(No Model.)

L. ATWOOD.

SAFETY HOD ELEVATOR.

No. 271,678. Patented Feb. 6, 1883.

Fig. 1.

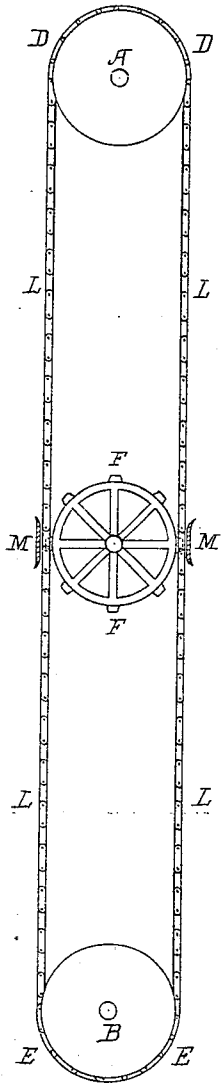


Fig. 2.

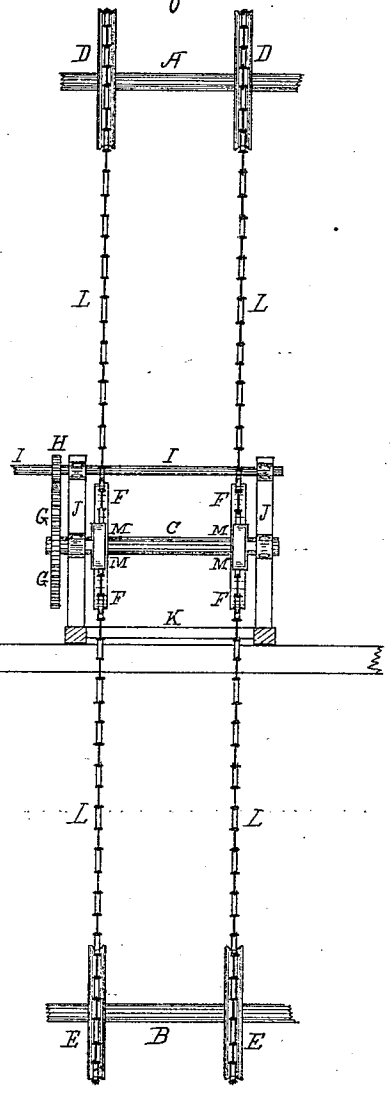
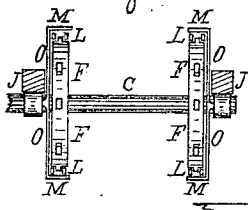


Fig. 3.



Witnesses:

Lucien Ford.

Jacob Rettig.

Inventor:

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UNITED STATES PATENT OFFICE.

LEONARD ATWOOD, OF NEW YORK, N. Y.

SAFETY HOD-ELEVATOR.

SPECIFICATION forming part of Letters Patent No. 271,678, dated February 6, 1883.

Application filed July 25, 1882. (No model.)

To all whom it may concern:

Be it known that I, LEONARD ATWOOD, a citizen of the United States, and a resident of the city of New York, in the county and State of New York, have invented certain new and useful Improvements in Safety Hod-Elevators and the Method of Hod-Elevating, of which the following is a specification, reference being had to the accompanying drawings.

The chief object of my invention is to adapt the endless traveling-ladder hod-elevator now known in the art to exigencies of modern building.

It is now usual not only to build very high buildings, but also to make underneath very deep excavations for basements, cellars, and sub-cellars. On the very bottom of this excavation it is customary to mix the mortar, and a hod-elevating apparatus must reach this point to carry up hods filled with mortar and return emptied hods to be refilled and again elevated. It is also customary to deposit bricks on the street above, and on this level hods are therewith filled, carried to the ascending elevator, and attached to be hoisted to their destination at the top. Empty brick-hods are taken off the descending ladder at this point to be refilled. Hitherto such a hod-elevator has always been driven from the top or bottom; but cannot practically or conveniently be so driven by horse or steam power, owing to the difficulty of reaching such positions. The same objections apply, but not with equal force, to the use of hand-power in the same positions. To overcome these fundamental objections I have invented the apparatus and system hereinafter described, and illustrated in the drawings hereto attached, wherein similar letters of reference indicate corresponding parts throughout the several views.

Figure 1 is a side, and Fig. 2 a front, elevation of my apparatus; and Fig. 3 is a plan of the motive-gearing on a median line.

The shafts A and B carry companion pulleys D D and E E, and are journaled in ordinary frames well known in the art. These frame-works are located respectively at the top and bottom of the hoistway, and the endless ladder travels around these pulleys.

Any well-known means of connecting the chains or ropes L L and affording places of attachment for the hods, may be employed. Between the extremities of such a hod-elevator, and preferably upon the beams on a level with the street, I place the motive-gearing and its frame-work. As shown, it consists of a base, K, sustaining uprights J J, which hold in journals the shafts C and I.

The pinion H upon the shaft I communicates hand, horse, or steam power applied to it in any ordinary manner through the spur-wheel G to the shaft C. This shaft C carries toothed or friction wheels F F, which transmit its motion to the chains or ropes L L, whereby the endless ladder is revolved.

In order to keep the chains or ropes L L against the driving-wheels F F, I provide suitable shoes or guides, M M. These may be held in proper positions by arms or braces—such as O O—affixed to the frame-work, where most serviceable and least in the way, according to the judgment of the mechanic, who may also give such shape and construction to the shoes or guides as to best adapt them to their purpose. I prefer angle-iron bent outward at the ends to prevent catching against the passing links. The surfaces in sliding contact may be lubricated.

In addition to the novel and useful results of my invention already pointed out, the driving machinery is kept much cleaner and consequently wears longer than in the old system, and power in reference to the work to be done is more advantageously applied.

What I claim as novel, useful, and my invention is—

1. A shoe or guide constructed and located to keep the driving-gearing and endless traveling belt of a hod-elevator in contact, substantially as described.

2. The pairs of such shoes or guides located on opposite sides of the driving-wheels, in the manner and for the purpose substantially as described.

3. A method of elevating hods continuously, wherein the driving machinery is located between the terminations of the endless traveling belt, in the manner and for the purpose substantially as described.

4. An endless hod-elevator adapted to ex-

tend above and below the level where motive power is applied, for the purpose and substantially as described.

5. An endless hod-elevator actuated by motive-gearing between its terminations, substantially as described.

6. As motive-gearing for an endless hod-elevator, driving-wheels adapted to engage and actuate the chains or ropes at opposite points of their circumference, substantially as described.

7. As motive-gearing for and between the terminations of an endless hod-elevator, driving-wheels adapted to engage and actuate the chains or ropes, in combination with shoes or guides, whereby such engagement is maintained, substantially as described.

LEONARD ATWOOD.

Witnesses:
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