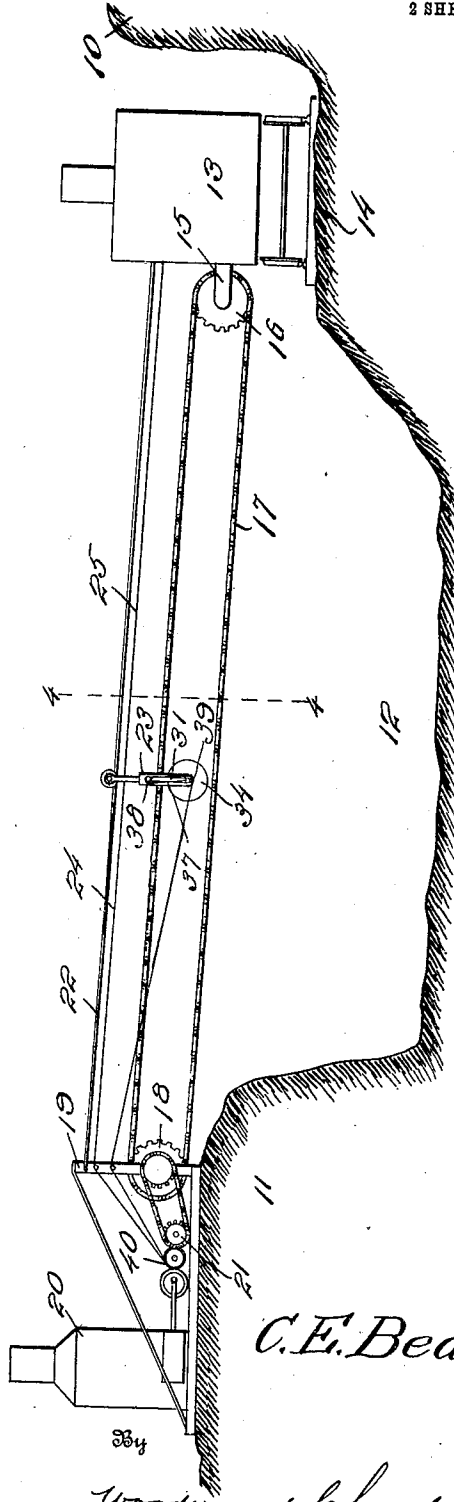


C. E. BEARCE.  
EARTH EXCAVATOR AND CONVEYER.  
APPLICATION FILED JULY 15, 1908.

925,075.

Patented June 15, 1909.  
2 SHEETS—SHEET 1.

Fig. 1.



