

No. 673,232.

Patented Apr. 30, 1901.

B. E. BECHTEL.  
BRICK TRUCK.

(Application filed Dec. 20, 1900.)

(No Model.)

Fig. 1.

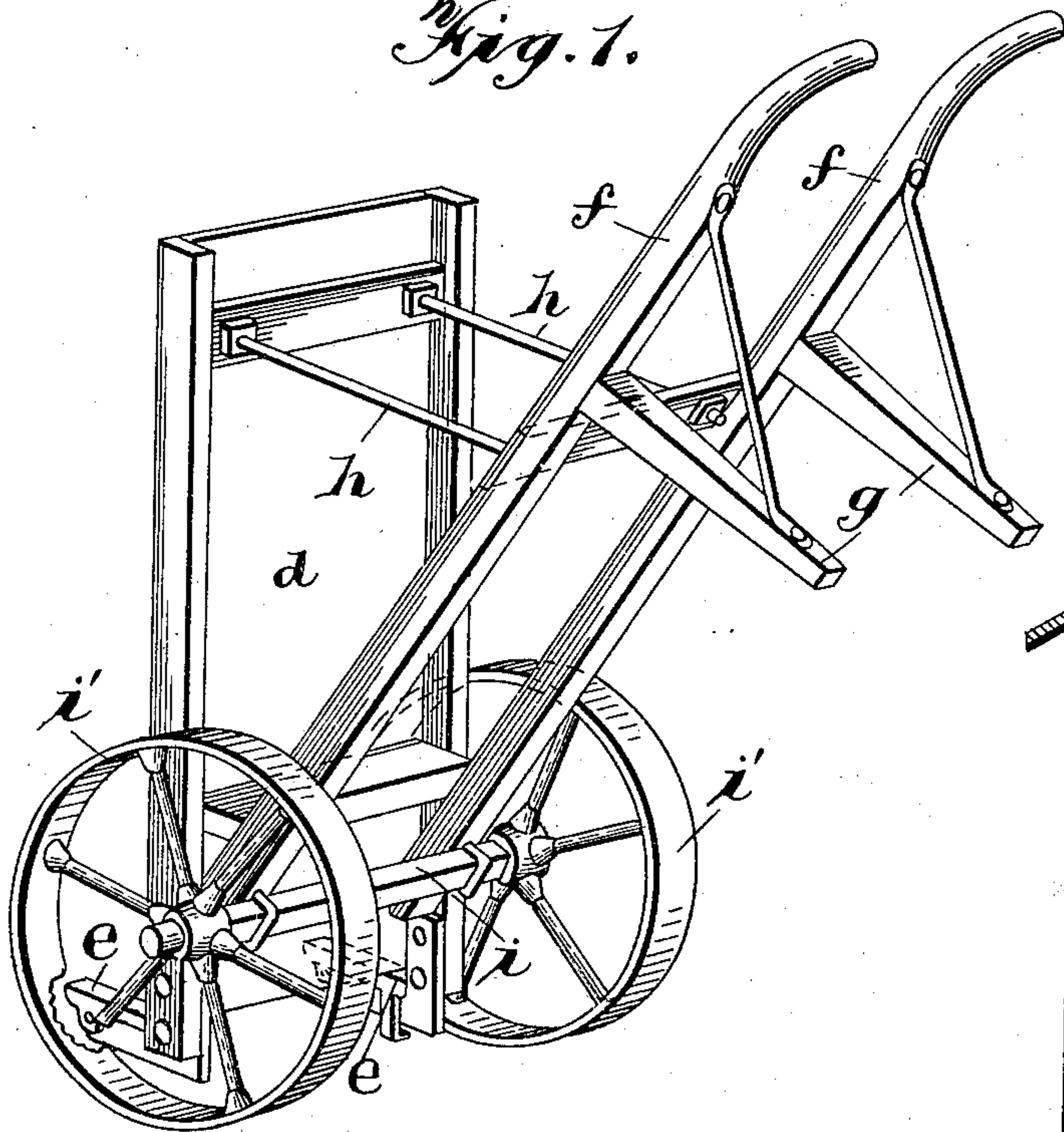


Fig. 3.

