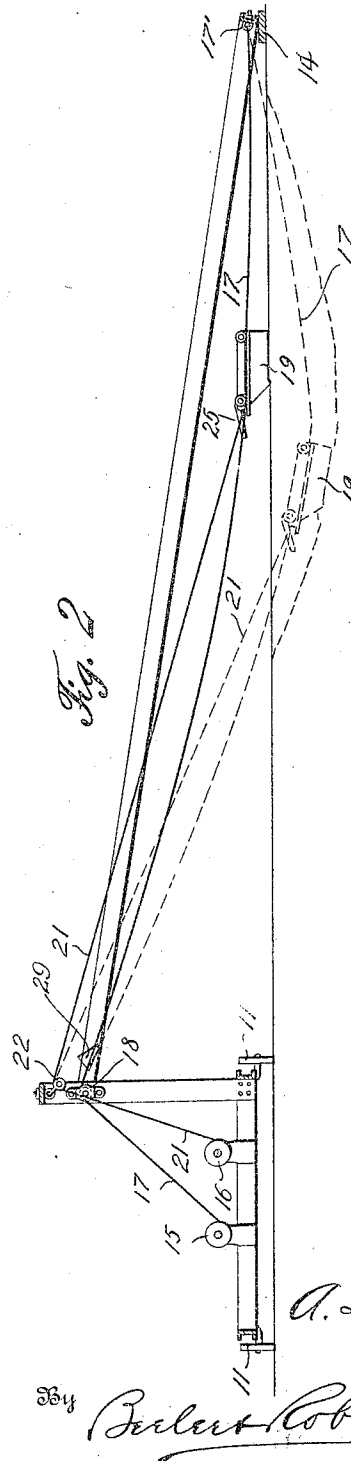
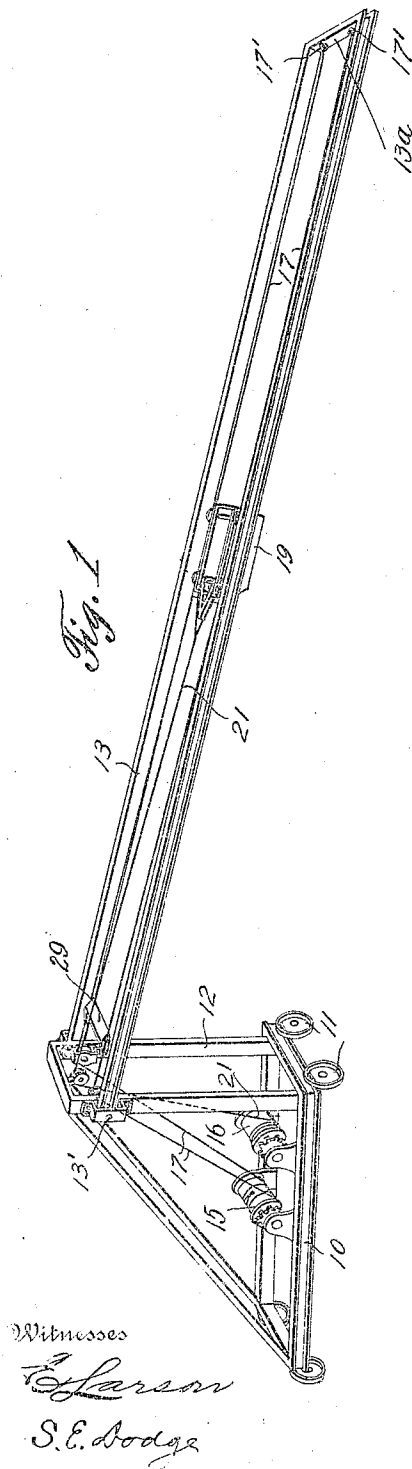


945,939.

