

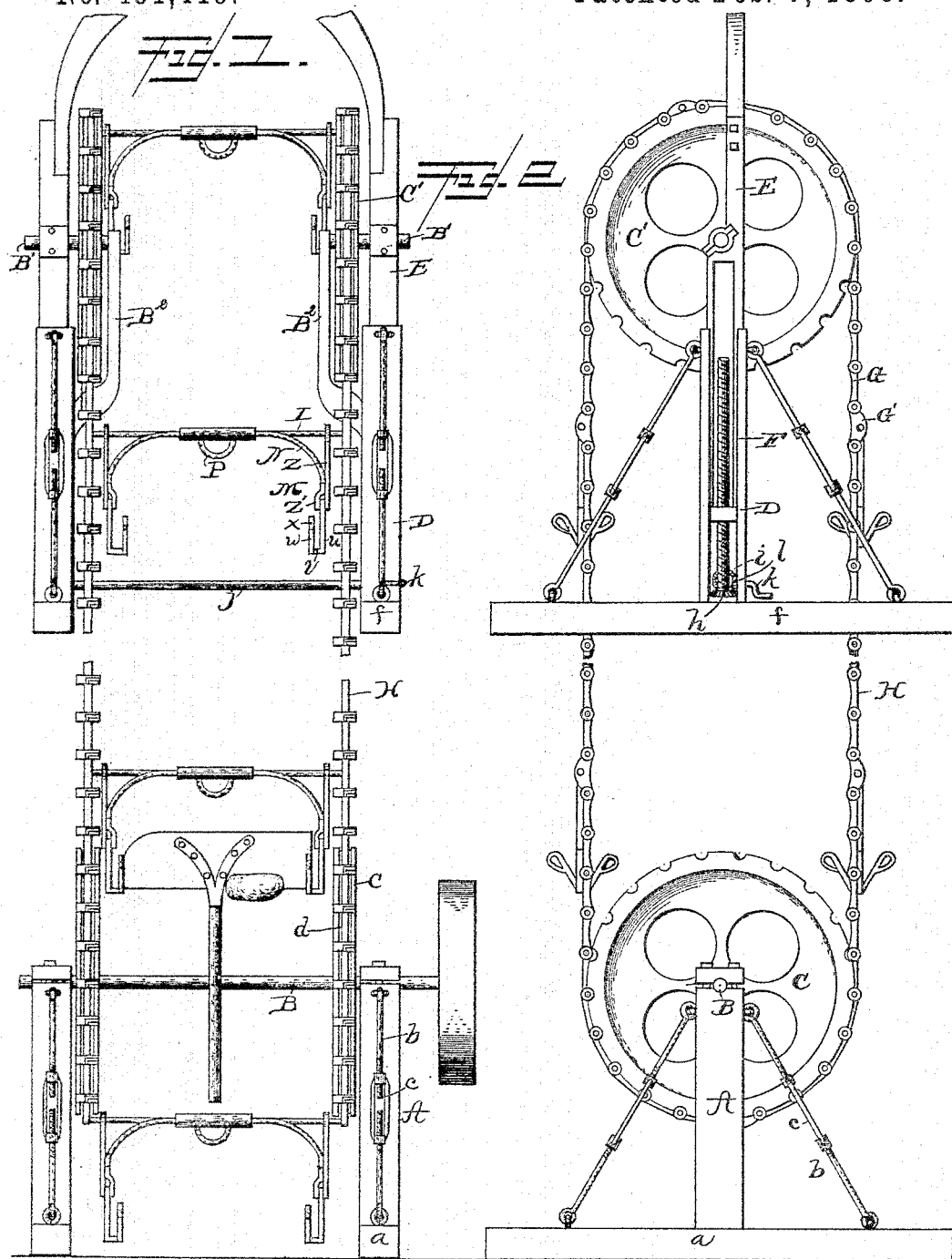
(No Model.)

2 Sheets—Sheet 1.

E. J. GARRARD.
HOD ELEVATOR.

No. 491,419.

Patented Feb. 7, 1893.



Witnesses

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Edward J. Garrard Inventor
By W. F. Fitzgerald & Co.,
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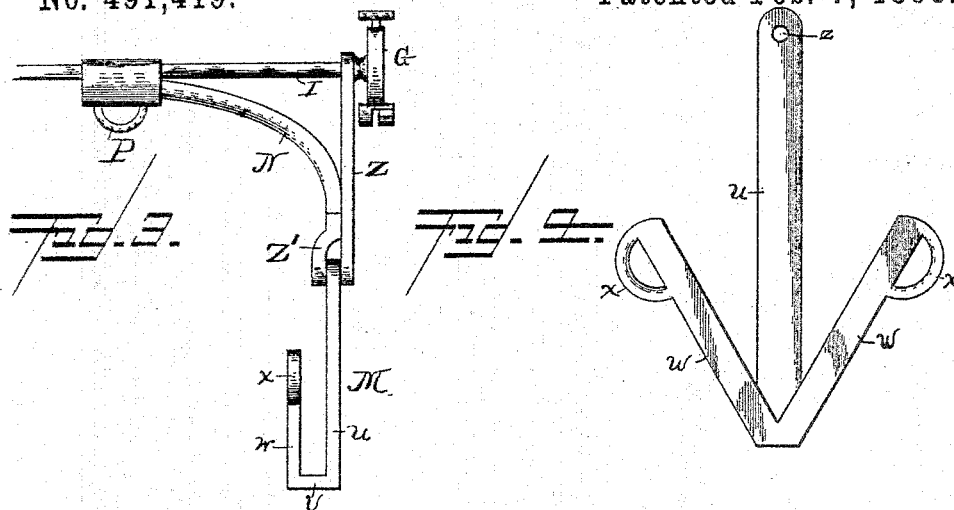
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UNITED STATES PATENT OFFICE.