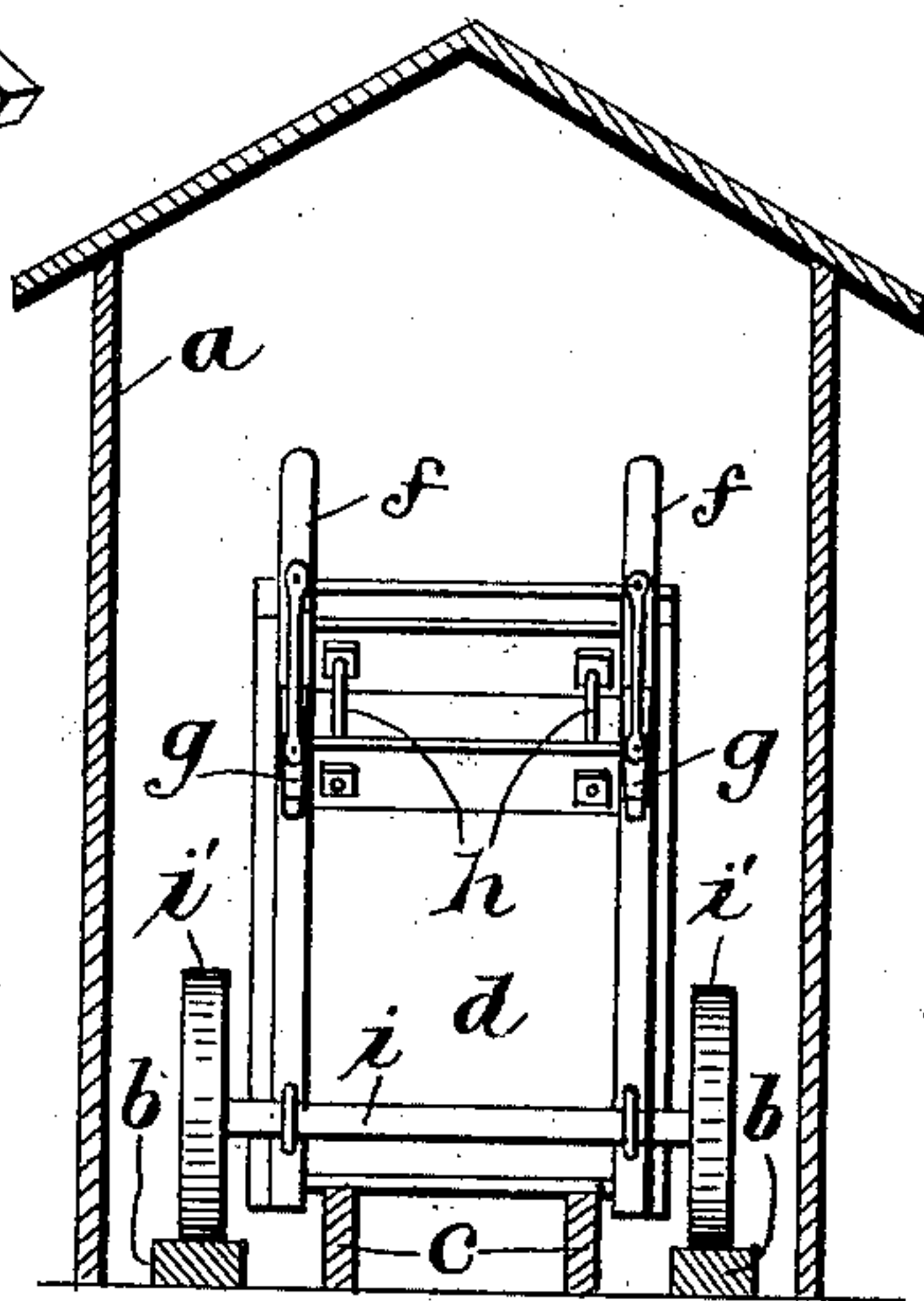


Fig. 2.