A. D. HADSEL.
ELEVATED CARRIER.
APPLICATION FILED OCT. 18, 1909.

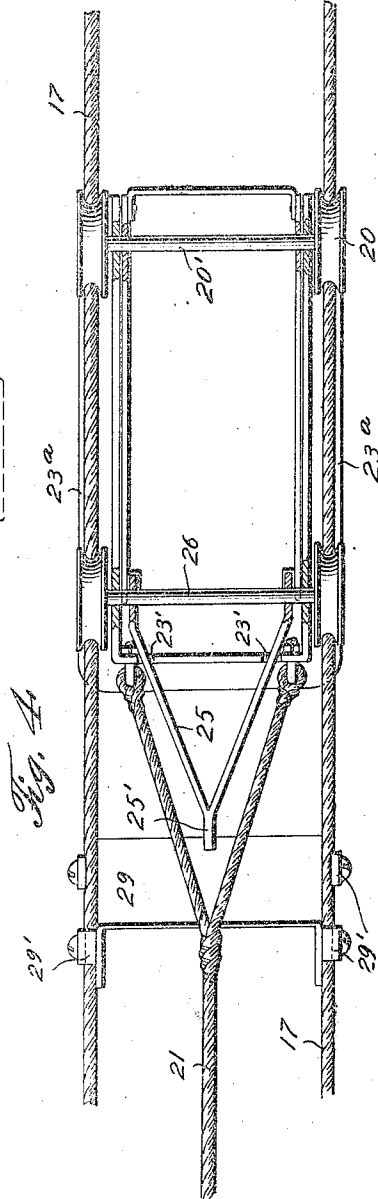
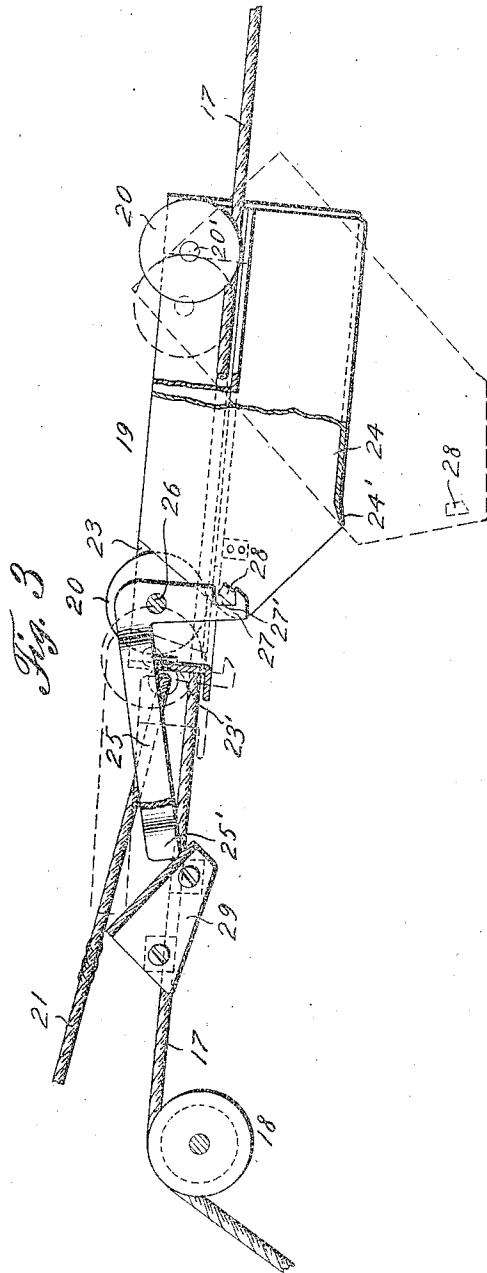
Patented Jan. 11, 1910.
2 SHEETS—SHEET 1.



945,939.

A. D. HADSEL.
ELEVATED CARRIER.
APPLICATION FILED OCT. 18, 1909.

Patented Jan. 11, 1910.
2 SHEETS—SHEET 2.



Witnesses

E. Larson
S. E. Dodge

By

Reuben Lobe

Attorneys

Inventor

A. D. Hadsel

UNITED STATES PATENT OFFICE.

ALVAH D. HADSEL, OF WILKES-BARRE, PENNSYLVANIA.

