

No. 774,074.

PATENTED NOV. 1, 1904.

S. P. HEDGES.
BRICK ELEVATING ATTACHMENT FOR TRUCKS.

APPLICATION FILED AUG. 22, 1903.

NO MODEL.

2 SHEETS—SHEET 1.

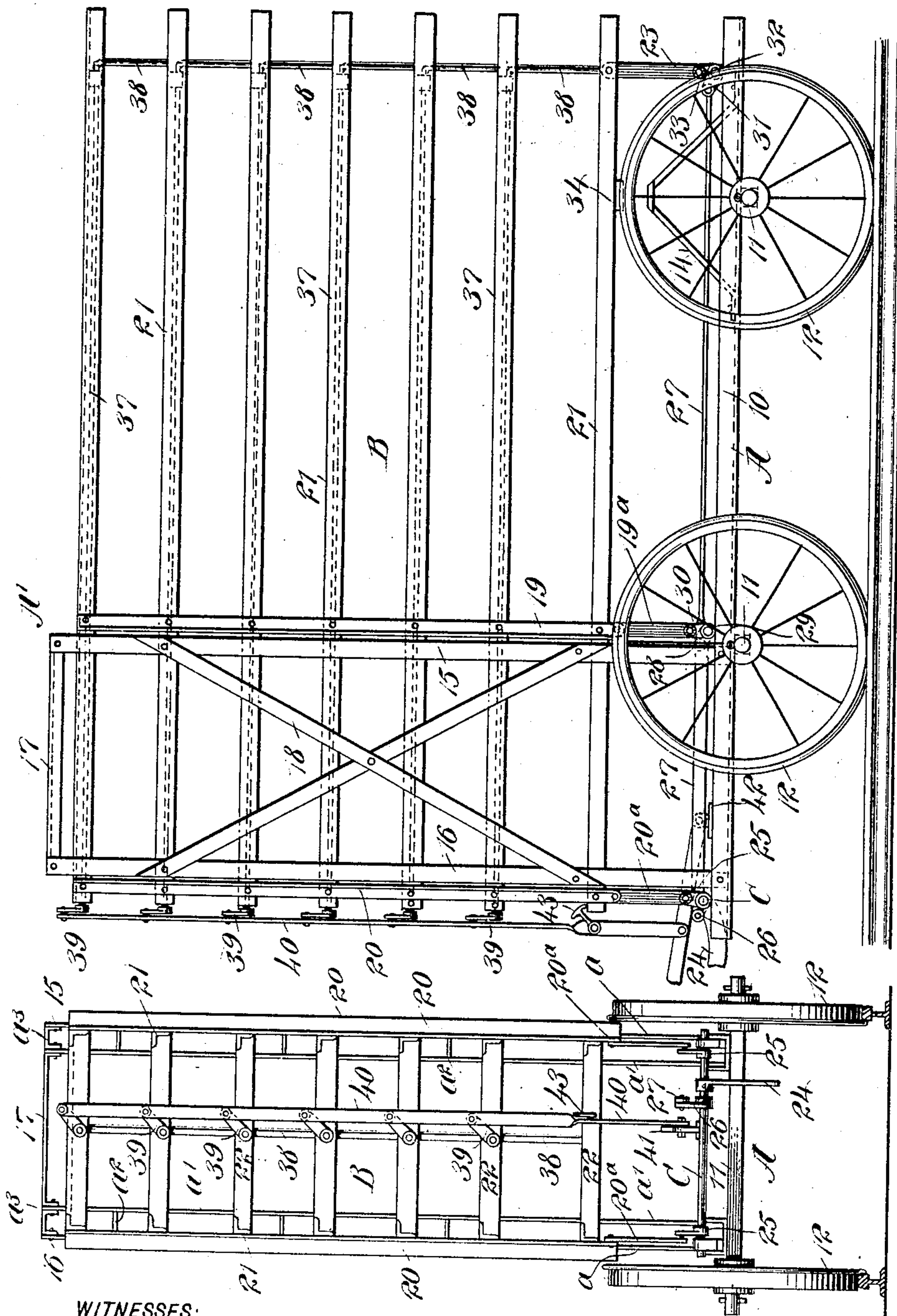


Fig. 1

Fig. 2

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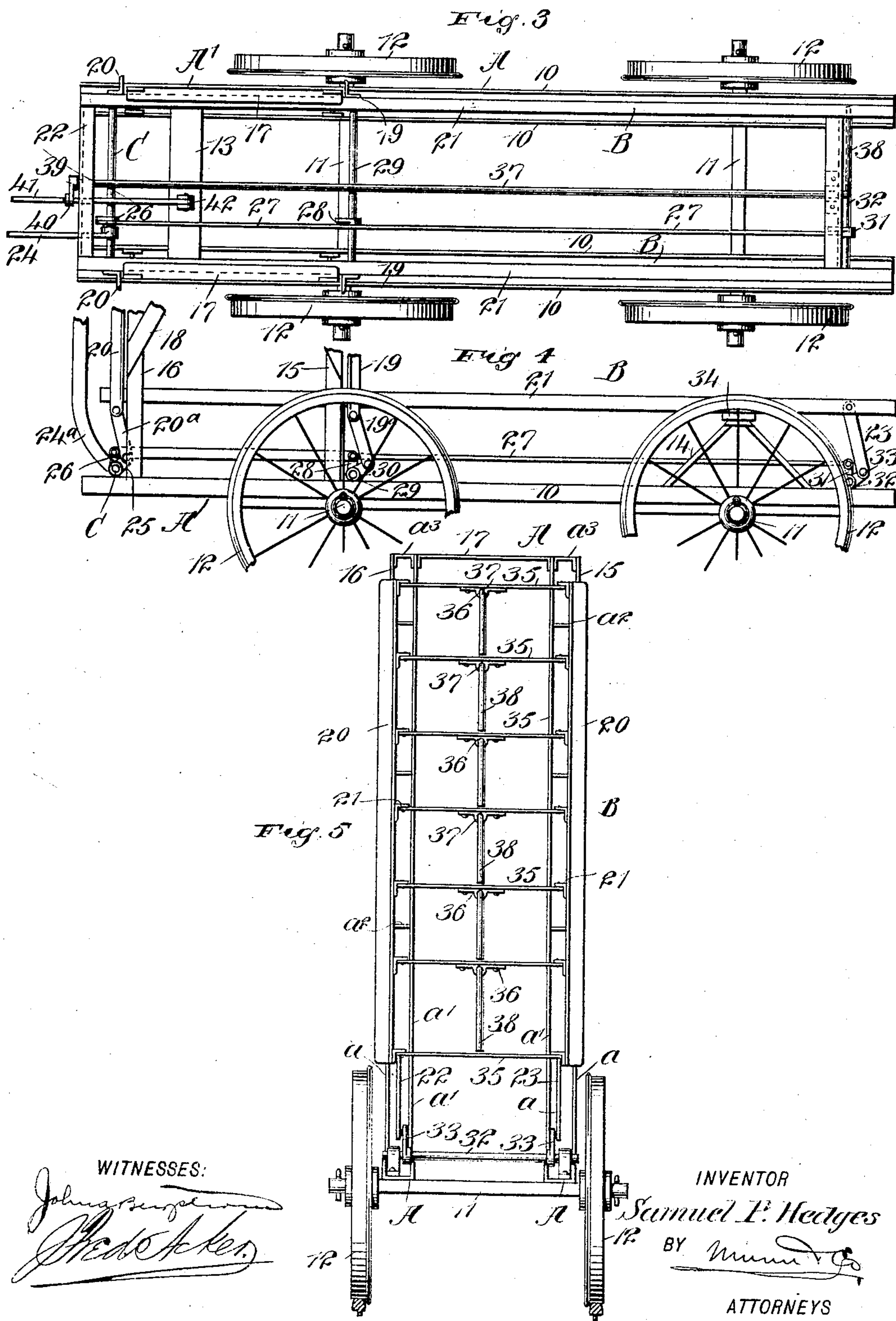


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UNITED STATES PATENT OFFICE.

SAMUEL P. HEDGES, OF GREENPORT, NEW YORK.

BRICK-ELEVATING ATTACHMENT FOR TRUCKS.

SPECIFICATION forming part of Letters Patent No. 774,074, dated November 1, 1904.

Application filed August 22, 1903. Serial No. 170,480. (No model.)

To all whom it may concern:

Be it known that I, SAMUEL P. HEDGES, a citizen of the United States, and a resident of Greenport, in the county of Suffolk and State of New York, have invented a new and Improved Brick-Elevating Attachment for Trucks, of which the following is a full, clear, and exact description.

