

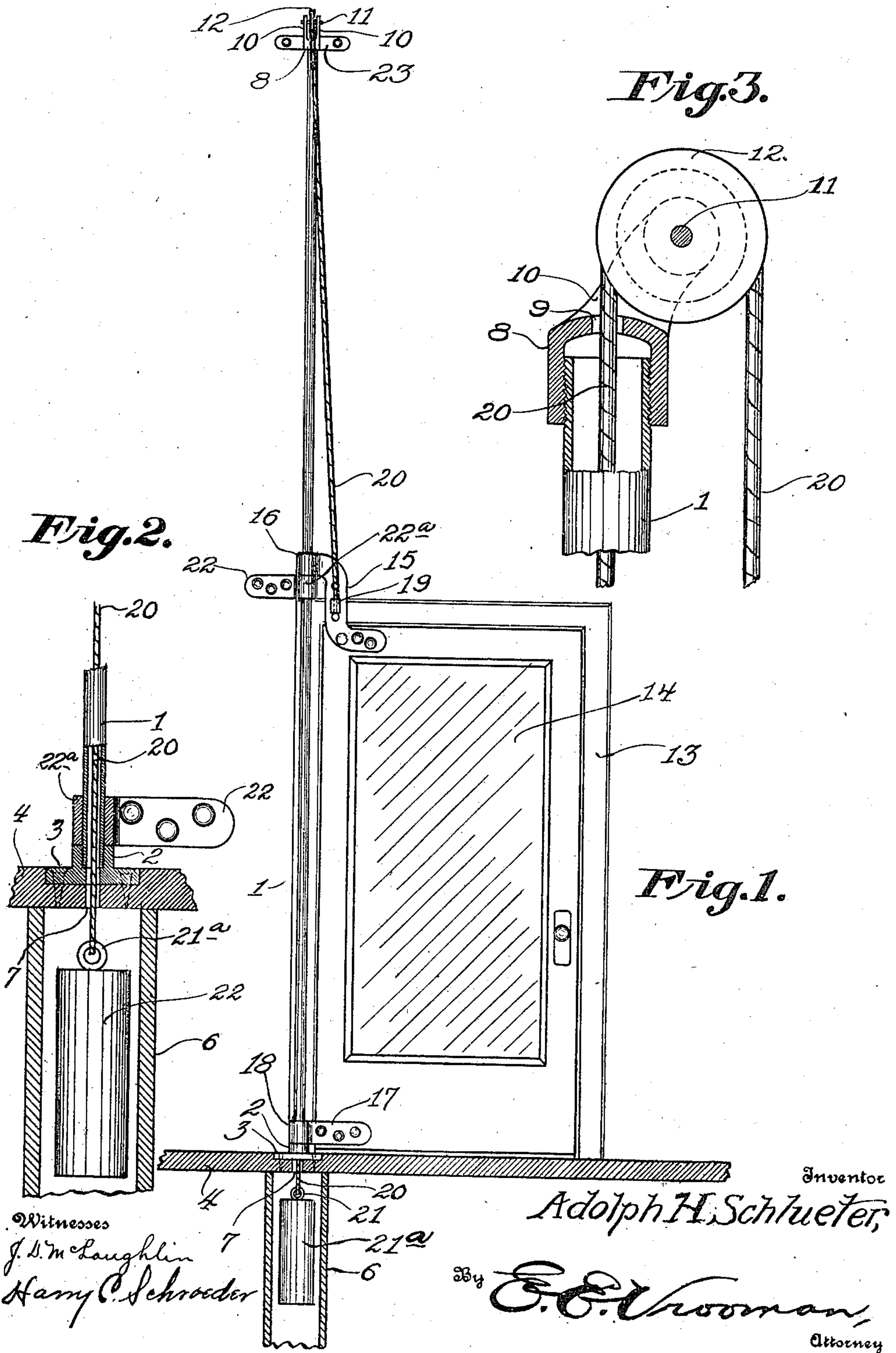
A. H. SCHLUETER.

DOOR.

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963,948.

Patented July 12, 1910.



UNITED STATES PATENT OFFICE.

