July 10, 1923. 1,461,707

G. HANSON ET AL

PORTABLE CONVEYER

Filed April 7, 1920 2 Sheets-Sheet 1

Fig. 1.

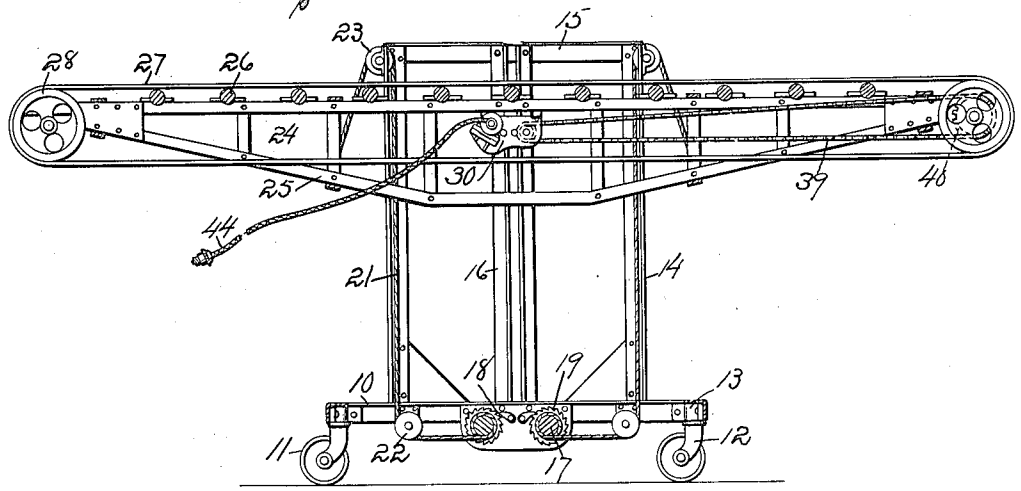


Fig. 2.

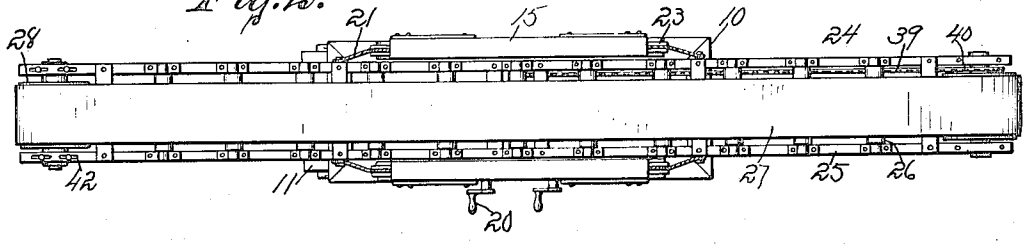


Fig. 6.

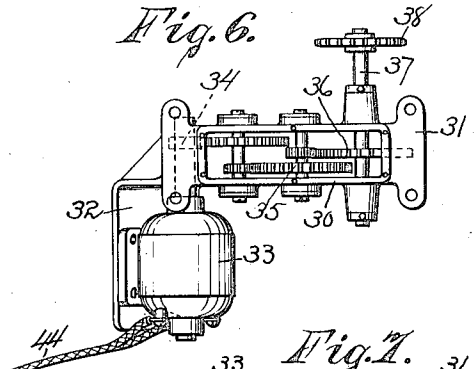
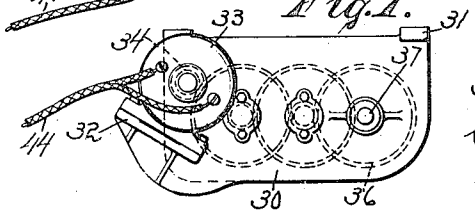


Fig. 7.



INVENTORS.
Gustave Hanson,
Charles A. Nelson
BY
Arthur B. Jenkins,
ATTORNEY.

July 10, 1923. 1,461,707

G. HANSON ET AL

PORTABLE CONVEYER.

Filed April 7, 1920 2 Sheets-Sheet 2

Fig. 3.

