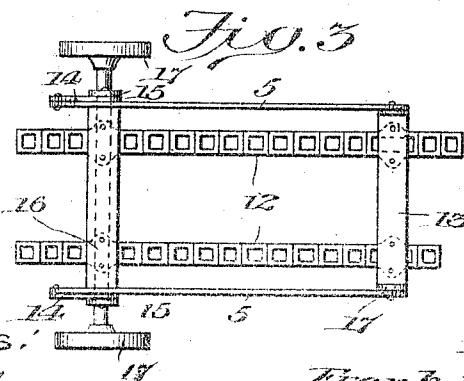
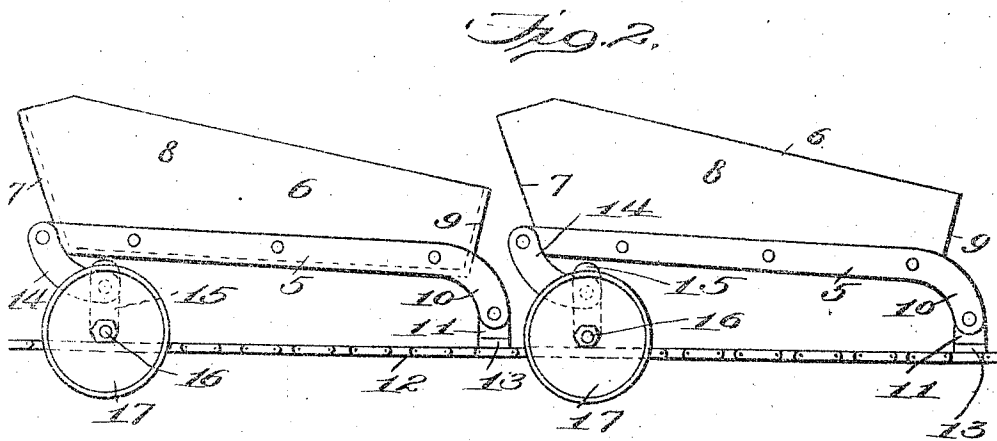
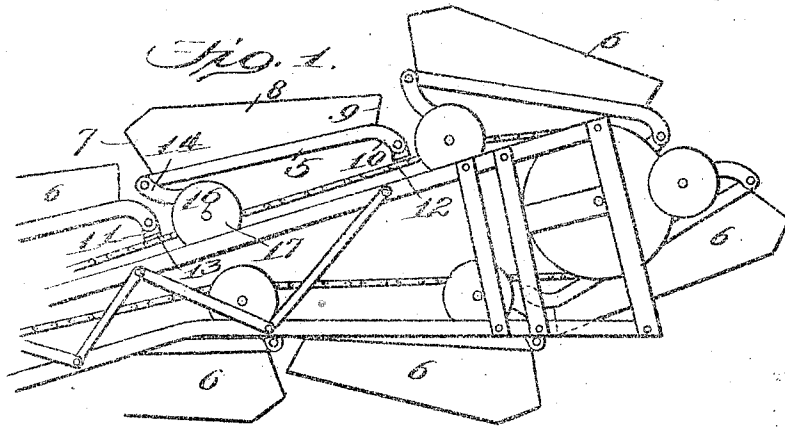


FRANK H. BROWN & FRED H. BROWN.
CAR OR CARRIER FOR ELEVATING APPARATUS.

APPLICATION FILED MAY 26, 1909.

1,037,119.

Patented Aug. 27, 1912.



Witnesses:
[Signature]
[Signature]

Inventors:
Frank H. Brown
Fred H. Brown
By *[Signature]*
James L. Norris

UNITED STATES PATENT OFFICE.

FRANK H. BROWN AND FRED H. BROWN, OF PORTLAND, OREGON.

CAR OR CARRIER FOR ELEVATING APPARATUS.

1,037,119.

Specification of Letters Patent.

Patented Aug. 27, 1912.

Application filed May 26, 1909. Serial No. 498,456.

To all whom it may concern:

Be it known that we, FRANK H. BROWN and FRED H. BROWN, citizens of the United States, residing at Portland, in the county of Multnomah and State of Oregon, have invented new and useful Improvements in Cars or Carriers for Elevating Apparatus, of which the following is a specification.

This invention relates to a car or carrier for use on loading and unloading apparatus or conveying means, and the primary object of the same is to provide a car or carrier particularly adapted for handling or conveying loose material such as sand, gravel, coal and soil, said carrier having a strong and durable and simplified construction, and to so arrange a plurality of the cars or carriers on a conveying means such as a chain belt that the operation of loading and unloading loose material or conveying such material from one point to another may be expeditiously and effectively pursued.

