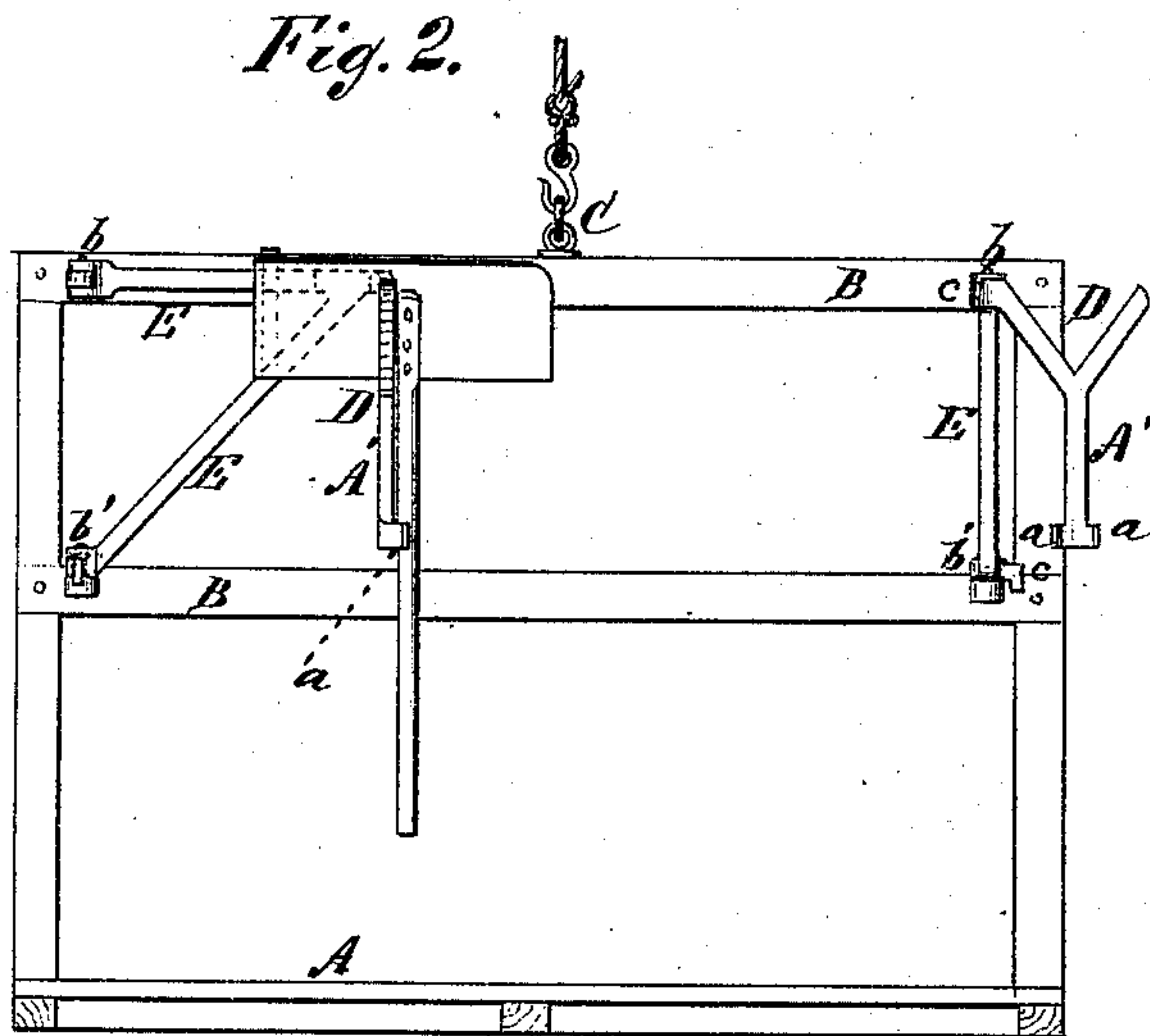