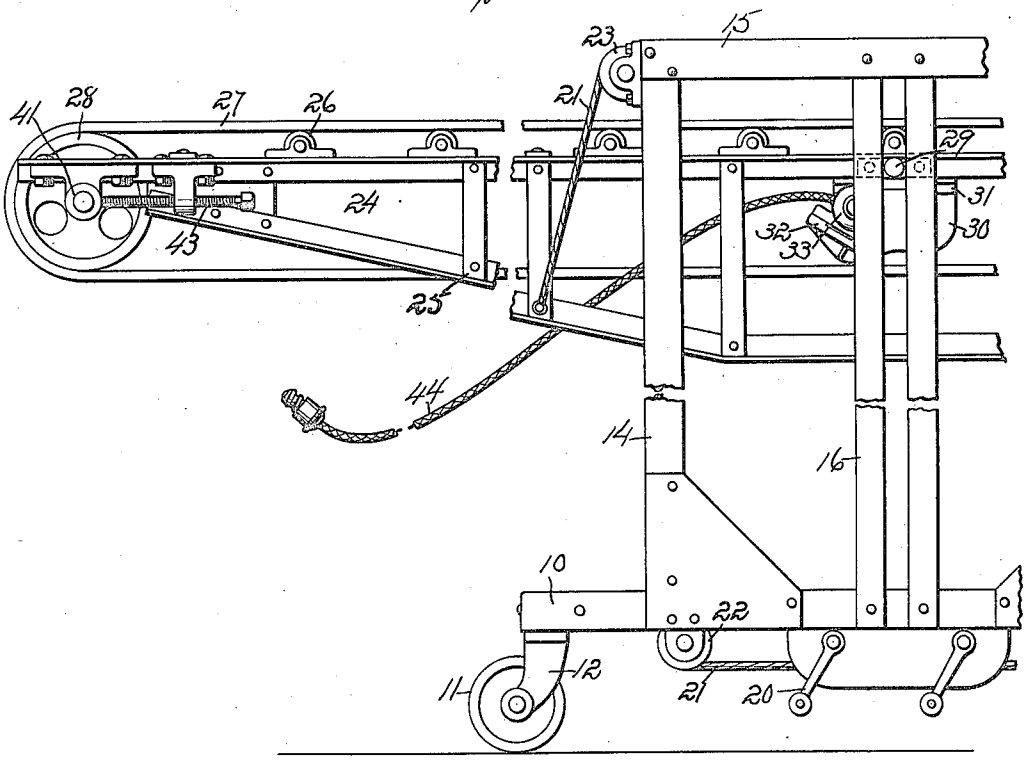


Fig. 4.

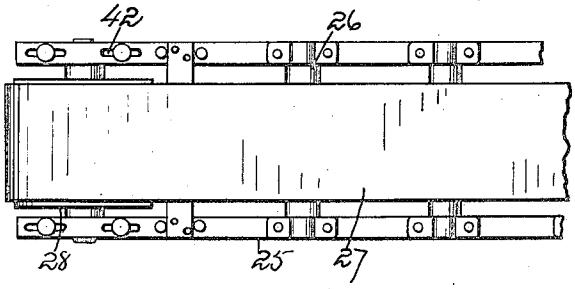
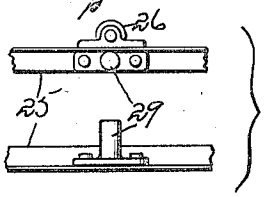


Fig. 5.



INVENTOR:
Gustave Hanson
Charles A. Nelson,
BY
Arthur B. Jenkins,
ATTORNEY.

Patented July 10, 1923. 1,461,707

UNITED STATES PATENT OFFICE.

GUSTAVE HANSON AND CHARLES A. NELSON, OF EAST BERLIN, CONNECTICUT, ASSIGNORS, BY DIRECT AND MESNE ASSIGNMENTS, TO LANCASTER IRON WORKS, OF LANCASTER, PENNSYLVANIA, A CORPORATION OF PENNSYLVANIA.

PORTABLE CONVEYER.

Application filed April 7, 1920. Serial No. 371,227.

To all whom it may concern:

Be it known that we, GUSTAVE HANSON and CHARLES A. NELSON, each a citizen of the United States and a resident of East Berlin, in the county of Hartford and State of Connecticut, have invented new and Improved Portable Conveyers, of which the following is a specification.