Witnesses  
*E. E. Cummings*  
*E. L. Chandler*

Inventor  
*C. E. Bearce,*

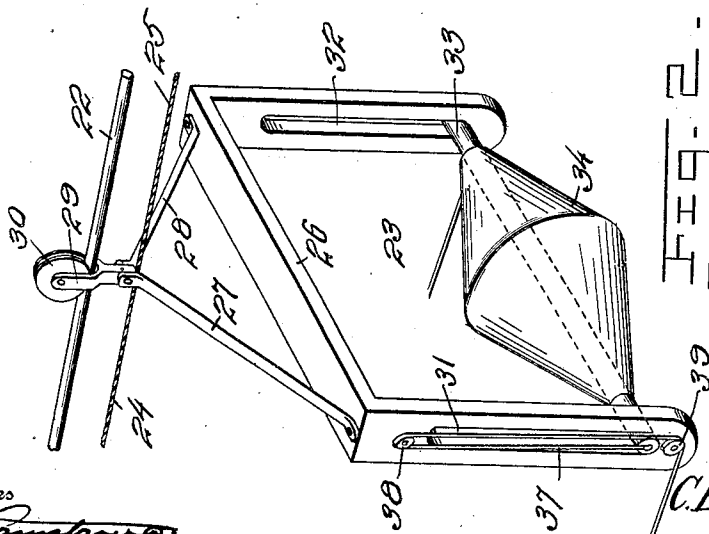
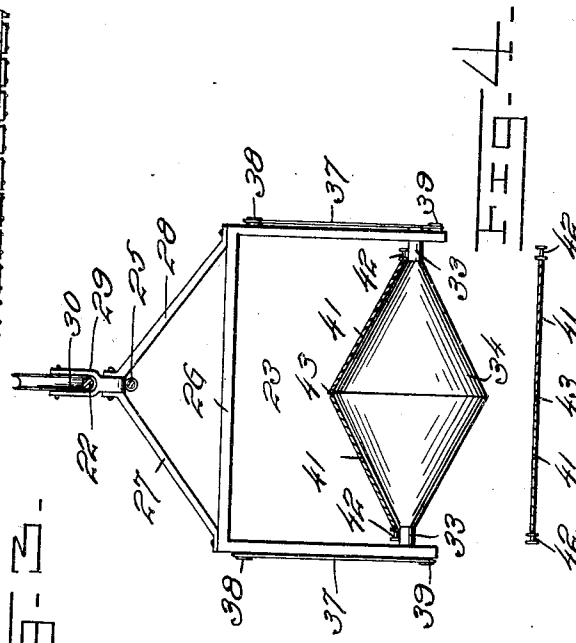
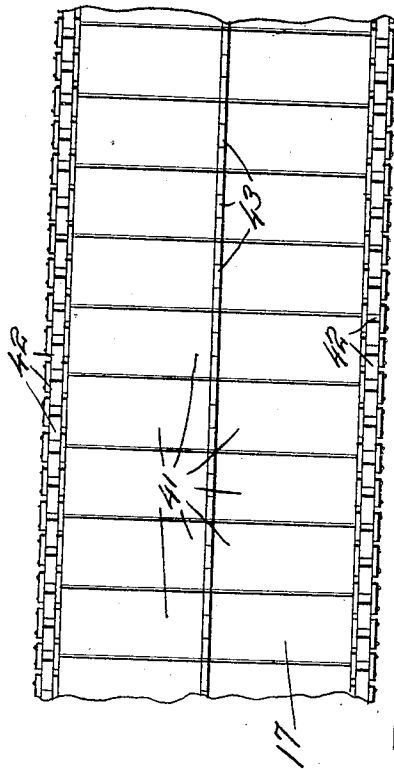
*Woodward & Chandler* Attorney

C. E. BEARCE.  
EARTH EXCAVATOR AND CONVEYER.  
APPLICATION FILED JULY 15, 1908.

925,075.

Patented June 15, 1909.

2 SHEETS—SHEET 2.



Witnesses  
*L. P. Chandler*  
*A. L. Chandler*

Inventor  
*C. E. Bearce,*  
*By Woodward & Chandler*  
Attorneys

# UNITED STATES PATENT OFFICE.

CHARLES E. BEARCE, OF PUNTA GORDA, FLORIDA.

## EARTH EXCAVATOR AND CONVEYER.

No. 925,075.

Specification of Letters Patent.

Patented June 15, 1909.

Application filed July 15, 1908. Serial No. 443,652.

*To all whom it may concern:*

Be it known that I, CHARLES E. BEARCE, a citizen of the United States, residing at Punta Gorda, in the county of De Soto and State of Florida, have invented certain new and useful Improvements in Earth Excavators and Conveyers, of which the following is a specification.

This invention relates to hoisting and conveying apparatus, having especial reference to the construction of several of its parts.

An object of this invention is to provide an apparatus of this character with a novel means for dumping the load carried.

Another object of this invention is to construct a conveyer in such a manner that the load may be dropped from the same at any suitable or desired point along the line of travel.

A further object of this invention is to provide a dumper which is adapted to actuate the belt at predetermined points along the line of travel which can be operated from either end of the apparatus.

Other objects and advantages will be apparent from the following description and it will be understood that changes in the specific structure shown and described may be made within the scope of the claims without departing from the spirit of the invention.

In the drawings forming a portion of this specification and in which like numerals of reference indicate similar parts in the several views, Figure 1 is a side elevation of the complete device. Fig. 2 is a detailed and enlarged view of the dumper detached from the apparatus. Fig. 3 is an enlarged detailed view of a section of the endless conveyer employed in connection with this apparatus. Fig. 4 is a vertical section on the line 4—4 of Fig. 1.

Referring now more particularly to the drawings, attention is directed to Fig. 1 where the numerals 10 and 11 designate banks disposed upon opposite sides of an excavation 12 over which this apparatus is adapted to extend. A steam shovel 13 of any suitable construction is positioned upon a ledge 14 along the base of the bank 10 which is provided with laterally extending arms 15 carrying in their extremity a suitable sprocket roller 16 which is adapted to support one end of the endless belt 17. The endless belt 17 extends over the excavation 12 to the bank 11 where it is supported on a

suitable sprocket roller 18 mounted in the lower ends of standards 19 which are carried by a hoist 20. The sprocket roller 18 is actuated by a hoist 20 through a plurality of gears 21. The standards 19 support in their upper extremities one end of a cable 22 which extends across the excavation 12 above the endless belt 17 and is secured at its opposite end to the upper portion of the steam shovel 13. The cable 22 serves the purpose of supporting a movable dumper 23 which is mounted on the same and which is operated longitudinally thereof by the operating ropes 24 and 25.

