H. B. CRUM.

TRANSFER CAR FOR UNIT BRICK STACKS.

APPLICATION FILED FEB. 23, 1912.

1,119,685.

Patented Dec. 1, 1914.

3 SHEETS—SHEET 1.

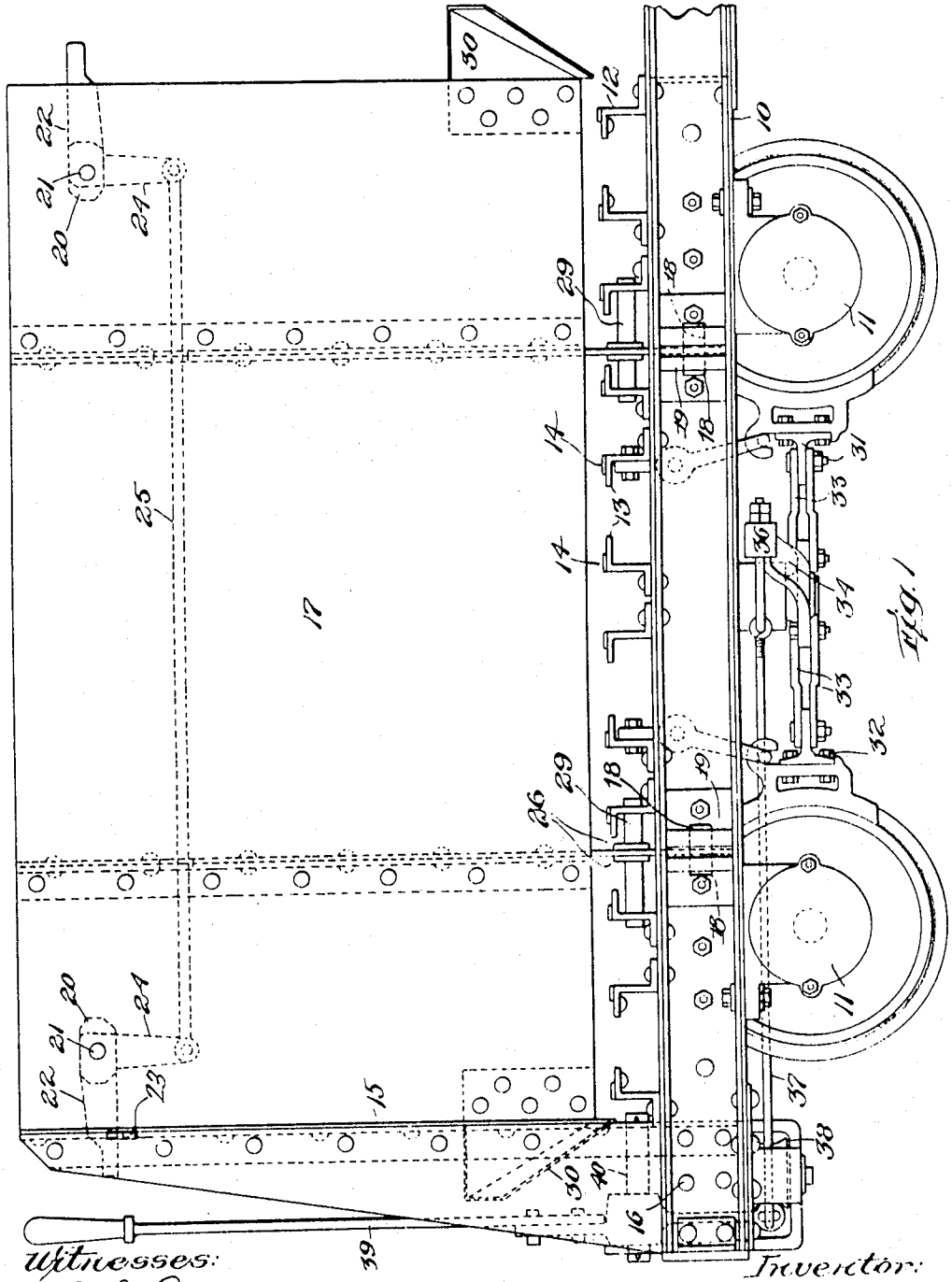


Fig. 1

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THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