Our invention relates to the class of conveyers above mentioned, and an object of our invention, among others, is to provide a conveyer member adjustably supported and including driving means carried by said member, and the latter being so arranged that it may be positioned for use under many and varying conditions.

One form of device embodying our invention and in the construction and use of which the objects herein set out, as well as others, may be attained, is illustrated in the accompanying drawings, in which—

Figure 1 is a view of our improved conveyer looking from one side and shown as cut in vertical section.

Figure 2 is a top plan view of the same.

Figure 3 (Sheet II) is a view in side elevation on enlarged scale of a portion of our improved conveyer.

Figure 4 (Sheet II) is a top view of one end of the conveyer frame.

Figure 5 (Sheet II) is a detail view illustrating the arrangement of the guides for the conveyer frame.

Figure 6 (Sheet I) is a detail view of the motor and gear box.

Figure 7 (Sheet I) is a side view of the same.

As its name indicates, our improved conveyer may be moved from place to place, and to this end and as shown in the drawings, it embodies a base 10 in the form of a frame with sides and ends preferably formed of angle irons secured together in any suitable manner, the whole being supported on wheels 11. In the preferred construction these wheels are rotatably mounted in frames comprising forks 12 with shanks rotatably mounted in boxes 13 arranged in the corners of the base, this being the well known caster construction.

The supporting frame for the conveyer member comprises four corner posts 14 upstanding from the base and secured thereto in any suitable manner with side rails 15 at the top and intermediate uprights 16, two in number spaced apart at each side of the frame, and all of which parts are preferably made from angle iron to provide a firm and rigid structure.

Lifting drums 17 are supported on shafts rotatably mounted in the side parts of the base with pawls 18 engaging the teeth of ratchet wheels 19, handles 20, in the form of cranks, extending from the drums for the purpose of rotating them. Lifting cables 21 are secured at their ends to the drums, there being two of these cables secured to each drum and wound therearound and passing over sheaves 22 rotatably mounted on the base and about sheaves 23 rotatably mounted at the upper ends of the corner posts 14. The outer ends of each of these cables is secured to a conveyer frame 24 at such points that the latter will be supported against tipping movement.

This frame 24 comprises sides 25 preferably in the form of trusses and each comprising a top and bottom rail connected by cross pieces, said sides being preferably formed of angle iron to secure strength and rigidity. Rollers 26 are rotatably mounted on the top rails of said frame to support an endless conveyer belt 27 passing around conveyer drums 28 rotatably mounted at the ends of the conveyer frame.

The uprights 16 are properly spaced to provide guideways for the conveyer frame, the latter having guide studs 29 projecting from the sides of the top rails of the conveyer frame into the space between said posts.

A gear box 30 is suspended as by means of brackets 31 from the top rails of the conveyer frame and spanning the space therebetween near the lengthwise center thereof. A motor bed 32 comprises an integral extension from the gear box and projecting laterally therefrom to support a motor 33 in an inclined position with its shaft in line with an opening through the side of the box. The motor shaft may extend into this opening or a separate shaft may be mounted in bearings therein, however, whichever construction is employed, there being a pinion 34 secured to said shaft and in mesh with a train 35 of gears and pinions mounted in bearings in the side of the box, said train comprising a gear 36 se-

cured to a shaft 37 and carrying a sprocket wheel 38 from which a chain 39 passes to a sprocket wheel 40 secured to the shaft of one of the drums 28.

The bearings 41 for one of the conveyer drums 28 may be adjustably mounted as by means of brackets secured by bolts projecting through slots 42 at one end of the sides of the top rails of the conveyer frame adjusting screws 43 mounted in brackets in said top rails being employed to move the drum, or permit its movement, to tighten or loosen the conveyer belt. The motor may be supplied with a plug at the end of an electric cable 44 to convey current to said motor.

The gear box comprising a case including a support for a motor so arranged that it may be readily connected to a system of gear mechanism inclosed within the box, and said mechanism including a driving member, as the sprocket wheel 38, forms an important feature of our invention, as it enables a construction of the conveyer complete with its driving means embodied therein all mounted upon a single supporting frame.

