

(No Model.)

G. H. REYNOLDS.
PLUNGER ELEVATOR.

No. 595,280.

Patented Dec. 7, 1897.

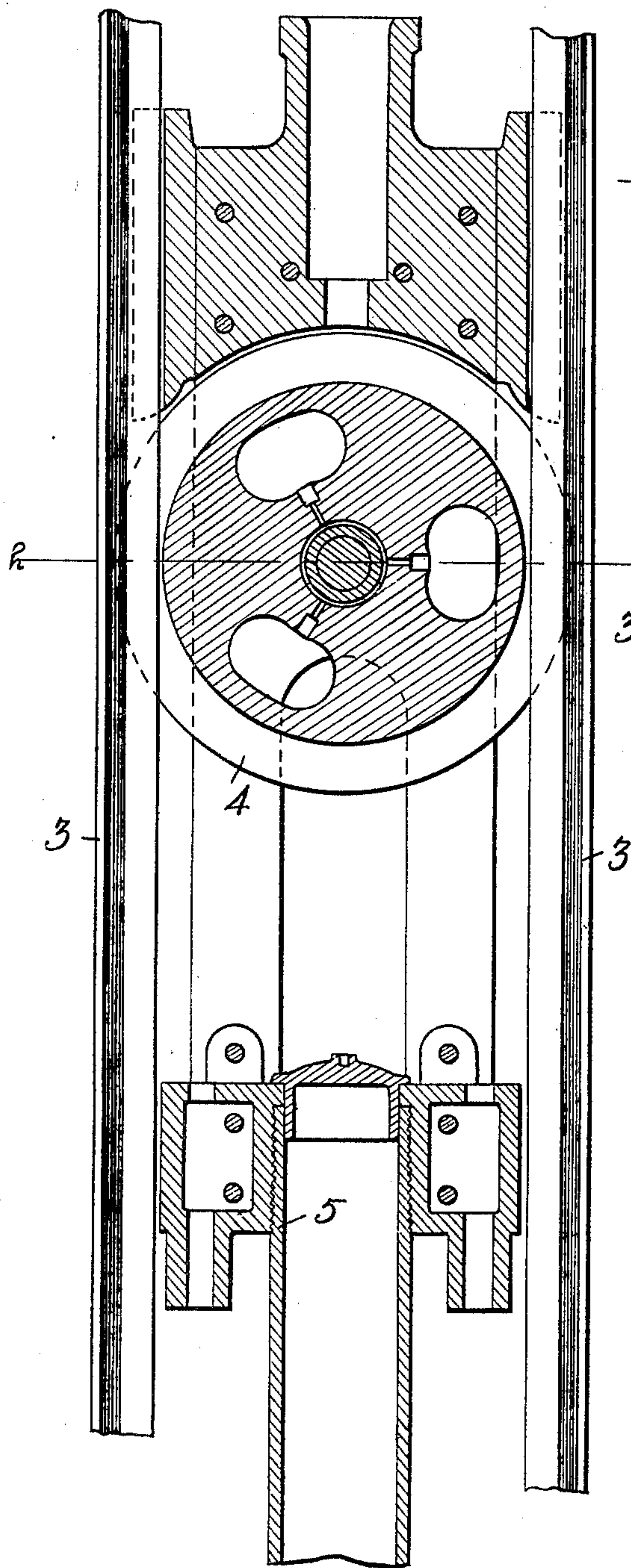


Fig. 1.