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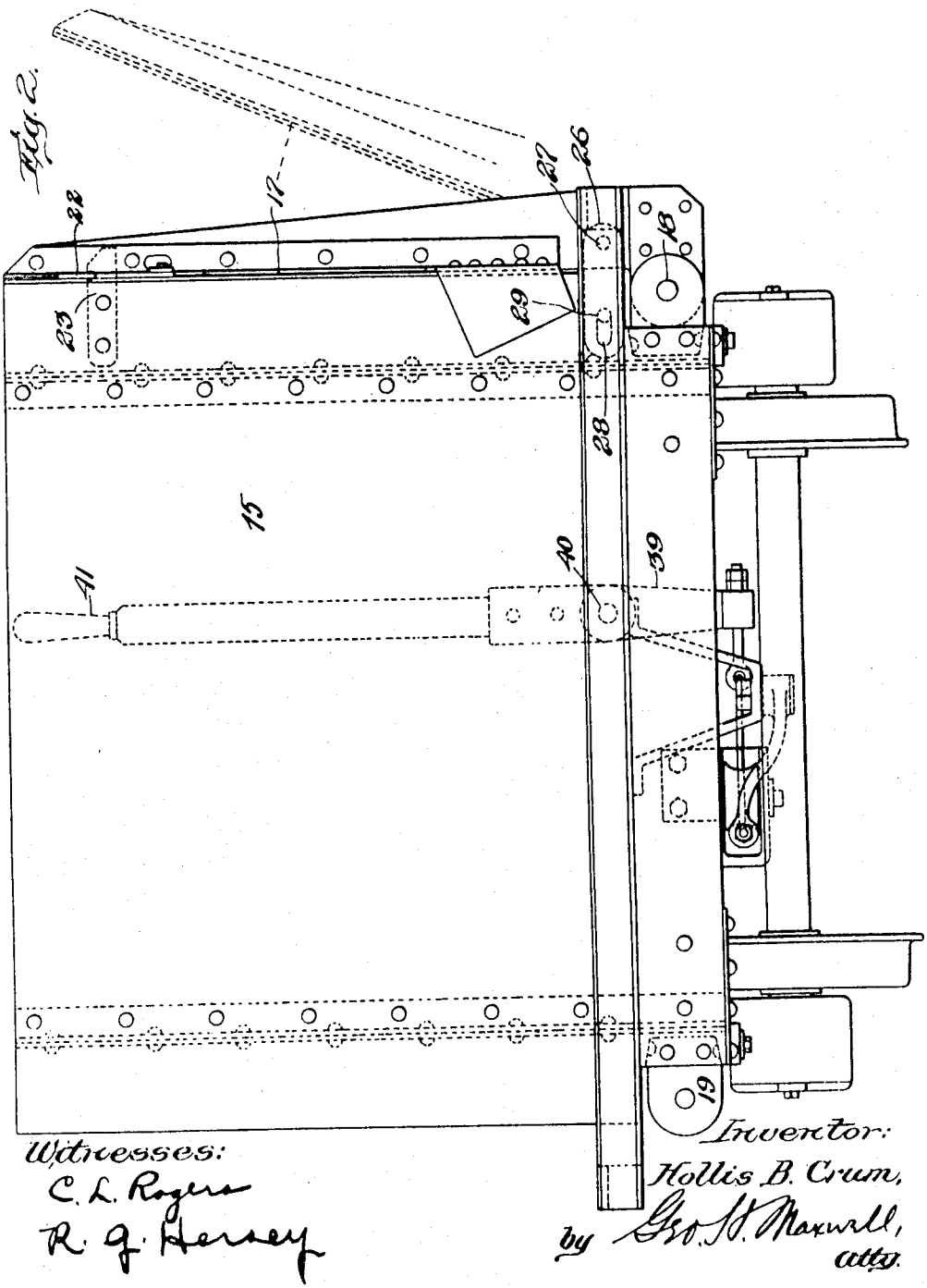
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