The dumper 23 is shown to better advantage in Fig. 2 where 26 designates a frame which is substantially inverted U shaped which is provided with rods 27 and 28 extending upwardly from the opposite corners thereof which are supported by a trolley harp 29 of any suitable structure which carries a trolley reel 30 for engagement with the cable 22. The frame 26 is adapted to be vertically disposed and is provided at its opposite lower extremities with parallel longitudinally formed slots 31 and 32 which are adapted to support the extremities of a shaft 33 which is disposed across the lower ends of the frame 26. The shaft 33 supports intermediately thereof a convex roller 34 which is for the purpose of operating the belt 17 to displace the material. The extremities of the shaft 33 are provided with cables which extend upwardly as at 37 where they pass over pulleys 38, thence downwardly under pulleys 39 secured in the lower extremities of the frame 26 where they pass out to the hoist 20 which actuates the cables 37 through one of the drums 40.

Fig. 3 shows a fragmentary view of the belt 17 which comprises a plurality of laterally disposed hinged sections 41 which support in their opposite ends links 42 which are adapted to engage over the teeth of the sprockets 16, 18 and rollers 34. The sections 41 are each secured at their inner ends to hinges 43 which extend longitudinally of the entire belt 17.

The operation of the device is as follows: The hoist 20 is actuated to cause the rotation of the roller 18 for the purpose of operating the endless belt 17. As the belt 17 travels the steam shovel 13 deposits the excavated material upon the upper side of the same where it is carried to the point where

it is desired to dump the same and where the dumper 23 is located. When the load which is placed upon the belt 17 arrives directly over the convex roller 34 the cables 37 are operated to raise the shaft 33 in the slots 31 and 32 thereby raising the roller 34 and causing the same to engage the under side of the belt 17 to raise the central portion thereof. As the sections 41 are centrally hinged, the edges of the belt 17 remain in close contact with the roller 34 and the material placed upon the belt 17 is caused to slide off the edges thereof. The cables 37 may be released and the shaft 33 will drop to its original position until the next load from the steam shovel 13 has been conveyed to the dumper 23. The dumper 23 may be carried along the cable 22 to any desired position by means of the cables 24 and 25 which extend in parallel to the cable 22 and are preferably actuated from the hoist 20.

What is claimed is:—

1. A device of the character described comprising a frame, said frame having slots formed in the lower extremities thereof, a shaft horizontally disposed in said slots, a convex pulley supported intermediately of said shafts, cables carried in the opposite extremities of said shafts, pulleys disposed on said frame about said shafts, said cables adapted to extend upwardly over said pulley, a second set of pulleys disposed at the lower end of said frame, said second set of pulleys adapted to support said cable, upwardly extending rods disposed at the upper ends of said frame, a trolley harp supported in the outer extremities of said rod, and a trolley wheel carried in said trolley

harp for the purpose of supporting said frame.

2. In a device of the character described the combination with an endless belt conveyer, of a U-shaped frame having slots formed in the extremities of the same positioned about said conveyer, a shaft mounted in the slots, a convex pulley disposed centrally on said shaft between the arms of said frame, cables carried at the extremities of said shaft, pulleys disposed on said frame above said shaft, pulleys disposed below said shaft, said pulleys adapted to support said cable, a trolley wire disposed in parallel with said conveyer and a trolley wheel supported in the upper end of said frame for engagement over said trolley wire to support said frame.

3. In a device of the class described the combination of a conveyer comprising a centrally and longitudinally hinged belt of two sections, links disposed along the outer edges of said belt sections for engagement over sprockets for supporting the same, a U-shaped member having its arms disposed about said belt and having slots formed longitudinally therein, a shaft mounted in said arms, a convex pulley disposed on said shaft, cables carried by said frame for actuating said shaft to raise said pulley and means for adjustably supporting said frame above said conveyer.

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

CHARLES E. BEARCE.

Witnesses:

J. W. NEWMAN,  
C. R. DAVIS.