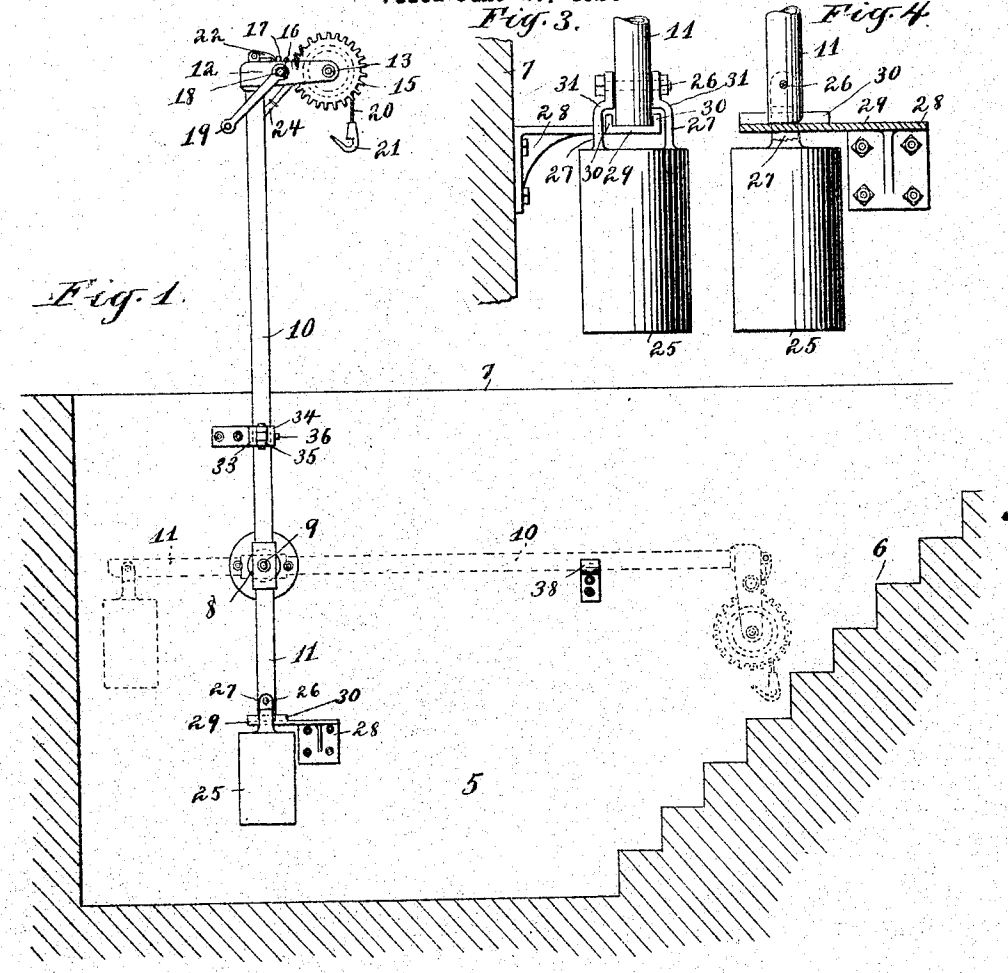
Oct. 27, 1925. 1,558,614

E. D. HOOKER

HOISTING APPARATUS

Filed June 20, 1924



Patented Oct. 27, 1925. 1,558,614

UNITED STATES PATENT OFFICE.

EDWARD D. HOOKER, OF NEW YORK, N. Y., ASSIGNOR TO GILLIS & GEOGHEGAN, INC., OF NEW YORK, N. Y., A CORPORATION OF NEW YORK.

HOISTING APPARATUS.

Application filed June 20, 1924. Serial No. 721,158.

To all whom it may concern:

Be it known that I, EDWARD D. HOOKER, a citizen of the United States, residing in the city of New York, borough of Manhattan, in the county and State of New York, have invented a certain new and useful Improvement in Hoisting Apparatus, of which the following is a specification.

The invention relates to hoisting apparatus adapted for service in raising ash cans and like light loads from a cellar to the sidewalk. Such apparatus is usually mounted in a sidewalk hoistway and arranged to be collapsed beneath the hoistway doors when not in use. The main object of the present invention is to provide simple, inexpensive and easily operated hoisting mechanism adapted for service in open sidewalk areas, and arranged to swing vertically therein to project above the sidewalk level when required for the hoisting operation.

A further object is to provide means for supporting the mechanism reliably to resist the strains due to the lifted load, and to hold the mechanism in the vertical operative position.

The invention consists in certain novel features and details of construction and arrangement by which the above objects are attained, to be hereinafter described and claimed.

The accompanying drawings form a part of this specification and show the apparatus disposed in a common type of sidewalk area.

Figure 1 is a vertical section through a portion of the area, showing the hoisting apparatus in elevation and in the elevated position.

Figure 2 is a plan showing the apparatus in the horizontal inoperative position.

Figure 3 is a side elevation of a portion, on a larger scale, showing the supporting step for the standard of the apparatus.

Figure 4 is a corresponding front view, taken at a right angle to Figure 3, and partly in vertical section.