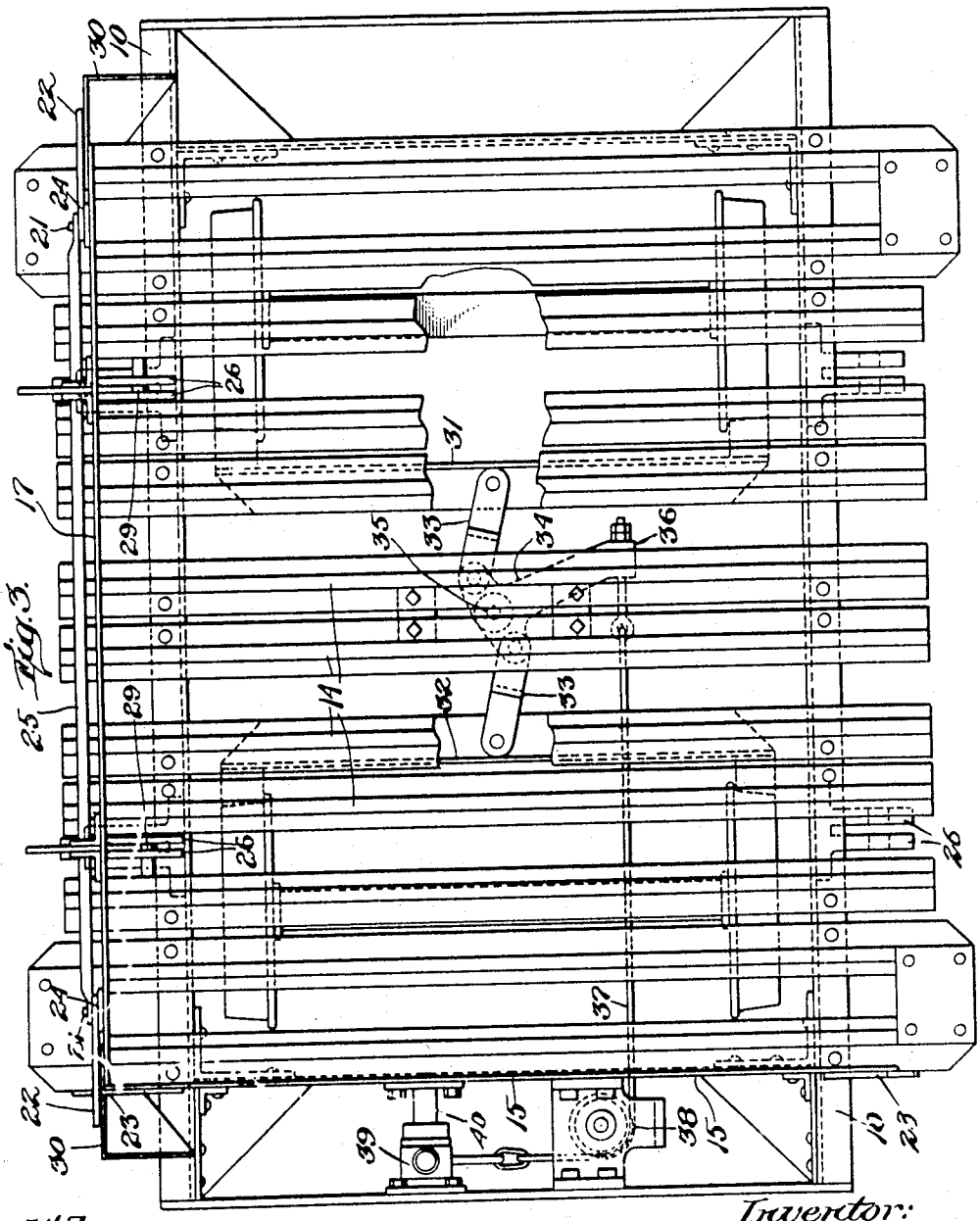
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3 SHEETS—SHEET 3.