The device herein illustrated and described comprises a conveyer that is extremely simple in its construction, that is self-supported and self-driven, and that will lend itself to uses under varying conditions, as either end may be placed at any elevation desired, within the range permitted by the frame, and without changing the elevation of the opposite end.

We claim:—

1. A conveyer comprising a base, a supporting frame rising from the base, a conveyer frame rigid from end to end, extending on opposite sides, and supported for vertical movement on said supporting frame and projecting beyond the supporting frame on opposite sides thereof, means for independently lifting either end of said conveyer frame, said lifting means being supported by said supporting frame, and a conveyer movably mounted on said conveyer frame.

2. A conveyer comprising a base, a supporting frame rising from the base and including two upright posts spaced apart to form guideways, a conveyer frame supported for vertical movement on said supporting frame, guides extending from the conveyer frame into said guideways, means supported by said supporting frame for independently lifting either end of the conveyer frame, and a conveyer movably mounted on the conveyer frame.

3. A conveyer comprising a base, a supporting frame rising from the base, a conveyer frame comprising a structure rigid from end to end suspended by means of cables supported by said supporting frame, drums for said cables, the latter being arranged to independently lift either end of the conveyer frame, and means for rotating said drums.

4. A conveyer comprising a base, a supporting frame including corner posts rising from the base, a conveyer frame rigid from end to end suspended from said supporting frame and between the corner posts by means of cables, said conveyer frame projecting beyond the supporting frame on opposite sides thereof, means for operating said cables to independently lift either end of the conveyer frame, and a conveyer movably mounted on the conveyer frame.

5. A conveyer comprising a base, a supporting frame rising from the base and including corner posts and guide members, a conveyer frame rigid from end to end suspended from said supporting frame by means of cables, guides projecting from the conveyer frame into the space between said guide members, means for operating cables suspending said conveyer frame to independently lift either end of the latter, and a conveyer movably mounted on the conveyer frame.

6. A conveyer comprising a base, a supporting frame rising from the base, a conveyer frame mounted for vertical movement on said supporting frame, said conveyer frame including sides each with top and bottom rails, a conveyer movably mounted on said conveyer frame, and a gear box secured to the top rails of the conveyer frame and including a motor and gears operatively connected to drive said conveyer.

7. A conveyer comprising a base, a supporting frame rising from the base, a conveyer frame mounted for vertical movement on said supporting frame, said conveyer frame including sides of truss construction, a gear box secured to the top members of said truss frame and spanning the space between said top members, said gear box including a motor attached thereto and a train of gears located therein, a conveyer movably mounted on said conveyer frame, and an operative connection between said gear box and said conveyer.

8. A conveyer comprising a base, a supporting frame rising from the base and including posts disposed in rectangular form, a conveyer frame extending through and for a considerable distance beyond and at opposite sides of the supporting frame between said posts and movable vertically therebetween, hoisting cables secured to the conveyer frame outside of the supporting frame and on opposite sides thereof, and means for operating said hoisting cables.

9. A conveyer comprising a base, a supporting frame rising from the base and including posts located at the four corners thereof, a pair of guide posts located be-

tween the corner posts on each side of the supporting frame and spaced apart to form guideways, a conveyer frame extending between the sides of the supporting frame, each side of which comprises two corner posts and a pair of guide posts, said conveyer projecting beyond the supporting frame at opposite ends thereof, hoisting cables secured to the conveyer frame outside of the supporting frame, and means on the base and within the boundaries of the supporting frame to receive the cables and to operate them to raise and lower the conveyer frame.

10. A conveyer comprising a base, a supporting frame rising from the base, a conveyer frame supported for vertical movement on said supporting frame and projecting at opposite sides beyond said supporting frame and beyond said base, means for independently lifting each end of said conveyer frame, said lifting means being supported by said supporting frame, and a conveyer movably mounted on said conveyer frame.

11. A conveyer comprising a base, a supporting frame rising from the base, a conveyer frame supported for vertical movement on said supporting frame and projecting at opposite sides beyond said supporting frame and beyond said base, means for independently lifting each end of said conveyer frame to elevate said end above the opposite end, said lifting means being supported by said supporting frame, and a conveyer movably mounted on said conveyer frame.

GUSTAVE HANSON.
CHARLES A. NELSON.