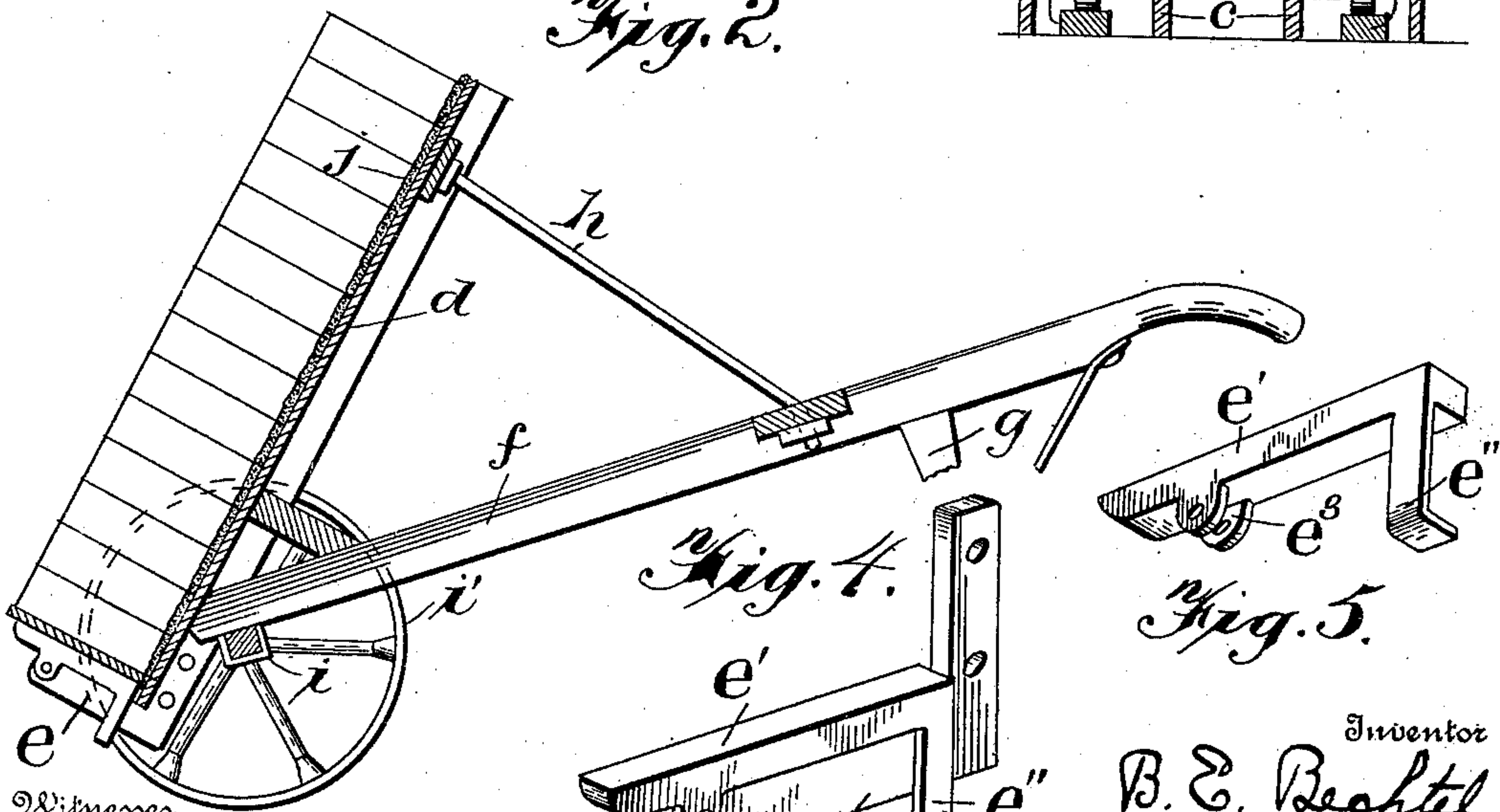


Fig. 4.