ELEVATED CARRIER.

945,939.

Specification of Letters Patent. Patented Jan. 11, 1910.

Application filed October 18, 1909. Serial No. 523,223.

To all whom it may concern:

Be it known that I, ALVAH D. HADSEL, a citizen of the United States, residing at Wilkes-Barre, in the county of Luzerne and State of Pennsylvania, have invented certain new and useful Improvements in Elevated Carriers, of which the following is a specification.

This invention relates to a certain type of elevated carriers adapted especially for use in connection with excavating means for operation upon trenches, canals, or the like, at a suitable distance from the power station.

The invention comprises certain specific mechanical details hereinafter fully described and claimed and illustrated in the accompanying drawings, in which—

Figure 1 is a diagrammatic perspective view of the elevated carrier. Fig. 2 is a vertical longitudinal section of the same, but with some of the parts in different position. Fig. 3 is a side elevation, with certain parts in section, of the skip and parts associated therewith, and Fig. 4 is a plan view of the structure of Fig. 3.

Throughout the following description and on the several figures of the drawings similar parts are referred to by like reference characters.

The apparatus includes a power frame or carriage 10, mounted for transportation on any suitable form of runners indicated as wheels 11, the design being for the power frame or carriage to be moved by any suitable means along the line of the operation. A standard 12 is rigidly connected to the main portion of the frame 10 and extends upwardly therefrom. To the upper end of the standard is attached a rigid truss 13. The truss may be connected to the standard by means of pivots 13', so that the end thereof distant from the standard may be moved slightly up or down, depending upon the contour of the country operated upon. The truss 13 is presumed to be of considerable length, even as great as two or three hundred feet, and is adapted to span the canal or ditch which is being dug. The outer end 13^a of the truss may be supported upon a truck or float 14 of a character suited to the work

being done. Said end may rest directly upon the ground or it may be carried by a float which may rest upon the surface of a body of water, practically the only essential requisite being that the truss 13 must be substantially rigid and inclined downwardly from the pivot points 13'.

Mounted upon the frame 10 are a plurality of independently operated power drums 15 and 16. A pair of cables 17 are connected to the drum 15 and extend thence upwardly and outwardly over a pair of direction pulleys 18 mounted upon the upper end of the standard 12, and thence said cables extend to the outer end 13^a of the truss and are there attached permanently at 17'. The cables 17 between the pulleys 18 and point of attachment 17' are always parallel to each other and may or may not be held in a substantially taut condition so as to be parallel with the truss 13, this condition depending upon the operation of the drum 15.

A skip 19, provided with a set of wheels 20, is adapted to operate upon the cables 17, the skip being designed to operate outwardly and downwardly by gravity along the truss and over said cables when the same are taut. The skip has connected to its front end, however, a cable 21 which extends thence upwardly over a direction pulley 22 connected centrally to the top of the standard 12 and thence cable 21 extends downwardly and is wound upon the drum 16. When the power is applied to the drum 16 to wind up the cable 21, the skip will be drawn toward the power frame and upward toward the top of the standard 12. The skip comprises two principal parts,—a main frame 23 and a bucket 24. Said two parts are pivoted together at the rear end of the skip by means of the axle 20' of the rear wheels, and the bucket portion is adapted to swing downwardly with respect to the frame 23 unless it is held upward by some means. As a convenient means for locking the bucket 24 up within the frame, I may employ a bail 25, pivoted upon the front axle 26, and provided with one or more downwardly projecting arms 27 having notches 27' adapted to en-

gage lugs 28 on the forward end of the bucket. The forward end 25' of the bail is sufficiently heavier than the other portion to insure the prompt engagement of said lugs 28 when the same are brought into position to be engaged thereby. The downward movement, however, of said forward end 25' is limited by engagement with the frame 23 at the points 23'. The frame 23 is provided with an outwardly extending flange 23^a which lies just beneath the track cables 17 and prevents displacement of the carrier wheels 20 therefrom.