Similar reference numerals indicate the same parts in all the figures.

The sidewalk area is marked 5 and is shown as having a flight of stairs 6 leading from the sidewalk level to the floor thereof, as usual in sidewalk openings of this character.

On the outer vertical wall 7 of the area is a fixed stud 8 carrying a horizontally projecting pivot at 9 on which is mounted the standard of the hoisting apparatus with liberty to swing vertically on such pivot in a plane parallel with the wall 7. The point of suspension is near one end of the standard, thus dividing the latter into a long arm 10 and a short arm 11.

The standard is preferably tubular for combined lightness and strength and on the outer end of the long arm 10 is rotatably mounted the hoisting head, which may be of any preferred type and is shown as comprising a frame 12 carrying a drum-shaft 13 on which is mounted the winding drum 14 and a gearwheel 15. A parallel pinion-shaft 16 mounted in the frame carries a pinion 17 in mesh with the gearwheel 15. The overhung end of the shaft 16 is squared as at 18 to receive a removable crank 19 by which the cable 20 may be wound upon the drum by the operator on the sidewalk and a load suspended from the hoisting hook 21 raised from the floor of the area to the sidewalk when the standard is in the vertical position shown in full lines in Figure 1. The hoisting head also has a pawl 22 arranged to engage the pinion 17, a brake 23 operated by a lever 24, and may have other equipments of any approved construction.

On the outer end of the short arm 11 of the standard is a counterweight 25 shown as pivotally connected thereto by a bolt 26 extending through the standard and the lugs 27 on the weight, so that the latter depends by gravity and hangs vertically in all positions of the standard. A bracket 28 fixed upon the wall 7 projects outwardly and carries a horizontal step 29 having raised side flanges 30 and located in the path of the short arm 11 so that the end of the standard will ride upon the step when the standard is in the vertical position. The weight of the standard and its load is thus supported upon the step 29 and the pivot 9 relieved from strain in the hoisting operation. The flanges 30 guard against sidewise movements.

The step is narrow and the lugs 27 are offset as at 31, see Figure 3, to permit the body of the weight 25 to pass beneath the step 29 which with its flanges 30 is thus inclosed between the lugs 27 when the standard is swung to the vertical position.

In order to hold the standard against a downward swing to the inoperative position

after being elevated for service, a locking device is employed shown as consisting of an outwardly projecting arm 32 fastened to the wall 7, having a semicircular outer end 33 and a similarly shaped clamp 34 hinged thereto at 35, adapted to encircle the standard. The free end of the clamp 34 is slotted to receive a lug 36 on the arm 32 and has a hole 37 in its exposed end adapted to permit the insertion of a pin, not shown, by which the clamp is locked upon the standard and the latter reliably maintained in the upright position.

The counterweight 25 is slightly overbalanced by the greater weight of the hoisting head and long arm 10 of the standard, so that the latter tends normally to assume the inoperative position, and is supported horizontally in such position by a bracket 38 fixed on the wall and located at any convenient point between the pivot 9 and the hoisting head.

The operation is briefly as follows:—Assuming the standard to be in the inoperative position shown in Figure 2 and in dotted lines in Figure 1, and resting on the bracket 38, it is swung manually on its pivot 9 by the operator to the vertical position and locked in the clamp 33, 34. In this position the lower end of the standard rests upon the step 29 and is confined between the flanges 30 thereon, and is thus securely supported in all directions. By applying the crank 19 to the hoisting head the apparatus is in condition for service. A reversal of the operation again lowers the standard to the idle position.

Modifications may be made in the forms and proportions of the parts as may be found necessary or desirable in adapting the invention to various locations and conditions of installation and service.

I claim:—

1. A counterbalanced hoisting apparatus swingingly mounted intermediate its ends in a sidewalk area and arranged to be swung from an inoperative position below the sidewalk level to an operative position above such level, and means disposed upon opposite sides of the pivot for holding it in such operative position.

2. A standard swingingly mounted in a sidewalk area, a hoisting head on one end of said standard, said standard arranged to be swung vertically to present said head in operative position above the sidewalk level, and means fixed on the area wall engaged by the opposite end of said standard for supporting said standard and head in such operative position.

3. A standard swingingly mounted in a sidewalk area, a hoisting head on one end of said standard, and a counterweight on the opposite end of said standard, said standard arranged to be swung vertically to present said head in operative position above the sidewalk level, and means on a wall of said area for holding said standard and head in such operative position.

4. A standard swingingly mounted in a sidewalk area, a hoisting head on one end of said standard, a counterweight on the opposite end of said standard, said standard arranged to be swung vertically to present said head in operative position above the sidewalk level, and a step engaged by such opposite end and arranged to support said standard and head in such operative position.

5. A standard swingingly mounted in a sidewalk area, a hoisting head on one end of said standard, a counterweight on the opposite end of said standard, said standard arranged to be swung vertically to present said head in operative position above the sidewalk level, locking means for holding said standard and head in such operative position, a step engaged by such opposite end and arranged to support said standard and head in such operative position, and means for supporting said standard and head in the inoperative position below the sidewalk level.

In testimony that I claim the invention above set forth I affix my signature hereto.

EDWARD D. HOOKER.