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UNITED STATES PATENT OFFICE.

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TRANSFER-CAR FOR UNIT BRICK-STACKS.

1,119,685. Specification of Letters Patent. Patented Dec. 1, 1914.

Application filed February 23, 1912. Serial No. 679,465.

To all whom it may concern:

Be it known that I, HOLLIS B. CRUM, a citizen of the United States, and resident of Chicago, county of Cook, State of Illinois, have invented an Improvement in Transfer-Cars for Unit Brick-Stacks, of which the following description, in connection with the accompanying drawings, is a specification, like letters on the drawings representing like parts.

The present invention relates to cars for receiving unit stacks of bricks in proper alinement and spaced relation for being delivered by a mechanical lifter, and, while having other and more general fields of usefulness, is well adapted for having burned brick units stacked thereon at the kiln, preparatory to sending them to the dock or other delivery point where the load may be picked up by the lifting cage, or other mechanical lifter, and transferred to a barge or other conveyance.

The invention comprises a truck framework having a brick supporting formation, shown as Z-bars, properly spaced apart to receive the basic courses of brick in the requisite separated relation to permit a lifting cage to be lowered over the same, there being open space provided both between and beneath the bricks to allow chips and dirt to escape, and the brick supporting bars being preferably provided with guiding means to insure the brick being placed in proper position.

Further features of the invention relate to a construction of car having a vertical side and end wall adapted to vertically aline the brick units as they are deposited on the car, the other side and end of the car being preferably open, so as to permit freer movement of the brick handling cage in depositing and lifting out the brick units. The vertical side wall is mounted on a pivot support at its base and is adapted, upon the release of a catch at its upper portion, to swing outward by gravity to give room for the cage or lifter to be lowered around the bricks. This swinging side is also preferably reversible for placing upon either side of the car at will, so that bricks may be deposited upon the car from either side without turning the car around.

The above and other features of invention will be better understood from the following detailed description, taken in connection with the accompanying drawings, and will be hereafter pointed out in the appended claims.

Referring to the drawings, Figure 1 is a side elevation of a car embodying the present invention viewing one pivoted side wall from the interior of the car, a small portion at the right end being broken away; Fig. 2 is an end view; and Fig. 3 is a plan view thereof with a portion broken away.

The car framework 10 may be of usual or any desired form and material, being preferably, however, as shown, of structural angle bars with any usual or standard trucks 11. The lengthwise extending members of the framework 10 have bolted or otherwise fixed to the tops thereof transverse brick supporting members, shown as upstanding Z-bars 12. These bars are, as shown, arranged in pairs with the flanges of each pair at their tops inwardly extending toward each other, as seen at 13, the members of each pair being in properly spaced relation for a usual stack of bricks with the individual bricks of its bottom line extending lengthwise to be deposited thereon, these bricks fitting between guide strips 14 fixed to the top flanges of the Z-bars. This construction in connection with the open angle bar framework 10 provides an unobstructed open space beneath the respective unit stacks, so that chips and dirt falling down from the several units can escape without filling in and clogging up the platform, as clearly shown in the plan view of Fig. 3. The car is preferably provided with only one vertical end wall as shown at 15, this being suitably braced and bolted to the base frame, as at 16. The one swinging side is designated 17, being pivoted at 18 to outstanding lugs or ears 19 of the base frame. These lugs are provided at each side of the car, so that the pivoted side wall 17 may be attached at either side as required, depending on the side from which the brick units are to be loaded. This swinging side is provided with a lock construction for cooperation with a catch on the fixed vertical end, this lock consisting of bell crank levers 20 pivoted at 21 adjacent either end of the swinging side, and having arms 22 projecting beyond the side wall to engage a catch 23 fixed to the end wall. These bell crank levers have their downwardly projecting arms 24 connected by a link rod 25 so that

either one may be tripped by operating the other. Thus, when either of these levers is acting as a lock to hold up the side wall at whichever side of the car it may be located, the other is adapted to serve as a handle to be moved by the operator for tripping the lock and releasing the side wall so that it may swing away to permit the lifting cage to be lowered into position. The swinging side wall 17 is provided with means for limiting its outward swing, such means consisting, as shown, in links 26 pivotally secured at 27 to the swinging side some little distance above its pivotal axis, the other end of these links having elongated slots 28 within which are stop bolts 29 suitably fixed to the base frame, as by being carried by pairs of the Z-bars 12. The length of the links and the slots 28 therein is such as to allow the swinging side to swing outward enough to permit the lifting cage to be moved into place and to assist in guiding it, the side being securely supported in this inclined position by the bolts 29 engaging the outer ends of the slots 28. As a means to further assist in guiding the lifting cage down into place, the swinging side may be provided with flange plates 30 fixed at its ends and extending in position to engage the lifter as it descends.