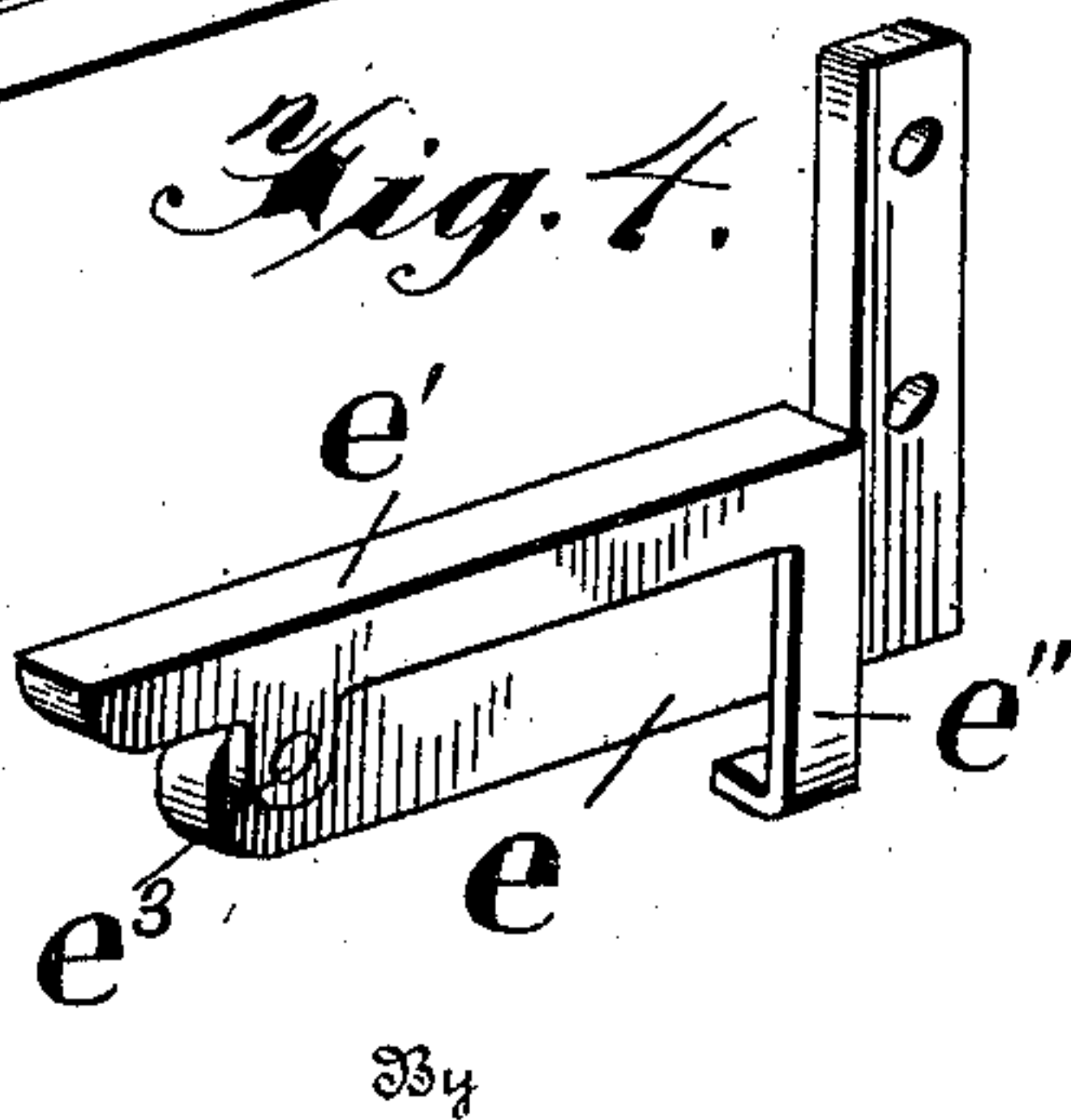
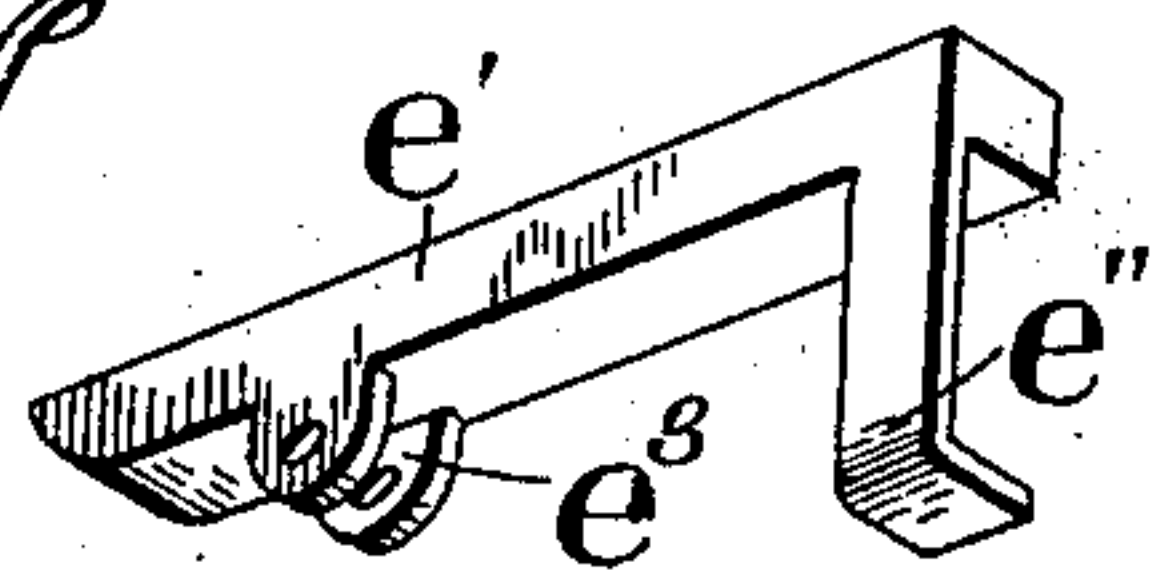