ADOLPH H. SCHLUETER, OF OAKLAND, CALIFORNIA.

DOOR.

963,948.

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To all whom it may concern:

Be it known that I, ADOLPH H. SCHLUETER, a citizen of the United States, residing at Oakland, in the county of Alameda and State of California, have invented certain new and useful Improvements in Doors, of which the following is a specification, reference being had therein to the accompanying drawing.

This invention relates to doors especially adapted for stores and the like, and the principal object of the invention is to so mount the door that when swung to an open position it may be readily raised overhead so as to be out of the way, or in a position where it will not interfere with a display in the store.

With the above and other objects in view, the invention contemplates hinging and slidably mounting the door upon a suitable rod and having an overhead connection between the door and a counterweight so that when the door is swung on its hinges to an open position it may be readily pushed upwardly upon the said rod.

In carrying out the objects of the invention generally stated above it will be understood, of course, that the essential features thereof are susceptible of changes in details and structural arrangements, but one preferred and practical embodiment of the same is shown in the accompanying drawings wherein—

Figure 1 is a view in front elevation of a door and its hinge connection with a supporting rod, also showing the manner of counterbalancing the door, part of the figure being shown in section. Fig. 2 is a detail vertical sectional view of the guide rod for the door and the counterweight, also showing the manner of mounting said rod. Fig. 3 is a detail elevation of the upper portion of the guide rod, part thereof being shown in section.

Referring to said drawings by numerals 1 designates a vertically arranged hollow guide rod the base of which is mounted in a socket 2 projecting from a floor plate 3 countersunk into a floor or the like 4. A pipe standard 6 depends from the bottom of said floor, an opening 7 being formed through the floor which communicates with said

socket. The top of said standard or guide rod 1 is externally threaded for the reception of an internally threaded cap 8 which has a centrally located opening 9 formed through its top. A pair of pivot ears project from opposite sides of the opening 9 of the cap, said ears being upwardly and outwardly inclined and supporting a pivot pin 11 upon which a grooved roller or pulley 12 is mounted.

The guide rod 1 is arranged adjacent to and at one side of a door frame 13 which is adapted to be closed by means of a door 14. An upper hinge 15 mounted on said door has its outer end provided with a sleeve 16 which slidably surrounds the rod 1, said hinge being preferably of an S-shape so that its sleeved end will engage the guide rod at a point above the door. The lower hinge 17 is of the well known strap-hinge type and is also provided with an end sleeve 18 which slidably surrounds the rod 1.

The hinge 15 carries an outstanding lug 19 to which one end of a cable 20 is fastened, the other end of said cable passing upward and over the pulley 12 at the top of the guide rod 1, thence down through the cap 8 and into and through the rod 1 to the pipe standard 6, at which point the end of said cable is fastened to an eye 21 carried by the upper end of a counterweight 21^a vertically movable in said pipe standard 6.

The guide rod 1 is braced at its intermediate portion by means of a strap 22 secured to the wall or other support and which has its free end in the form of a sleeve 22^a which surrounds said rod. Preferably this intermediate brace is arranged just above the door frame 13 and below the sleeve 16 of the hinge 15, so that said brace forms a support or rest for said hinge when the door is in position to close said doorway. The upper end of the guide rod is braced by means of a strap 23.

It will be seen from the foregoing that when the door is swung on its hinges to an open position, a slight upward pressure on the same will cause it to slide up the guide rod 1 until its lower hinge 17 contacts with the intermediate brace 22, said brace obviously acting as a stop which limits both the upward and downward movement of the

door. It will also be understood that the door may be elevated by means of a motor or other hoisting means if desired.

What I claim as my invention is:—

- 5 A device of the character described comprising a hollow guide rod, a cap having a threaded engagement with the upper end thereof, a pulley mounted on said cap, a door hinge having a slidable connection with
10 said guide rod, a cable passing through said

rod and cap and over said pulley, a connection between one end of said cable and said door hinge, and a counterweight carried by the other end of said cable.

In testimony whereof I hereunto affix my 15 signature in presence of two witnesses.

ADOLPH H. SCHLUETER.

Witnesses:

H. C. SCHROEDER,
F. P. SCHROEDER.