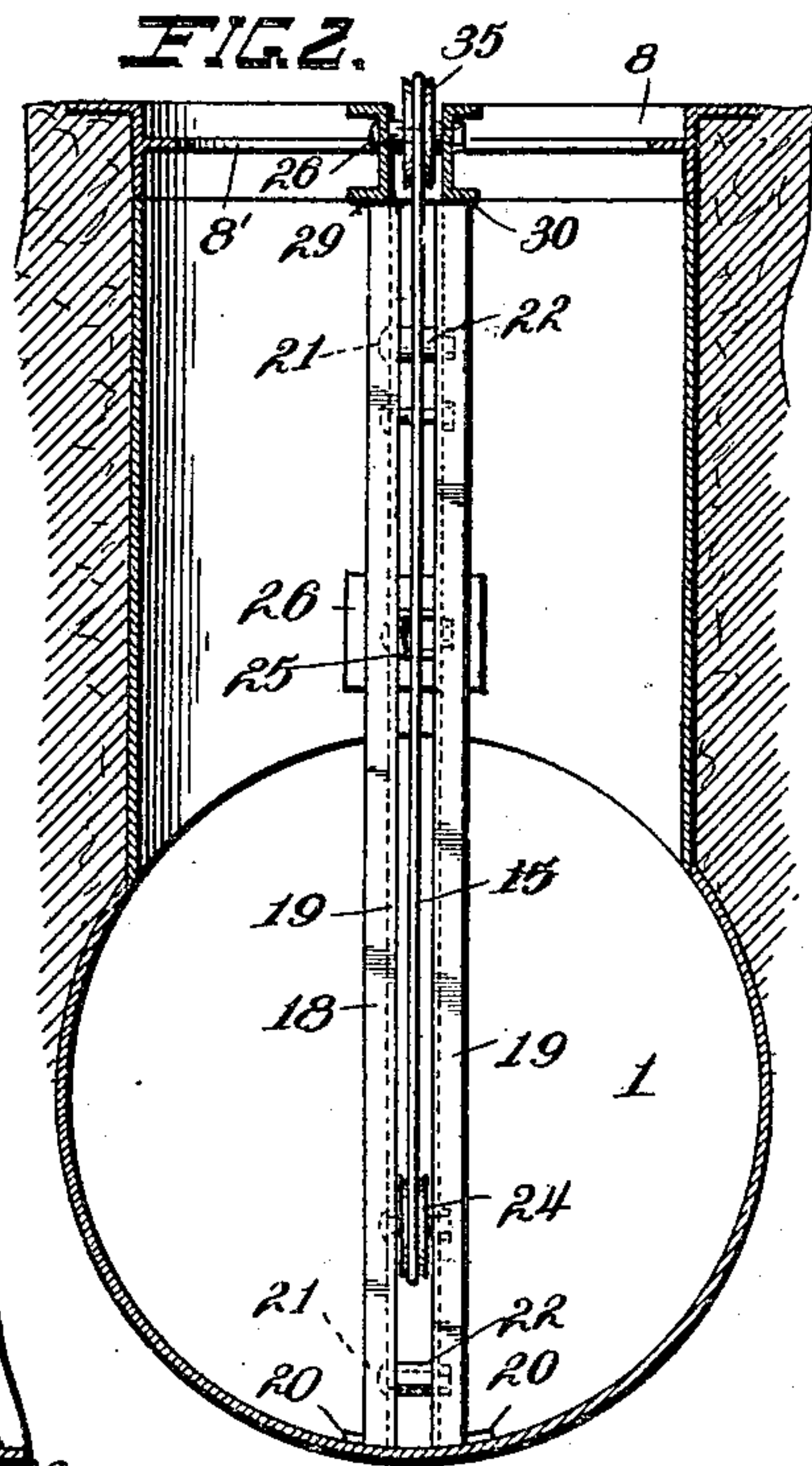
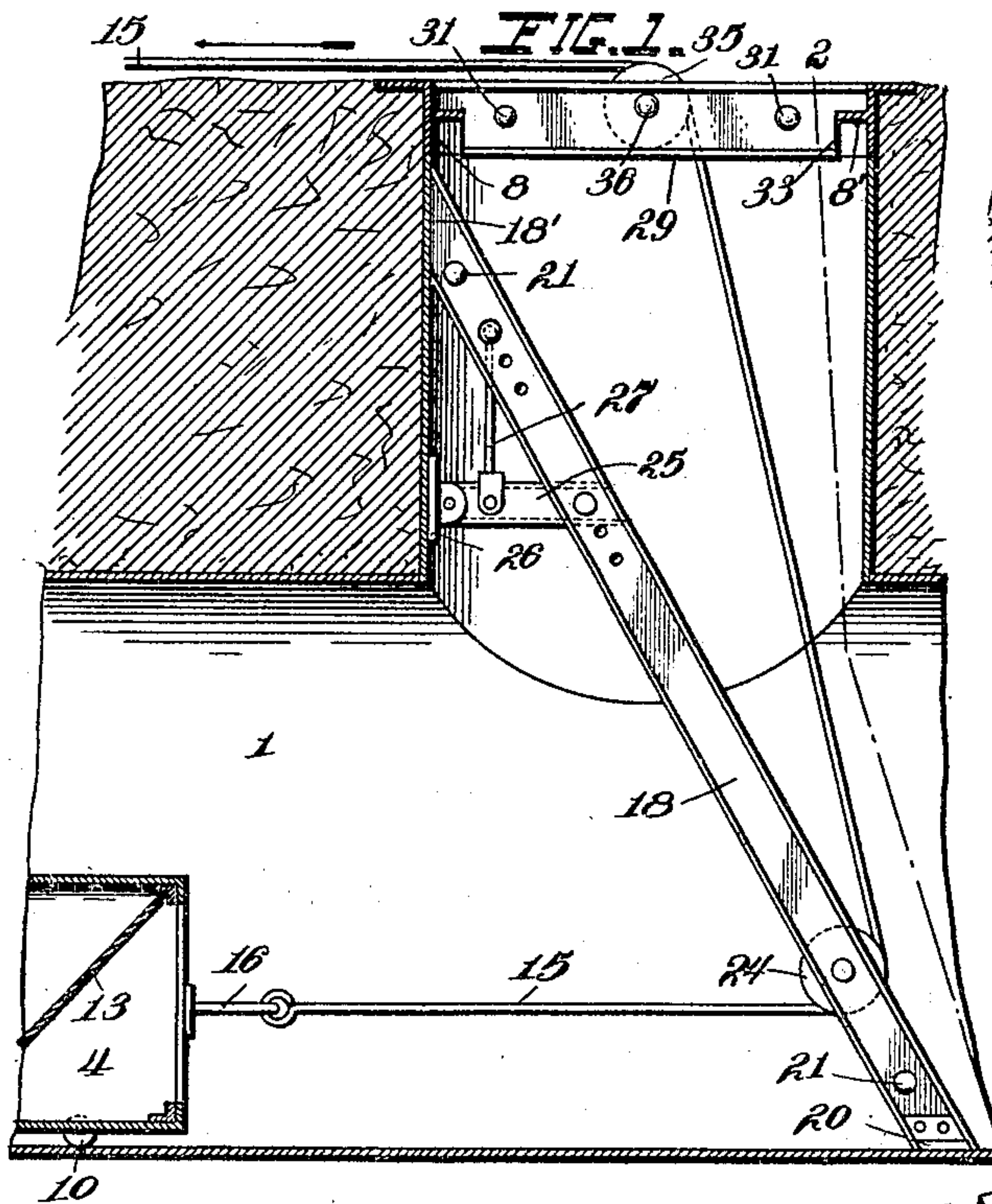