Fig. 5.



Witnesses

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# UNITED STATES PATENT OFFICE.

BYRON E. BECHTEL, OF WATERLOO, CANADA.

## BRICK-TRUCK.

SPECIFICATION forming part of Letters Patent No. 673,232, dated April 30, 1901.

Application filed December 20, 1900. Serial No. 40,506. (No model.)

*To all whom it may concern:*

Be it known that I, BYRON E. BECHTEL, a subject of the Queen of Great Britain, residing at Waterloo, Province of Ontario, Dominion of Canada, have invented certain new and useful Improvements in Brick-Trucks; 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.

This invention relates to certain improvements in brick-trucks, and particularly to an improved construction of truck adapted to carry the green bricks from the brick-machine into the hacks or drying-tunnel, and from thence after the green bricks have been dried to the brick-kiln; and the objects and nature of my invention will be obvious to those skilled in the art in view of the following detailed explanations of the accompanying drawings.

My invention consists in certain novel features in construction and in combinations and in arrangements of parts, as more fully and particularly pointed out and described hereinafter.

Referring to the accompanying drawings, Figure 1 is a perspective view of the truck without its load of bricks, showing the same in about the position it assumes immediately after picking up a loaded pallet or just before depositing it on the supports. Fig. 2 is a side elevation of the truck and a pallet of bricks thereon, the truck being shown in the position it assumes while transporting a load. Fig. 3 is a cross-section through a hack or drying-tunnel, showing the truck therein in rear elevation and in the position shown in Fig. 2. Fig. 4 is a detail perspective view of one of the brackets. Fig. 5 is a detail perspective view of a pivoted footpiece detached from its bracket.