My invention relates to an elevating attachment for trucks, especially trucks for carrying brick and other material to be burned, stacked, stored, or dried.

The purpose of the invention is to provide a truck of the character described with stationary uprights and a movable frame mounted between them and adapted to carry pallets on which the material is placed and to so construct the truck and carrying-frame that they will be more substantial than as they are ordinarily made, being built with the least number of posts and posts not liable to bend or get out of shape.

A further purpose of the invention is to provide supports for the rear ends of the carrying-bars of the carrying-frame, so that such bars when loaded will not sag or drop as the loaded frame is conveyed from the press to the racks of the drier, for example, enabling the truck, with its load, to enter the drier without any of the pallets dragging upon the racks or engaging with the racks until the carrying-frame is purposely adjusted to deposit the pallets upon the racks.

A further purpose of the invention is to provide a simple, effective, and economic means for operating the supports from the rear of the carrying-frame, bringing said supports into and out of supporting position, and means for controlling the vertical movement of the carrying-frame, which means are independently operated from the front of the truck.

The invention consists in the novel construction and combination of the several parts, as will be hereinafter fully set forth, and pointed out in the claims.

Reference is to be had to the accompanying drawings, forming a part of this specification,

in which similar characters of reference indicate corresponding parts in all the figures. 50

Figure 1 is a side elevation of the improved truck and its carrying-frame, the frame being shown in its upper carrying position and the supports at the rear end of the frame in supporting position. Fig. 2 is a front elevation 55 of the truck, the parts being in the position shown in Fig. 1. Fig. 3 is a plan view of the truck. Fig. 4 is a partial side elevation of the truck, showing the frame lowered; and Fig. 5 is a rear elevation of the truck in carrying position. 60

In the ordinary construction of trucks adapted to transport bricks upon pallets from a press to a drier such construction has been found to be faulty, as no supports have been 65 provided for the rear ends of the carrying-bars on which the pallets are laid, so that when the carrier-bars are loaded they sag to such an extent at times as to render it almost impossible to place the load in the drier without disturbing the material upon the drier and that 70 upon the carrier or the truck. I aim to overcome these difficulties and provide supports for the rear ends of the carrying-bars which hold the bars in normal position throughout 75 their lengths when carrying a load under all conditions of travel, but which may be quickly and conveniently shifted to permit the uninterrupted withdrawal of the carrying-frame from the drier or other structure in which the 80 material is to be deposited and the removal of the carrying-section from the deposited material. I further aim to provide a truck of the character described which can be conveniently carried into the structure to deposit the 85 material and which can be withdrawn without interfering with the material.

The truck consists of a base-section A and an upright section A' at the forward portion of the base-section. The base-section consists 90 of side bars 10, which are preferably made of angle-iron, and these side bars are suitably secured or mounted upon axles 11, having wheels 12 loosely mounted at their ends, the said wheels being preferably provided with flanges, 95 as illustrated. The side bars 10 of the base-

section may be connected by any suitable number of cross-bars, one of which, 13, is illustrated in Fig. 3, at the forward portion of the base, and at the rear portion of each side beam 10 of the base, over the rear axle, an upwardly-extending truss 14 is extended for a purpose to be hereinafter described. The upright portion of the truck consists of standards 15 and 16, secured at their lower ends to the side beams 10 of the base in any approved manner. These standards 15 and 16 are located usually one near the front end of the base and the other near the forward axle 11. Although the standards 15 and 16 may be made of angle-iron and each singly constructed, the construction illustrated is preferred, wherein each standard is of double construction, comprising an outer member a and an inner member a' , the two members being separated and connected by suitably-located cross or connecting bars a^2 , as is shown in Figs. 2 and 5, and at the top these members a and a' are connected by a suitable channel-iron a^3 , as is shown in the same views. Corresponding standards at opposite sides of the truck are connected by an upper cross-bar 17, and this cross-bar is also, preferably, of angle-iron. Furthermore, the standards 15 and 16 at each side of the truck are strengthened by cross-braces 18. (Shown in Fig. 1.)