The invention consists in the construction and arrangement of the several parts which will be more fully hereinafter specified in preferred form.

In the drawing: Figure 1 is a side elevation of a portion of a loading or unloading apparatus showing the improved car or carrier applied thereto. Fig. 2 is a side elevation showing two of the improved cars or carriers and a portion of the conveying means to which they are attached. Fig. 3 is a plan view of one of the cars or carriers.

The numeral 5 designates a body or frame comprising side and rear end bars of metal continuous with each other or assembled in any suitable manner and having a bucket 6 snugly fitted therein and secured thereto by rivets or other suitable means. The bucket 6 is preferably formed of sheet metal of suitable thickness, such for instance as steel pressed into form and having an elevated back 7 from which the sides 8 slope downwardly to a lower front 9, the back and front, or rear and forward ends of the bucket having an outward flare or inclination. The forward extremities of the sides of the frame 5 are bent or deflected downwardly as at 10 and pivotally attached to angle couplings 11 secured to the conveying chains or analogous devices 12, a cross tie, rod or bar 13 cooperating with the angle couplings and chains or conveying means 12 to give the car or carrier sufficient

rigidity at the front extremity to resist lateral strain and also to prevent spreading of the chains or conveying means 13. The rear terminals of the side bars or sides of the frame 5 have the upper ends of links 14 pivoted thereto, the said links extending downwardly and also pivoted at their lower extremities to upstanding projections 15 secured to an axle 16 which projects outwardly beyond the frame 5 at opposite sides and is suitably connected to the chain belts or conveying means 12, track or drag wheels 17 being mounted on the outer ends of said axle to engage track flanges or other portions of an elevating frame, as shown by Fig. 1.

The cars or carriers are assembled in close relation as shown by Fig. 2 or so that the forward lower extremity of each bucket will be under the rear higher extremity of the next succeeding bucket in advance of the same, and by this arrangement the length of the conveying chains or analogous means is not only fully and economically utilized so that a greater number of the buckets may be applied to a given length of conveying chains, but when the buckets are traveling at an upward or downward incline any tendency toward spilling of the contents thereof, or actual spilling of the material in the buckets due to the motion or vibration of the latter will not result in a loss of the conveyed material or falling of such material onto the elevating apparatus below because the material escaping from the rear extremity of one bucket will fall over into the next bucket. The shape of the buckets and the difference in elevation at the front and rear extremities thereof are also advantageous in the dumping operation that may ensue at the upper extremity of the elevating apparatus, and, furthermore, the elevated back extremity of each bucket will adapt the several buckets to serve as scoops in taking up loose material in proximity thereto and through which the said buckets may be caused to run.

The movable attachment of the bucket frame, or of the bucket, to the conveying chains or analogous conveying devices permits the several buckets to readily turn the opposite extremities of the conveying apparatus without disarranging or imposing irregular or unusual strain on the conveying chains or like devices. The improved cars or carriers are adapted for use in conveying

any loose material such as sand, gravel, coal, loose grain, sawdust, sugar beets, etc., from one plane to a higher plane within a building, or from some part of a storage building to transportation means or vice versa. The improved car or carrier is economical in its construction and may be manufactured at a comparatively small cost. It is also proposed to modify the proportions and dimensions thereof to accommodate various applications and uses.

While it is preferred that the several parts of the car or carrier be constructed of metal, as hereinbefore explained, it will be understood that in some instances both metal and wood may be used, or metal and some other material adapted for the purpose.

What is claimed is:

The combination with a flexible conveying means embodying opposite chain belts and a track means at a distance below said belts, of a plurality of carriers each comprising a front rigid cross tie secured to said chain belts and extending transversely over the latter, an axle also extending transversely over and secured to the chain belts and having its opposite extremities projected outwardly beyond the belts and provided with

wheels to engage the track rails, upstanding projections secured to the axle inside of the wheels, a bucket or carrier comprising side frame bars curved downwardly at their forward extremities and directly and pivotally attached to the cross tie close to the chain belts and a body mounted in the frame and increasing gradually in vertical extent from the front to the rear terminal thereof and having the rear terminal overhanging the rear extremities of the side bars, and curved links pivotally connected at their upper ends to the rear ends of the side bars of the frame and at their lower ends to intermediate portions of the upstanding projections of the axle, the said links and the rear axle with which they cooperate together with the side bars of each carrier being wholly in advance of the side bars of the succeeding carrier.

In testimony whereof we have hereunto set our hands in presence of two subscribing witnesses.

FRANK H. BROWN.
FRED H. BROWN.

Witnesses:

ROBERT E. MENEFEY,
CORA J. ANDERSON.