In the drawings, *a* is a drying-tunnel, the floor of which is provided with the track extending longitudinally therethrough and preferably extending from the brick-machine through said tunnel to the brick-kiln. This track is composed of the separated suitably constructed and arranged flat (or otherwise formed) rails *b b*.

*c c* are supporting rails or beams arranged longitudinally along the floor of the drying-tunnel, preferably parallel with the track-rails, and usually, although not necessarily, arranged between the track-rails. These supporting-beams are preferably of greater height than the track-rails, with their upper edges in a horizontal plane above the plane of the track-rails.

Usually wheeling-in and off-bearing brick-trucks are employed in a plant such as hereinbefore referred to. The off-bearing truck is employed to convey the green bricks from the brick-machine and deposit the same in the drying-chamber, while the wheeling-in truck is employed to convey the dried bricks from the drying-tunnel to the brick-kiln. These two trucks are usually, broadly considered, the same in construction, although I have illustrated a truck particularly intended and adapted for use as a wheeling-in truck.

Referring to my truck as illustrated in the drawings, *d* is the platform or bed thereof, preferably comprising two parallel side beams suitably and rigidly secured together by cross-pieces. This platform is suitably formed to receive the pile or stack of bricks on the loaded pallet upheld on the platform by a suitable bottom ledge or support. This bottom ledge or support can be formed about as shown by one or more forwardly-projecting strong rigid toes, brackets, or fingers *e e*. In the present instance I show two such brackets *e e* secured rigidly to the lower ends of said side beams, respectively, and projecting forwardly a suitable distance approximately at right angles to the length or plane of the platform. The inner ends of these brackets are usually, although not necessarily, secured to the inner side faces of the lower ends of the said side beams, and from thence deflected forwardly and properly spaced to pass beside the supporting rails or beams in depositing the loaded pallet thereon or in removing the same therefrom. If desired, the bottom ledge can be provided with a tilting support or foot having a limited vertically-tilting movement. As an example of a device which might be employed for this purpose I show each bracket *e* provided with a tilting foot or support *e'*,



consisting of an elongated bar arranged longitudinally along and normally resting on the top edge of the bracket and projecting outwardly a suitable distance beyond the end of the bracket, as more clearly shown in Fig. 4. This foot is suitably hinged or pivoted to the bracket to swing on a horizontal axis at a point intermediate the length of the foot. In the example shown the foot is provided with ears depending on opposite sides of the bracket and joined thereto by a horizontal pivot *e*<sup>8</sup>. These ears are located a distance in rear of the front or outer end of the foot-piece and preferably at or near the front end of the bracket. The footpiece is provided with means to limit its swing upward from the top edge of the bracket. For this purpose I show a rigid stop projection or arm *e*<sup>9</sup> depending from the rear end of the foot, with its end turned laterally and projecting under the bracket to engage the under edge thereof when the foot reaches its limit of swing away from the bracket. The hinged footpieces are in length preferably equal to the width of the pallet or board on which the bricks are piled. Said footpieces are adapted to engage the under surface of the pallet and rest thereagainst parallel with the plane of the pallet and form a firm base and support therefor, although the plane of the pallet may not be parallel with the top edges of the brackets nor be exactly at right angles to the plane of the supporting-platform against which the bricks rest. In loading the truck these pivoted feet will permit the bricks to tilt easily against the supporting-platform and will afford a firm footing for the loaded pallet, although the bricks may not be so stacked or piled thereon as to rest evenly against the platform. In practice I have found that material advantages are attained by the employment of this tilting base or support, although I do not wish to limit other features of my invention to employment therewith.