EDWARD J. GARRARD, OF FRANKLIN, PENNSYLVANIA.

HOD-ELEVATOR.

SPECIFICATION forming part of Letters Patent No. 491,419, dated February 7, 1893.

Application filed March 26, 1892. Serial No. 426,580. (No model.)

To all whom it may concern:

Be it known that I, EDWARD J. GARRARD, a citizen of the United States, residing at Franklin, in the county of Venango and State of Pennsylvania, have invented certain new and useful Improvements in Hod-Elevators; and I do hereby 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.

My invention has relation to improvements in hod elevators, and it consists in the construction and arrangement of parts, as will be hereinafter described, and particularly pointed out in the claims.

In the accompanying drawings Figure 1 is a front elevation of my improved elevator complete; Fig. 2 is a side elevation of the same; Fig. 3 is an enlarged, detail front elevation of a portion of one of the cross-bars, a chain bearing link and a hod hanger connected together; Fig. 4 is an elevation of the inner side of one of the hod hangers.

In the said drawings similar letters designate corresponding parts throughout the several views, referring to which: A, indicates the supporting standards of the drive-shaft B, which are preferably mounted upon base blocks as *a*, and braced by the sectional rods *b*, provided with the turn-buckles *c*. The drive-shaft B, which is rotated through the medium of suitable gearing, by any suitable motor, is journaled in suitable bearings in or upon the standards A; and upon said shaft are fixedly mounted the chain driving wheels C, which may be cast with a solid body or with spokes, as illustrated.

D, indicates the upper standards which preferably rise from base blocks as *f*, and are preferably braced, as illustrated. These standards D, are provided with suitable ways or grooves for the movable standards E, in or upon which the outer ends of the short upper shafts B', are journaled, which shafts B', carry idler chain wheels C'.

The inner ends of the shafts B', are journaled in bracket arms B², as better illustrated in Fig. 1 of the drawings, and the lower ends of the said arms B², are connected in a suitable manner to the movable standards E,

whereby it will be perceived that they will not interfere with the passage of the hod hangers presently to be described.

Formed in blocks, or the like, at the lower end of the movable standards E, which are preferably connected at their upper ends by an arch brace, as shown, are vertically-disposed threaded bores, through which take the threaded rods F, which are journaled in suitable bearings at their lower ends and are designed to be rotated to raise and lower the wheels C', to tighten or loosen the chain belts or to raise the idler wheels, another story. Fixedly mounted upon the threaded rods F, adjacent to the lower ends thereof are beveled gear wheels *h*, with which mesh the beveled pinions *i*, on the horizontal shaft *j*, which serves to transmit motion from one of the rods F, to the other.

Motion is preferably imparted to one of the shafts F, through the medium of a crank shaft *k*, carrying a pinion *l*, at one end engaging the gear wheel *h*, but I do not desire to confine myself to such gearing for rotating the rods F, inasmuch as the same may be rotated in any approved manner.

G, G', indicate the links, which when connected together form the endless chains H, which travel over the wheels C, C', as shown in Figs. 1 and 2 of the drawings.

Seated and suitably secured in the links G', are the cross-bars I, from which depend hanger links Z, which are preferably of about the proportional length illustrated and are provided adjacent to their lower ends with laterally-disposed eyes to receive the T-branches *z*, of the hod hangers M. These hangers M, preferably comprise the body *u*, the T-branches *z*, the inwardly directed branch *v*, at the lower end of the body, and the upwardly diverging branches *w*, which are preferably provided upon their outer sides with hand loops *x*, whereby the hangers may be readily pushed or pulled out of their perpendicular positions, when desirable.

Suitably connected to the bodies of the pairs of hanger-links Z, and to the cross-bar I, suspending said links, is an arched branch N, which is provided at or adjacent to its middle with a hook or eye P, upon which a bucket of water, or the like, may be hung and elevated

when desirable; and suitably connected to the links Z, at one end are depending brackets Z', which are provided with apertures to receive the inner ends of the T-branches z, of the hod hangers M, and serve in conjunction with the said links Z, to hang the said hangers M.

In operation, the endless chains are caused to travel, preferably at a comparatively slow speed, so that the hods may be placed upon and removed from the hangers M, without stopping the travel of the chains. Thus it will be readily perceived that a continuous train of hods may be elevated.

By reason of the peculiar construction disclosed, and the fact that the hangers M, always rest in a perpendicular position, it will be readily seen that no harm will result if a hod is not removed at the upper end of the elevator.

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

1. In a hod elevator, the combination with the grooved standards D, and standards E, carrying the bracket arms B², in which are mounted the shafts B', with wheels C', and the perforated screw threaded blocks, as described, of screw threaded vertical shafts F, engaging said blocks, the cross-shaft i, and

suitable gearing for operating the several shafts to adjust the uprights E, substantially as and for the purposes specified.

2. In a hod elevator, substantially as described, the combination with a pair of parallel elevator chains, and a cross-bar connecting said chains; of a pair of hod hangers respectively comprising a body having an inwardly-directed, lateral branch and diverging arms extending upwardly from said branch, hanger links connecting the hod hangers to the cross-bar and a brace connected to the cross-bar and connecting the hanger links; substantially as and for the purpose set forth.

3. In a hod elevator, substantially as described, the combination with a pair of parallel elevator chains, a cross bar connecting said chains, a pair of hod hangers and hanger-links connecting said hangers and the cross-bar; of a brace connected to the cross-bar and connecting the hanger links, and a hook or eye connected to and depending from said brace; substantially as specified.

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

EDWARD J. GARRARD.

Witnesses:

JOHN OSBORN,

WILLIAM GARRARD.