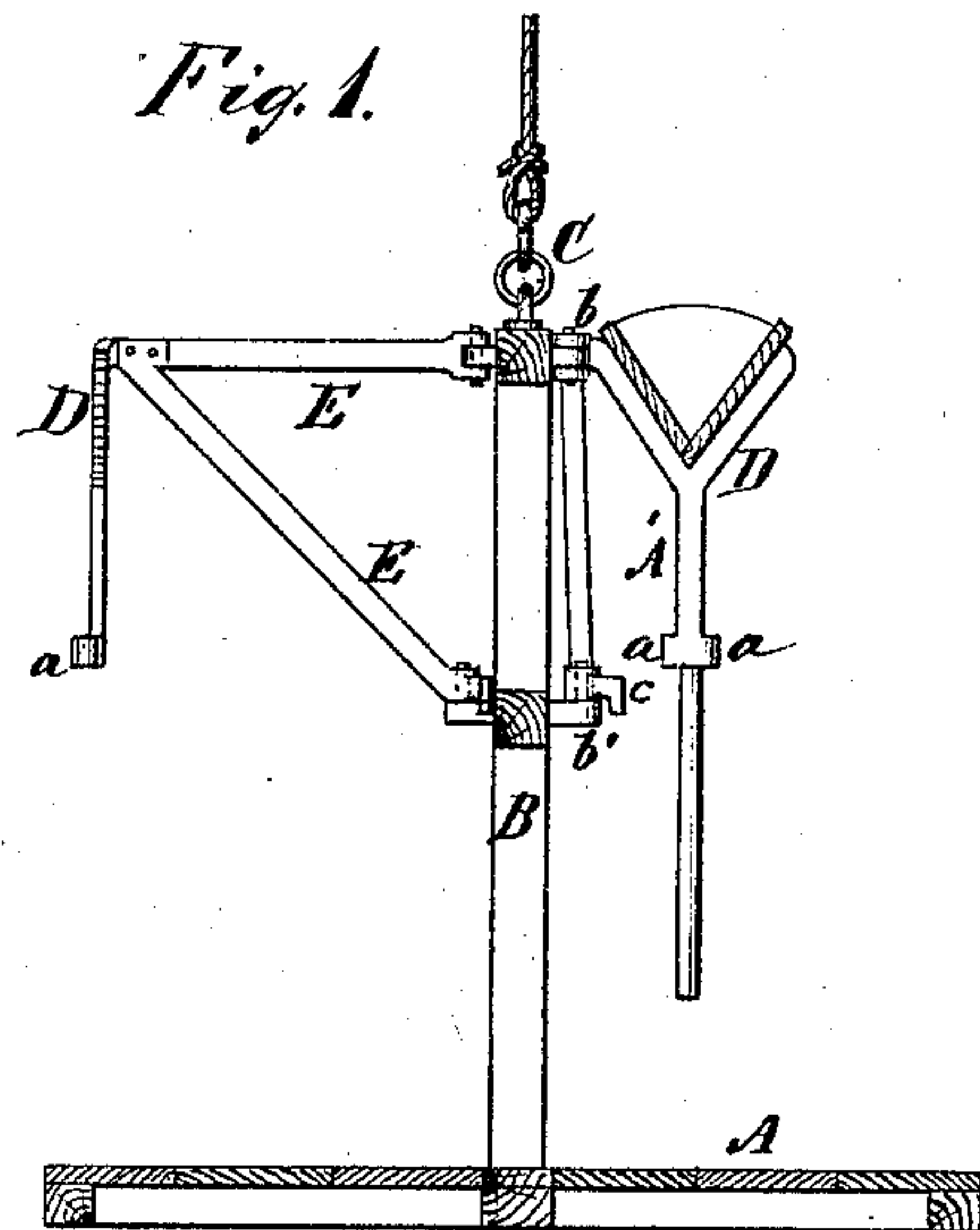