The elevating-section of the truck consists of a frame B, and the said frame consists of uprights 19 and 20, constructed, preferably, of angle-iron and located one at the rear of each rear standard 15 of the truck and the other forward of the forward standard 16 of the said truck, as is best shown in Fig. 1, and horizontal carrying-bars 21, which are constructed, preferably, of angle-iron having their horizontal faces upward. The said carrying-bars are secured by rivets or equivalent means to the inner faces of uprights 19 and 20 and extend to the rear portion of the truck. These carrying-bars 21 for the carrying-frame B are preferably at uniform distances apart, as is also shown in Fig. 1, and horizontal corresponding bars 21 are connected at the forward end of the frame B at the forward uprights 20 by means of cross-bars 22, as is illustrated in Fig. 2.

At the lower end of each upright 20 of the carrying-frame B a link 20^a is pivotally connected, and a link 19^a is likewise pivotally connected at the lower end of each of the rear uprights 19, while links 23 are pivotally attached to the lowermost carrying-bars 21 near the rear ends of the said bars, as is shown best in Fig. 1.

The carrying-frame B is raised and lowered on the body of the truck in the following manner: A shaft C is journaled in suitable bearings at the forward end of the base of the truck, and on this shaft a lever 24 is securely fastened whereby to turn the said

shaft. At each end of the said shaft C for operating the frame B a crank-arm 25 is secured, and these crank-arms are pivotally attached to the links 20^a, connected with the forward uprights 20 of the said carrying-frame. Preferably between the center of the said shaft C and one end another crank-arm, 26, is secured, being at angle to the crank-arms 25. A shifting rod 27 is pivotally attached at its forward end to the crank-arm 26, and, as illustrated, this shifting rod is made flat at its forward portion and is round throughout the remaining portion of its length; but the shape of the said shifting rod 27 is immaterial. This shifting rod 27 is connected to a crank-arm 28, secured to a shaft 29, suitably journaled on the base of the truck adjacent to the forward wall thereof, as is shown in Fig. 1, and from this shaft 29 crank-arms 30 are carried upward near its ends, being at an angle to the crank-arm 28 above mentioned, and the crank-arms 30 are pivotally connected with the links 19^a, connected with the uprights 19 of the said carrying-frame. The rear end of the shifting rod 27 is connected with a crank-arm 31, and this crank-arm 31 is attached to a shaft 32, suitably journaled on the base-section of the truck at its rear portion or rearward of its rear wheels, and from each end of the shaft 32 a crank-arm 33 is projected at an angle to the crank-arm 31, and the crank-arms 33 are pivotally connected with the links 23, connected with the bottom carrying-bar of the carrying-frame at the rear. It will thus be observed that when the lever 24 is carried to the lower position (shown in Fig. 1) the carrying-frame B will be elevated to its greatest extent, all of the carrying-bars 21 being in parallelism, and that when the lever 24 is carried upward, as is shown in Fig. 4, the links 20^a, 19^a, and 23 will be given a forward inclination, permitting the carrying-frame to drop downward in direction of the base of the truck, and when the said carrying-frame reaches its lowest position a cross-bar 34, located at the bottom rear portion of said frame, will rest upon the trusses 14 heretofore referred to.

In the further construction of the carrying-frame B it will be observed by reference to Fig. 5 that horizontally-opposing carrying-bars 21 are connected at or near their rear ends by cross-bars 35, riveted or otherwise secured to the carrying-bars 21. These carrying-bars are adapted to receive the pallets on which the bricks to be dried or treated are placed, and in the double construction of the standards 15 and 16 of the truck the carrying-bars 21 of the carrying-frame B pass between the members a and a' of the said standards.

Each rear cross-bar 35, with the exception of the lowermost cross-bar, is provided with a bearing 36 upon its under face, as is shown