No. 784,304.

PATENTED MAR. 7, 1905.

M. T. CONNOLLY.
SEWER CLEANING DEVICE.
APPLICATION FILED NOV. 10, 1904.



Witnesses
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UNITED STATES PATENT OFFICE.

MICHAEL T. CONNOLLY, OF JERSEY CITY, NEW JERSEY.

SEWER-CLEANING DEVICE.

SPECIFICATION forming part of Letters Patent No. 784,304, dated March 7, 1905.

Application filed November 10, 1904. Serial No. 232,220.

To all whom it may concern:

Be it known that I, MICHAEL T. CONNOLLY, a citizen of the United States, residing at Jersey City, county of Hudson, State of New Jersey, have invented certain new and useful Improvements in Sewer-Cleaning Devices, of which the following is a specification.

This invention relates to devices for cleaning sewers, and is an improvement on the apparatus set forth in my United States Letters Patent No. 672,593, dated April 23, 1901. The upright beams, known as "deadmen," in the manholes of the construction used in my patent aforesaid constitute an obstruction in the street and prevent the passage of vehicles, trolley-cars, &c., at these points.

The object of the present invention is to obviate the foregoing defect by the provision of upright beams or deadmen of improved construction located entirely within the sewer and manhole and to provide an improved and novel substitute for the upper pulleys on the deadmen in the shape of a pulley-supporting device adapted to set down in the manhole-frame flush with the street, so that no obstruction is afforded to passage of trolley-cars or vehicles on the street-level.

The present invention is described fully hereinafter, and the novel features are recited in the appended claims.