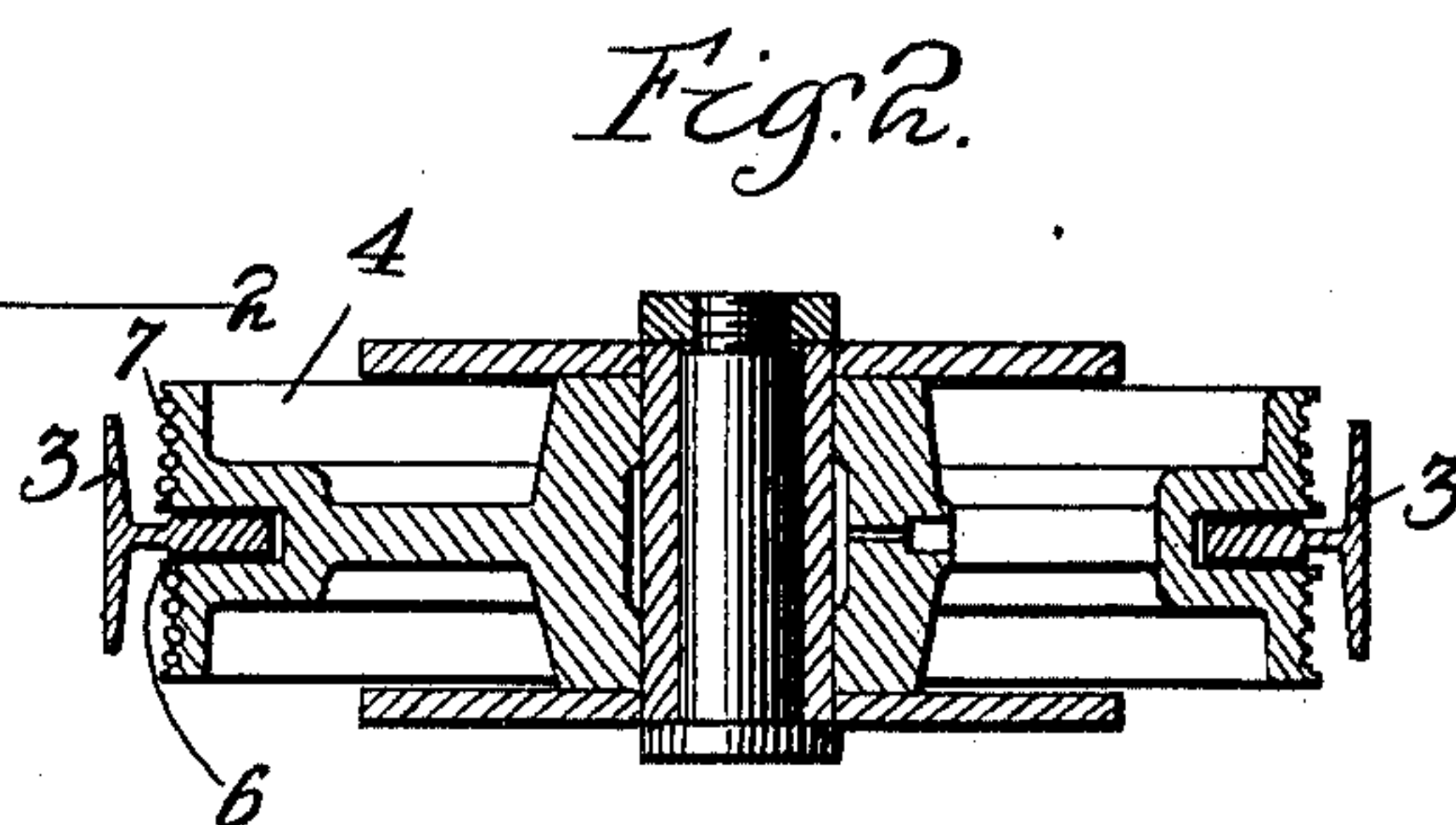


Fig. 2.

Witnesses
Wm. M. Rheem
O. Shumtree

Inventor
George H. Reynolds
by Paul Symmestvedt
att'y

UNITED STATES PATENT OFFICE.

GEORGE H. REYNOLDS, OF CHICAGO, ILLINOIS, ASSIGNOR TO THE CRANE
ELEVATOR COMPANY, OF SAME PLACE.

PLUNGER-ELEVATOR.

SPECIFICATION forming part of Letters Patent No. 595,280, dated December 7, 1897.

Application filed April 30, 1897. Serial No. 634,547. (No model.)

To all whom it may concern:

Be it known that I, GEORGE H. REYNOLDS, a citizen of the United States, residing in Chicago, Cook county, Illinois, have invented certain new and useful Improvements in Plunger-Elevators, of which the following, taken in connection with the accompanying drawings, is a specification.

My invention has particular relation to that class of elevators in which a weighted ram or plunger is used to raise the car, the car being lowered by hydraulic pressure acting so as to raise said ram or plunger. As the cylinder in this form of elevator must necessarily stand vertical and, as in the preferred construction, the pulleys are so arranged that the plunger will be equal in length to one-half the height of the building, considerable valuable floor-space would be wasted if it were not possible to set the operating apparatus within the elevator-shaft, which is at one side of the car. In some cases the space available for this purpose is too narrow to admit of the free movement of a large sheave and cross-head, if such sheave and cross-head are made of the usual construction. To overcome this difficulty, I have provided in the sheave itself a circumferential groove extending around the middle of its face in such a way as to divide the surface of the sheave in two parts and permit the guide-rails or T-irons to be brought closer together and the whole combined in a smaller space than would otherwise be possible.

Referring now particularly to the accompa-

nying drawings, Figure 1 represents a vertical section through the upper end of an elevator-plunger and its connected sheave having my improvements applied thereto, and Fig. 2 shows a section of the same on the line 2 2 of Fig. 1.

The guides of the cross-head (marked 3) are arranged as shown in Fig. 1, the sheave 4 being constructed to travel up and down between the guides 3 as the plunger 5 is raised and lowered. By an examination of Fig. 2 particularly it will be seen that I have arranged the sheave or pulley 4 with a circumferential groove 6 in its face to admit of its straddling the T-iron guides 3 without interference with the operation of the sheave 4 or the cables 7, which run around the same. This circumferential groove is made in the middle of the pulley, so as to make an equal number of turns on each side of the same, balancing the strain upon the cross-head axle.

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

In a plunger-elevator, the combination of two vertical guide-rails, a sheave arranged to move vertically between said rails, and a circumferential groove in the face of said sheave constructed to straddle said rails, substantially as described.

GEORGE H. REYNOLDS.

Witnesses:

LOUIS K. GILLSON,
PAUL SYNNESTVEDT.