in Fig. 5, and a shaft 37 extends from front to rear of the carrying-frame B beneath each of the rear cross-bars 35, with the exception of the lowermost one. These shafts 37 are journaled at their rear ends in the bearings 36 and at their forward ends are journaled in the forward cross-bars 22, as is shown, respectively, in Figs. 5 and 2. Each shaft 37 at its rear end is provided with a leg 38, which is at an angle, preferably a right angle, to the shaft. These legs 38 are of such length that when they are brought to a perpendicular position, as is shown in Fig. 5, the legs of the shaft journaled in one cross-bar 35 will engage with the next lower rear cross-bar 35, as is shown in Fig. 5, and thus support the rear ends of the carrying-bars 21, absolutely preventing them at such time from sagging or dropping from a horizontal position, no matter what load the said carrying-bars have to sustain. These legs or supports 38 are adapted to be carried to the upper position (shown by dotted lines in Fig. 3) when the truck is to be removed from the drier or other receptacle in which it may be entered, and the legs or supports 38 are brought to their supporting perpendicular position or their relieving horizontal position by the same mechanism, which mechanism is best shown in Figs. 1 and 2 and consists of crank-arms 39, secured to the forward ends of the shafts 37, which crank-arms are pivotally connected to a vertical shifting bar 40, and this shifting bar 40 extends downward to the base portion of the truck, where it is pivotally connected with a lever 41. The said lever 41 is preferably fulcrumed in suitable bearings 42 on the forward cross-bar 13 of the base of the truck, as is shown in Fig. 3. When the lever 41 is carried upward, as illustrated in Figs. 1 and 2, the legs or supports 38 are brought to their supporting perpendicular position (shown in Fig. 5) and the connecting or shifting rod 40 is held in the upper position in which it is placed by the upward movement of the lever 41 by a latch 43 of any suitable character, which latch is made to engage with the lower front cross-bar 22 of the carrying-frame B.

As has been stated, this truck is especially adapted for conveying bricks from a press to a drier, the drier being of the ordinary construction—namely, being provided with racks at its sides at equal distances apart. When the truck is to be loaded, the legs or supports 38 are carried to their upper position, and the pallets carrying the bricks are placed on the carrying-bars 21, their edges extending beyond the outer side edges of the carrying-bars. When the carrier has been suitably loaded, the legs or supports 38 are brought to their supporting position, (shown in Figs. 1 and 5,) thereby preventing any vertical movement at the rear ends of the carrying-bars and ren-

dering the rear portion of the carrier as stanch as any other portion thereof. The truck is now wheeled into the drier, and at such time the projecting edges of the pallets will be slightly above the racks in the drier on which the pallets are to be deposited. When the truck has been brought to a proper position in the drier, the lever 24 is operated to cause the elevating or carrying section B to be dropped downward, thus depositing the pallets on the racks in the drier. The lever 41 is next operated to carry the legs or supports 38 to an upper horizontal position, permitting the truck to be drawn out from the drier without interfering in the slightest degree with any of the deposited material or material in the drier in its path, as the carrier B will be in its lower position and the rear portion of the carrier will be entirely open.

This device is exceedingly simple and is particularly well adapted for the purpose intended.

Having thus described my invention, I claim as new and desire to secure by Letters Patent—

1. A truck for brick and other material, provided with a frame having a plurality of carrying members, a rocking support for the rear end of each carrying member of the frame and adapted to engage the next lower member, a lever, and a connection between the said lever and all of the said supports, whereby to simultaneously carry the supports to and from supporting position.

2. A truck for brick or other material, provided with a frame having a plurality of carrying members, a shaft mounted upon each member and provided with cranks at its forward end and with a leg at its rear end, a shifting bar to which the cranks of the several shafts are pivotally connected, and an operating-lever with which the shifting bar is connected.

3. A truck for brick or other material, a carrying-frame for pallets of bricks, a main and auxiliary shafts mounted on the truck, links connecting the carrying-frame with the main and auxiliary shafts, a lever connected with the main shaft, and link and crank connections between the main shaft and the auxiliary shafts, as set forth.

4. A truck for brick or other material, having side standards, a frame for carrying pallets of brick, guided by the said standards of the truck, the said frame consisting of uprights and series of horizontal carrying-bars connected with the uprights but free at their rear ends, link connections between the frame and the said truck, means substantially as shown and described, for raising and lowering the said frame, cross-bars at the forward and rear portions of the carrying-bars of the said carrying-frame, shafts journaled in the said cross-bars, legs located at the rear ends of the shafts, adapted in one position to en-

gage with the cross-bar connecting the next carrying-bars, crank-arms at the forward ends of the said shafts, a connecting-rod for the crank-arms, and a lever for controlling the movement of the connecting-rod, as described.

5 5. A truck for brick or other material, comprising a wheel-supported frame formed of a base-section and an upright forward section, a carrying-frame formed of uprights and horizontal carrying-bars, a plurality of crank-shafts mounted on the base-section of the main frame, links connecting the uprights of the

carrying-frame with the forward crank-shafts, a link connecting the rear end of the lowermost carrying-bar with the rear crank-shaft, a shifting rod connected with the end shafts, and means for operating one of the said shafts. 15

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

SAMUEL P. HEDGES.

Witnesses:

S. FRANK HEDGES,
FRED L. TERRY.