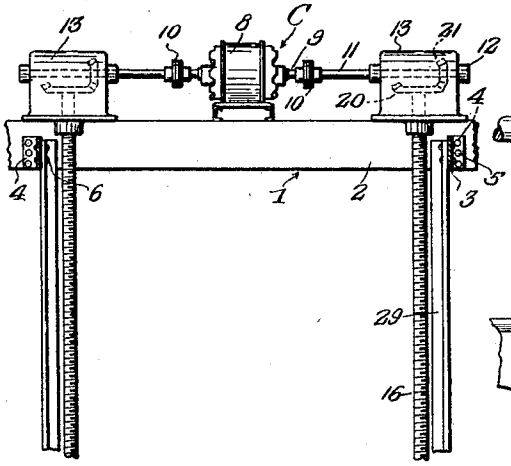
Dec. 8, 1925. 1,564,536

H. A. DAVIS ET AL

ELEVATOR HOIST

Filed Feb. 14, 1924



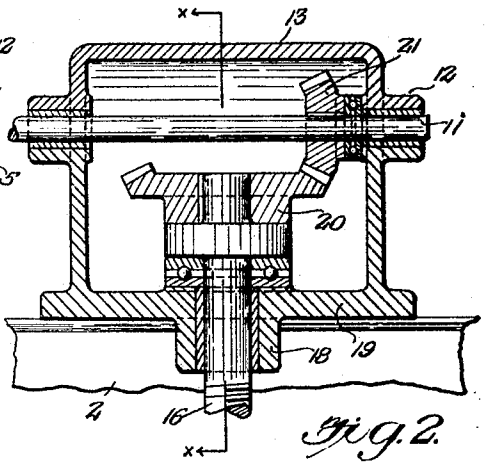


Fig. 2.

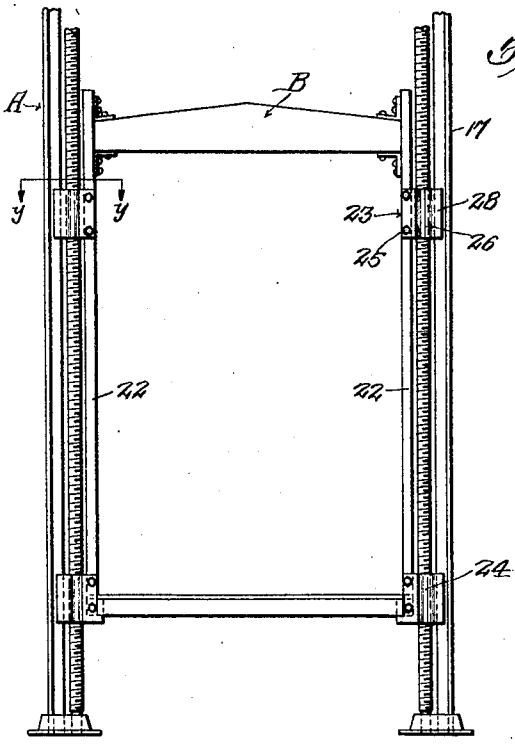


Fig. 1.

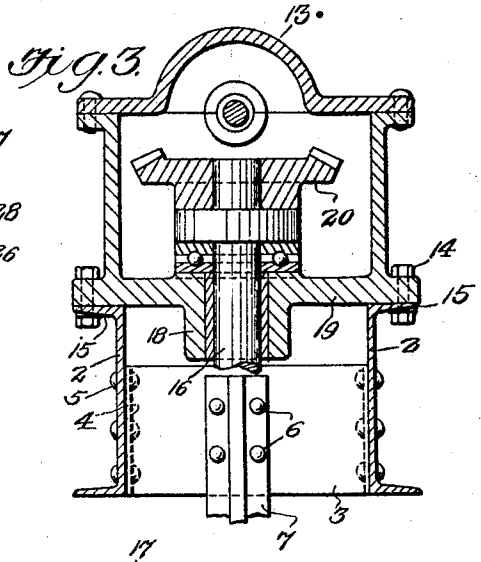


Fig. 3.

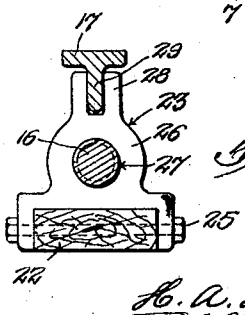


Fig. 4.

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# UNITED STATES PATENT OFFICE.