*ff* are two rigid handle-bars, at their lower forward ends rigidly secured to the said side beams of the platform at points intermediate the lengths of said side beams. Usually said handle-bars are secured to said side beams at points a short distance above the lower end of said platform. The handle-bars extend rearwardly from the upwardly-extending platform at an acute angle to the plane of the platform—say, at an angle of about forty-five degrees, although my invention is not so limited, as hereinafter pointed out. The outer portions of the handle-bars are provided with the depending legs *gg*, rigidly secured thereto and suitably braced. These legs preferably extend down from the handle-bars at right angles thereto.

*hh* are rigid braces from a cross-bar connecting the handle-bars to a rigid cross-bar connecting the upper portions of said side beams of the platform.

*i* is a cross-axle secured to the handle-bars

usually a suitable distance in rear of their lower or front ends.

*i'* *i'* are the truck or supporting wheels, mounted on the axle and adapted to travel on said track-rails hereinbefore referred to.

The construction of the truck is such that the axle of the supporting-wheels is located a distance in rear of and in a horizontal plane above the lower supporting-brackets of the platform, whereby certain material advantages are attained in a truck of the character described.

*j* is a pad or cushion secured on the front face of the platform and constituting the green-brick-engaging face or surface thereof. This pad is preferably composed of a heavy layer of felt or equivalent material, which is of sufficient thickness to form a cushion for the dry bricks and prevent chipping thereof or injury by contact with hard surfaces by reason of the jars and vibration incident to transportation on said truck. Usually I do not provide the off-bearing truck with such a cushion, but I consider it an important improvement for the wheeling-in truck, which carries the dried bricks from the drying-tunnel; but I do not wish to limit other features of my invention thereto.

Often the wheeling-in and off-bearing trucks also differ in respect to the distance between their bottom-supporting brackets. However, I do not wish to limit my invention to either wheeling-in or off-bearing trucks, as my invention comprises both forms of truck.

The truck is so constructed and arranged that it can be advanced to a pallet loaded with bricks and resting on the supporting-beams and by elevating the handle-bars slightly the platform will assume a vertical position and the lower support (brackets) thereof a horizontal position, and said supports will pass beside said supporting-beams and beneath the pallet carrying the bricks. Then on slightly depressing the handle-bars the pallet will be elevated on and by said brackets and the bricks will rest on the platform against the cushioned surface thereof. The truck will easily elevate the load of bricks because of the location of the axle (fulcrum of the lever) in rear of and considerably above the load—that is, the brackets which carry the bricks. Also during transportation the load is practically balanced on the axle and can be easily handled in loading, transporting, and depositing by a single operator, as a large portion of the weight is below the plane of the axle, and hence not between the axle and handle portions of the handle-bars. During transportation the weight is largely in front of the axle and the load of bricks rests easily on the platform, which is then inclined at such an angle rearwardly from the vertical or perpendicular position that the bricks rest against the platform and greatly relieve the weight on the lower bricks and pallet. The loaded pallet can be easily deposited by elevating the handle until the



brackets assume a horizontal position and the pallet rests on the supporting-beams and then withdrawing the truck.

The arrangement of parts in my truck is such that when the truck is tilted forwardly and the brackets are in a horizontal position to receive the load and the truck is then tilted back to elevate the load the brackets and the platform will move forwardly—that is, in a direction toward the load—and upwardly and in an arc and not upwardly and backwardly in an arc in a direction away from the load. Certain material advantages are attained in that the pallet and bricks thereon when lifted by the truck will be located completely up against the platform. Also notwithstanding the fact that during transportation the bricks extend below the plane of the axle of my truck and in advance thereof, yet when the loaded truck is lowered, with the legs resting on the ground, the weight of the load will be properly distributed between the legs and wheels, and the truck will have no tendency to tilt forward.

In my truck the angle of the carrying-frame or platform in respect to the handle-bars is in proportion to the height of the supporting-wheels and the amount of leverage necessary.