The car is shown as provided with brake mechanism, consisting of bars 31, 32 carrying brake shoes for engagement with the car wheels, these bars being connected by links 33 with the opposite projections of a T-lever 34 pivoted at 35 to the frame and having its other arm 36 engaged by a cable or the like 37, which passes around a pulley 38 suitably journaled in the frame, this cable being connected to the lower end of an upstanding lever 39 pivoted at 40 to the frame, and having its handle portion 41 in convenient position for manipulation. The links 33 and the opposite projections of the T-lever 34 with which they are engaged, are formed and arranged to constitute toggles which are straightened out by the movement of the lever 39 to cause the brake bars to press their shoes against the wheels in a manner readily understood from an inspection of Fig. 3.

A car thus formed, while of exceedingly simple construction, is highly serviceable for the purposes for which it is designed, enabling the unit stacks of burned bricks to be deposited in proper vertical alinement with the aid of the vertical end and side wall and the other side and end of the car being entirely open and unobstructed, facilitates the convenient manipulation of the lifting cage for depositing the loads of bricks at the loading point and thereafter again lifting them off the car at the delivery point. The outwardly slanting position of the car side when this is released from its locking catch aids in guiding the lifter down into place and the cage is further steered into proper position for either depositing or lifting the units by the flange plates 30 at the ends of the car sides. The construction permitting the shifting of the swinging car side from one side of the car to the other at will is of importance, since it permits the car to be loaded from either side and without turning it around, by merely detaching the swinging side member and fixing it in place with its pivot bolt engaged in the ears 19 at the other side of the car.

The structural details of the car may be modified without departing from the spirit of the invention, and I therefore do not desire to be limited as to these, or in any other particulars, except as set forth in the appended claims.

The pivoted side or wall 17 is specially valuable in aiding in alining the mechanical brick setter in loading the brick, such cage or setter with its load of brick being slowly lowered into the car and striking the inner slanting side of the wall when in its outwardly inclined position and serving to automatically aline the setter and its load into the interior of the car.

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

1. A car, having a platform support adapted to receive stacked units of brick, and upstanding end and side walls, one of said walls being swingingly mounted for a limited outward swing so that it is adapted to guide a lifting mechanism into place.

2. A car, comprising a platform adapted to receive units of brick, upstanding end and side walls for said car, one of said walls being swingingly mounted and having a lock for holding it normally vertical, and means for limiting the outward swinging movement of said wall upon release of said lock to a position adapting it to guide a lifting mechanism into operative position over said car.

3. A car, comprising a platform adapted to receive stacked units of bricks, a vertical alining wall upstanding from said platform, the car being open opposite said alining wall, and means for supporting said alining wall to extend up from different edges of the car platform at will.

4. A car, comprising a platform adapted to receive stacked units of bricks, an upstanding alining wall, means for pivotally supporting said alining wall at either side of the car at will, the opposite side of the car being open, and means for limiting the outward swing of said alining wall adapting it to serve as a guiding means for positioning a lifting mechanism.

5. A car, comprising a platform adapted to receive stacked units of bricks, a vertical

alining wall pivotally mounted at one side thereof, means for limiting the outward swing of said wall adapting it to serve as a guiding means for a lifting cage, and other guiding means for the lifting cage carried by said wall.

6. A car, comprising a brick receiving platform, an end wall vertically upstanding from said platform carrying one element of a lock, and an alining wall swingingly mounted at its base and upstanding from a side of the car, having a coöperative lock member adapted to normally hold it in substantially vertical position, and arranged for a tripping release to permit said alining wall to swing outward.

7. A car, comprising a brick receiving platform, an upstanding alining wall, means for swingingly mounting said alining wall at its base on either side of the platform at will, and a locking means for holding said alining wall upright, said locking means having one portion thereof carried by the alining wall with similarly formed oppositely extending interconnected members at opposite extremities of said wall, adapted to interchangeably serve for locking engagement with a fixed locking member, or as an operating device as the alining wall is located on one side or the other of the car.

8. A car, comprising a brick receiving platform, an end wall vertically upstanding therefrom, a side wall swingingly mounted at its base to a side of the platform, and means for detachably locking said side wall and end wall together to hold the side wall in vertical position, the other side and end of the car being open for the purpose stated.

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

HOLLIS B. CRUM.

Witnesses:
C. P. MERTENS,
S. KENNETH SMART.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."