HAROLD ALTON DAVIS AND PAUL SILAS NEWCOMER, OF FOSTORIA, OHIO.

## ELEVATOR HOIST.

Application filed February 14, 1924. Serial No. 692,715.

*To all whom it may concern:*

Be it known that HAROLD A. DAVIS and PAUL S. NEWCOMER, citizens of the United States, residing at Fostoria, in the county of Seneca and State of Ohio, have invented certain new and useful Improvements in Elevator Hoists, of which the following is a specification.

This invention relates to new and useful improvements in elevator hoists and has for its primary object to provide a new and improved method of raising and lowering elevators without the use of cables and drums.

With the foregoing and other objects in view that will appear as the nature of our invention is better understood, the same consists in the novel features of construction, combination, and arrangement of parts illustrated in the accompanying drawings and more particularly pointed out in the appended claim.

In the accompanying drawings which are for illustrative purposes only and are therefore not drawn to scale:—

Figure 1 is a diagrammatic view, illustrating the application of our invention.

Figure 2 is a longitudinal sectional view, taken through the upper end of one of the worm shafts and its corresponding drive gearing.

Figure 3 is a vertical transverse sectional view, taken on line X—X of Figure 2, and

Figure 4 is a detail horizontal section taken on the plane indicated by the dotted line Y—Y of Figure 1.

Referring to the drawings for a more particular description of our invention, and in which drawings like parts are designated by like reference characters throughout the several views, A represents the elevator shaft, B the elevator and C our improved hoist or attachment, as a whole. This attachment comprises a horizontal frame 1 consisting of a pair of corresponding laterally spaced angle bars 2 connected together at their opposite ends by the horizontal cross bars 3. The cross bars 3 are provided at opposite ends with outwardly bent flanges 4 riveted as at 5 to the angle bars 2. The cross bars 3 are also riveted as at 6, intermediate their ends, to the upper ends of the vertical guide bars 7 of the elevator shaft.

A motor 8 is mounted on the supporting frame 1 and its shaft 9 connected by the couplings 10 to the horizontal drive shafts 11 journaled at their outer ends in the bearings 12 of the housings 13 mounted upon and bolted as at 14, to the upper flanges 15 of the angle bars 2, aforesaid.

Vertical worm shafts 16 extend the full length of the elevator shaft and are disposed inwardly of and in parallel relation with the side members 17 of the latter. The upper ends of the worm shafts 16 extend through bearings 18 depending from the bottom walls 19 of the housings 13 and have keyed thereto the bevelled gears 20 which are disposed within the housings and meshed with bevelled pinions 21 keyed to the outer ends of the horizontal drive shafts 11. The side members 22 of the elevator are provided with an upper and lower pair of castings 23 and 24, respectively, which castings are bolted as at 25 to said side members and are provided in their substantially cylindrical body portions 26 with central interiorly threaded bores 27 which receive the worm shafts 16. The outer ends of the castings 23 and 24 are provided with slotted extensions 28 which receive the inner guide flanges 29 of the side members 17 of the elevator shaft.

From the foregoing description it will be apparent that when power is applied to the horizontal drive shafts 11, the worm shafts 16 are rotated which causes the elevator B to ascend or descend, depending of course on the direction of rotation of said worm shafts.

Through the use of our present invention, we eliminate the use of cables or cable drums. Our hoist is not only simple and economical in construction but is very durable and highly efficient in use and may be installed in the minimum time.

From the foregoing description taken in connection with the drawings, it is thought that the construction, operation and advantages of our invention will be readily understood without requiring more extended explanation. Various changes in the form, proportions, and minor details of construction may be resorted to without departing from the principles or sacrificing any of the advantages of our invention as defined in the appended claim.

Having described our invention, what we claim as new and desire to secure by Letters Patent is:

In a device of the kind described, a pair of vertically disposed spaced T-irons, a pair of vertically disposed screws each adjacent one of said T-irons, the webs of said T-irons confronting each other, pairs of nuts, each pair being disposed on a respective screw in spaced relation, spaced arms extending from each other to embrace the web of the adjacent T-iron, other spaced arms projecting from the respective nuts in a direction opposite the first mentioned arms, and connecting members each associated with the nuts on a respective screw, each of said connecting members being fitted within the last mentioned arms of the respective nuts, and bolts passing through said arms and connecting members to secure the latter fixedly to the nuts.

In testimony whereof they affix their signatures.

HAROLD ALTON DAVIS.
PAUL SILAS NEWCOMER.