Having thus fully described my invention, what I claim, and desire to secure by Letters Patent of the United States, is—

1. A brick-truck having an upwardly-extending carrying padded platform provided at its lower end with a forwardly-projecting support or bracket rigidly secured directly to the lower end of said platform, handle-bars secured to the lower portion of said frame above the lower end thereof and extending rearwardly therefrom at an angle thereto, and supporting-wheels the wheel-axis being located in rear of and in a horizontal plane above said bracket, for the purposes, substantially as described.

2. A brick-truck having an upwardly-extending platform provided with a padded cushioned brick-receiving surface, a support extending at an angle forwardly from the lower end of the platform, handle-bars rigid with and extending rearwardly from said platform at an angle to and below the same and provided with depending legs and an axle secured to the handle-bars and provided with supporting-wheels, for the purposes described.

3. In a brick-truck, the combination of an upwardly-projected platform, a supporting-ledge projecting forwardly approximately at right angles to the plane of the platform and rigidly secured to the lower end thereof, a handle-frame rigidly secured to the platform above the lower end thereof and extending upwardly and rearwardly at an angle to the plane of the platform, and an axle secured to said handle-frame and provided with a supporting-wheel, said axle being arranged in rear of said platform and in a plane above the lower end thereof, substantially as described.

4. A wheeled truck having a carrying-frame, a bottom-support projecting laterally therefrom provided with and carrying a tilting load-receiving foot fulcrumed thereto and resting thereon, substantially as described.

5. A wheeled truck having a carrying-frame provided at its lower portion with a rigid forwardly-extending support, and a tilting load-receiving foot hinged to said support and normally resting parallel therewith and adapted to pass under and receive the load, substantially as described.

6. A wheeled truck having a rigid carrying-frame and handles, and provided with rigid brackets extending forwardly from the lower end of same frame, and tilting load-receiving footpieces normally resting on and projecting forwardly beyond said brackets and hinged thereto and having stops, substantially as described.

7. The brick-truck consisting essentially of the upwardly-extending supporting-frame comprising upright beams, angular supporting-brackets rigidly secured to the side faces of said beams and projecting forwardly from the lower ends thereof, handle-bars extending upwardly and rearwardly from said frame at an angle, the lower ends of the handle-bars secured rigidly to said beams above the lower ends thereof, and supporting-wheels confined to said handle-bars in rear of said beams and above the lower ends thereof, substantially as described.

8. A brick-truck comprising the upright supporting-platform, supporting-fingers rigidly secured thereto and projecting forwardly from the lower end thereof, handle-bars at their lower ends rigidly secured to said platform at points above the lower end thereof, said bars extending upwardly and rearwardly from the platform at an angle thereto, an axle carried by said bars and located in rear of and above the lower end of said platform, and supporting-wheels on said axle and located at the outer edges of said bars and platform, substantially as described.

9. In a brick-truck, the combination of a supporting-platform having handles and a wheeled support, supporting-fingers rigid with and extending forwardly from the platform, each finger having an independent tilting load-receiving foot arranged along its upper surface and projecting outwardly beyond the finger end, for the purposes described.

10. In a brick-truck, the combination of an upwardly-extending supporting-frame provided with handles and carrying wheels, rigid supporting-fingers extending forwardly from said frame, tilting feet arranged longitudinally on and fulcrumed to said fingers near their outer ends, and means limiting the upward swing of the inner ends of said feet, substantially as described.

11. In a brick-truck, the combination of an upwardly-projecting platform, a supporting-ledge extending forwardly from said plat-



form to sustain the load resting against the platform, a tilting load-receiving foot arranged above and mounted on said support, means limiting the swing of the foot from  
5 said support, a handle-frame secured to the platform and extending upwardly and rearwardly therefrom at an angle thereto, and supporting-wheels having an axis in rear of

and above the plane of said support, substantially as described. 10

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

BYRON E. BECHTEL.

Witnesses:

JOHN KILLER,

L. W. SHUH.