In the drawings, Figure 1 is a sectional view illustrating the invention and showing its manner of use. Fig. 2 is a section on line 2 2 of Fig. 1. Fig. 3 is a plan view. Fig. 4 is a detail of one of the deadmen or upright beams, and Fig. 5 is a detail of the pulley-supporting frame.

Referring to Fig. 1, 1 represents a section of a sewer and a manhole thereof, only one manhole being shown, as the operation of the invention will be clearly understood from an inspection of my Patent No. 672,593. The cleaning device or car 4 is of the same construction as that set forth in my aforesaid patent, said car being provided with rollers 10 to travel on the bottom of the sewer 1 and having two doors or valves 13 at its respective ends, only one being shown. The valves or doors 13 are, as set forth in my patent afore-

said, hinged at their upper ends and both open inwardly. When the car is drawn in one direction, the door or valve at the forward end of the car opens inwardly and the accumulation in the sewer passes into the interior of the car, while the door at the rear end of the car remains closed. When the car is drawn back to the first manhole after having been dumped, the door which was previously closed opens and the accumulation in the sewer passes into the car, while the door which previously opened now closes. The car is provided at its respective ends with couplings or connections 16, to which the respective operating-ropes are connected, one of said ropes being shown at 15.

In my patent aforesaid the deadmen or upright beams 18 in the manholes extend above the street-level. In the present invention I make these deadmen of such length that when placed in the sewer or manhole their upper ends 18' terminate just under the manhole frame 8. Each one of the deadmen 18 consists of two parallel channel-beams 19, (see Fig. 2,) whose lower ends have feet 20 to bear on the bottom of the sewer 1. The channel-beams 19 are rigidly connected together by bolts 21, on which are separating sleeves 22, interposed between the channel-beams 19. A pulley 24, around which the rope 15 passes, is journaled on one of the bolts 21. A brace 25 is connected to the channel-beams 19 in an adjustable manner, so that it can fit any desired manhole, and the brace at its other end is provided with a foot 26 to bear against the side of the manhole. The brace is strengthened and supported by a hanger 27, connected to the upper portions of the beams 19.

Instead of having the upper ends of the deadmen extend through the manhole-frames, one of which is shown at 8, I provide a pulley-support composed of two channel-bars 29 and 30, connected together by bolts 31, on which are separating sleeves 32, said pulley-support having undercut hanger ends 33, adapted to rest upon the annular depressed flange 8' of the manhole-frame 8. A pulley 35 is provided with a broadened hub, which is journaled on a bolt 36, connecting the members 29 and 30,

and the rope or cable 15 passes upwardly from pulley 24, between the members 29 and 30, and over the pulley 35.

The manner of bracing and disposing the 5 deadmen holds them perfectly secure against slipping in the sewer or manhole, and the pulley-supporting frames fit the manhole-frames in such manner that they are secure therein and yet afford no obstruction to the passage 10 of vehicles and trolley-cars.

It will be understood that the deadmen and pulley-supporting frames are placed in position or removed at will, according to the location of the sewer and manhole, and the car 15 is drawn back and forth through the sewer from one manhole to another to carry off the accumulations in the sewer on each to-and-fro trip, as set forth in detail in my Patent No. 672,593.

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

1. In a device for cleaning sewers, the combination with a manhole-frame, of a pulley- 25 supporting frame adapted to be positioned within the manhole-frame and comprising separated bars connected together side by side, whose ends rest on the manhole-frame, and a pulley journaled to the bars and located between them. 30

2. In a device for cleaning sewers, the combination with a manhole-frame having an inwardly-projecting flange below its top, of a pulley-supporting frame within said manhole-

frame and of less length than the width of 35 said manhole-frame and having its ends resting on the flange aforesaid.

3. In a device for cleaning sewers, the combination with a manhole-frame having an inwardly-projecting flange below the top, of a 40 pulley-supporting frame of less length than the width of said manhole-frame and having undercut ends, said pulley-supporting frame being adapted for positioning within the manhole-frame and the outwardly-extending portions 45 of the undercut ends resting upon the aforesaid flange of the manhole-frame.

4. In a device for cleaning sewers, the combination with a cleaning device in the sewer, of a pulley-support resting on the bottom of 50 the sewer and terminating at its upper end below the street-level, a pulley-support in the manhole, and a rope or cable passing over said pulleys and connected to the cleaning device.

5. In a device for cleaning sewers, the combination with a cleaning device in the sewer, of a pulley-support resting on the bottom of 55 the sewer and against the manhole-walls, an independent pulley-support resting on the manhole-frame, and a rope or cable passing over 60 the pulleys of said pulley-supports and connected to the cleaning device.

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

MICHAEL T. CONNOLLY.

Witnesses:

JOHN H. KOENIG,
JOHN F. REILLY.