A trip cam 29 is connected to the cables 17 at any point where it is desired to dump the bucket, said connection being made by adjustable clamps 29'. Said cam is so formed and disposed as to receive the forward end or point 25' of the locking bail when the skip is drawn upward toward the top of the standard. The said end of the bail riding up the incline of the cam will cause the lugs 28 to be released from the arms 27 and permit the bucket with its contents to swing downwardly around the axis 20'.

The operation of the device may be substantially as follows: With the cables 17 taut, the skip 19 will gravitate downwardly thereon toward the outer end 13^a of the truss as far as will be permitted by the slackening of the cable 21, presumably to or over the point where an excavation is to be made. Upon slackening the cables 17 the skip will then be lowered so that the bucket will strike the earth, causing it to be lifted with respect to the frame 23 and bringing the lugs 28 thereof into interlocking engagement with the arms 27. With the cables 17 remaining loose, the skip will be drawn by means of the drum 16 and cable 21 toward the power frame 10, the cutting edge 24' of the bucket cutting or digging into the earth and filling the carrier. At this time, both the cable 21 and track cables 17 may be operated upon so that the cables 17 may be tightened. Upon continued draft upon the skip, the same will be brought into dumping position as above described and the operation may then be repeated. Aside from the operation of the drums in the manner above described the operation of the carrier is substantially automatic throughout.

I claim:

1. An elevated carrier comprising, in combination, a power frame including a standard, a rigid truss extending outwardly and downwardly from the top of said standard, a pair of track cables extending from one end of the truss to the other and connected at the outer ends to the outer end of the truss, a power drum connected to the power frame, and to which the other ends of said track cables are connected and whereby said track cables may be either held taut or loose, a skip mounted upon said track cables and

adapted to gravitate downwardly thereon toward the outer end of the truss and power means associated with the power frame to draw the skip in the opposite direction.

2. The herein described elevated carrier comprising, in combination, a power frame including a standard, a rigid truss pivotally connected to the upper end of the standard and extending outwardly and downwardly therefrom, a pair of track cables connected to the outer end of the truss and extending thence parallel to each other toward the top of the standard, power means carried by the frame and to which said track cables are connected for the purpose of placing same under tension, a skip mounted upon said track cables and adapted to gravitate outwardly and downwardly thereon toward the outer end of the truss, said skip including a pivoted digging member, locking means to hold said digging member in an upright position, means connected to the skip to cause same to approach the standard and means located at a certain distance from the top of the standard to cooperate with the aforesaid locking means to permit the pivoted member of the skip to drop.

3. The combination of a frame including a standard, a rigid truss connected to the top of the standard and extending outwardly and downwardly therefrom, a pair of independently operating power drums upon the frame, a pair of track cables connected to one of said drums and extending thence along said truss to the outer end thereof, a skip mounted upon said track cables, said skip including a pivoted member means to lock said pivoted member closed, a cable connected to the skip and to the other power drum to cause the skip to approach the standard, and a cam connected to said track cables to cooperate with said skip locking means to release the same.

4. In combination, a pair of tracks, a carrier comprising a frame mounted upon said tracks and a pivoted member cooperating with the frame, a bail pivoted to the frame and including a forwardly projecting arm and a downwardly projecting arm having a notch, a lug on the pivoted member of the skip to interlock with the notched bail arm, and means connected to the tracks for cooperation with the forward end of the bail for the purpose of unlocking the pivoted member of the skip.

5. In combination, a pair of tracks, a skip comprising a frame having an outwardly projecting flange extending beneath said tracks, a set of wheels journaled upon said frame, the said tracks being disposed between said wheels and said flange, a locking bail pivoted upon said frame and including a forwardly projecting arm adapted to engage the upper end of the frame and a downwardly projecting arm, said skip also

including a member pivoted to swing upwardly in the frame adjacent to said downwardly projecting bail arm, means to cause interlocking engagement between said pivoted bail arm and said pivoted skip member and means to automatically unlock said locking bail of said skip member.

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

ALVAH D. HADSEL.

Witnesses:

EDMUND E. JONES,
FLORENCE M. THOMA.