J. W. SUTTON.  
SAFETY HOD-ELEVATOR.

No. 182,086.

Patented Sept. 12, 1876.



*Witnesses:*  
*Henry Eichling*  
*Edward Holly*

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# UNITED STATES PATENT OFFICE.

JOHN W. SUTTON, OF NEW YORK, N. Y.

## IMPROVEMENT IN SAFETY HOD-ELEVATORS.

Specification forming part of Letters Patent No. **182,086**, dated September 12, 1876; application filed March 18, 1876.

*To all whom it may concern:*

Be it known that I, JOHN W. SUTTON, of the city, county, and State of New York, have invented certain Improvements in Safety Hod-Elevators, of which the following is a specification:

With the hod-elevators hitherto in use it has been necessary for the laborer or attendant to step upon the platform of the elevator in placing the hod upon the latter, and in removing it therefrom. This has led to numerous accidents, inasmuch as the ascent or descent of the platform, while the attendant is upon it, exposes the person to danger of being crushed or maimed by contact with the sides, framing, or adjacent timbers of the elevator-way.

The object of my invention is to provide a hod-elevator in which this drawback to safety and utility will be obviated; and to this end my invention consists in a novel combination of horizontally-movable cranes, combined with hod-carrying crotches, with the elevator-platform, whereby the cranes may be swung outward to such position as to have the hods placed in their aforesaid crotches by an attendant standing, not on the platform, but on the floor adjacent thereto, the said cranes being then swung inward toward the center of the platform, to bring the whole into reduced compass for the requisite ascent and descent of the apparatus.

The invention further comprises a novel arrangement of parts whereby the cranes, when loaded, are caused to swing automatically inward to their places, preparatory to the vertical movement of the elevator.

The invention further comprises a novel construction of parts whereby the hods are firmly and securely retained in position in the crotches during the vertical movement of the elevator.

Figure 1 is a cross-section, and Fig. 2 a side view, of an elevator fitted and constructed according to my invention.

A is the horizontal base or platform of the elevator, and B is the upright standard or framing of the same, to which, as at C, is attached the draft-rope whereby the elevator is raised and lowered. The elevator is designed to run in the usual elevator-way, and the draft-rope is run upon pulleys, and operated by any suit-

able power, also in any usual manner, therefore requiring no special description here. The platform A, however, may be made much narrower than is usual, the main object of my invention being to avoid entirely the necessity of stepping upon the platform, and considerable width of the latter, therefore, entirely uncalled for.

D D are the crotches for holding the hods, each of the said crotches having a downwardly-projecting extension, A', at each edge of the lower extremity of which is a flange, *a*. Each crotch D is rigidly attached to the outer or free extremity of a crane, E, which is pivoted, as shown at *b b'*, to the standard or framing B. The lowermost pivot, *b'*, is placed farther out from the standard than the upper one, *b*, so that when the cranes, when left free to swing from a position at right angles to the standard, will, by the action of their own gravity, swing or turn inward to a position more or less parallel with the said standard. Upon each crane are two stops, *c*, which, when the crane is swung outward, limits its movement to a position at right angles to the standard. As many of the cranes, with their attached crotches, may be provided upon the standard as there may be room for, or as circumstances may require and permit.

In the use and operation of the apparatus, the cranes are first swung outward, as herein just explained, and a hod (indicated at G in the drawings) is laid in each of the crotches, the handle of the hod, instead of being set against or upon the platform, being placed between the flanges *a*, which keep the said handle from lateral movement, while the entire weight of the hod rests in the crotch. Inasmuch as the hod fits the crotch with more or less snugness, it is supported and carried steadily thereby. The hod being thus placed, the crane is released and swings automatically inward to a position more or less parallel with the standard, thereby bringing the hod close to the latter, and narrowing the apparatus so that it may pass readily up and down the elevator-way. The elevator is then operated by suitable means to lift the hods to the required height, which done, the attendant reaches from his stand-point on the adjacent floor, swings the crane outward, and removes the



hod without once stepping upon the elevator or incurring personal danger therefrom.

The empty hods, being placed in the crotches in the same manner as loaded ones, are brought down by the lowering or reverse movement of the elevator.

What I claim as my invention is—

1. A horizontal movable crane, constructed with the hod-carrying crotches D, in combination with the elevator, substantially as and for the purpose set forth.

2. The lower pivot *b'* of the crane E, arranged at a greater distance from the stand-

ard B than the upper pivot *b*, whereby the cranes, with their crotches D, are caused to automatically swing inward toward the stand-ard, substantially as set forth.

3. The flanges *a*, provided upon the lower extremity of the extension A' of the hod-carrying crotches D, in combination with the crane E, substantially as and for the purpose set forth.

JOHN W. SUTTON.

Witnesses:

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