H. KAUKAINE.

PORTABLE CONVEYER.

APPLICATION FILED NOV. 4, 1915.

1,224,384.

Patented May 1, 1917.

4 SHEETS—SHEET 1.

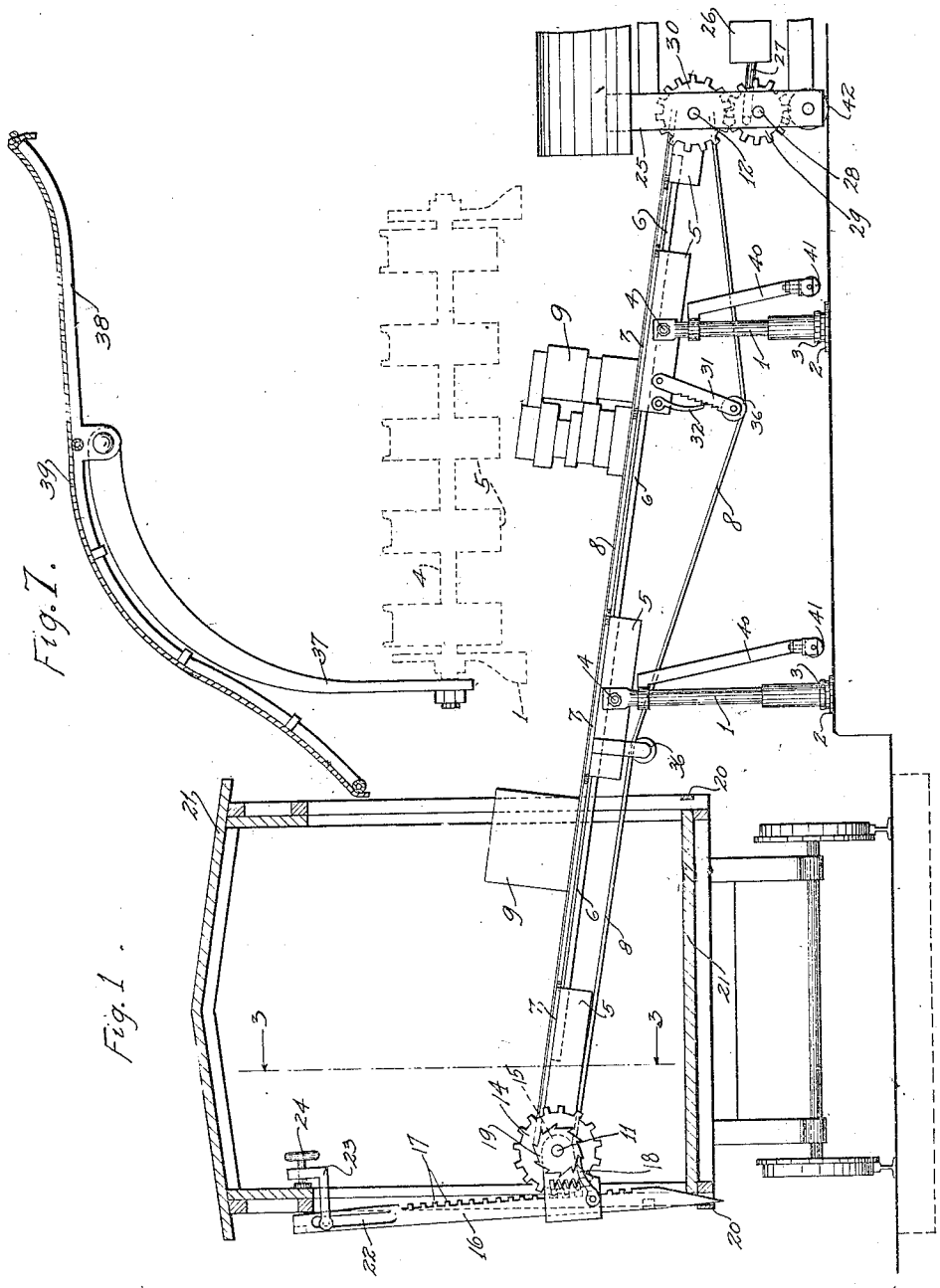


Fig. 1.

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4 SHEETS—SHEET 2.

Fig. 2.

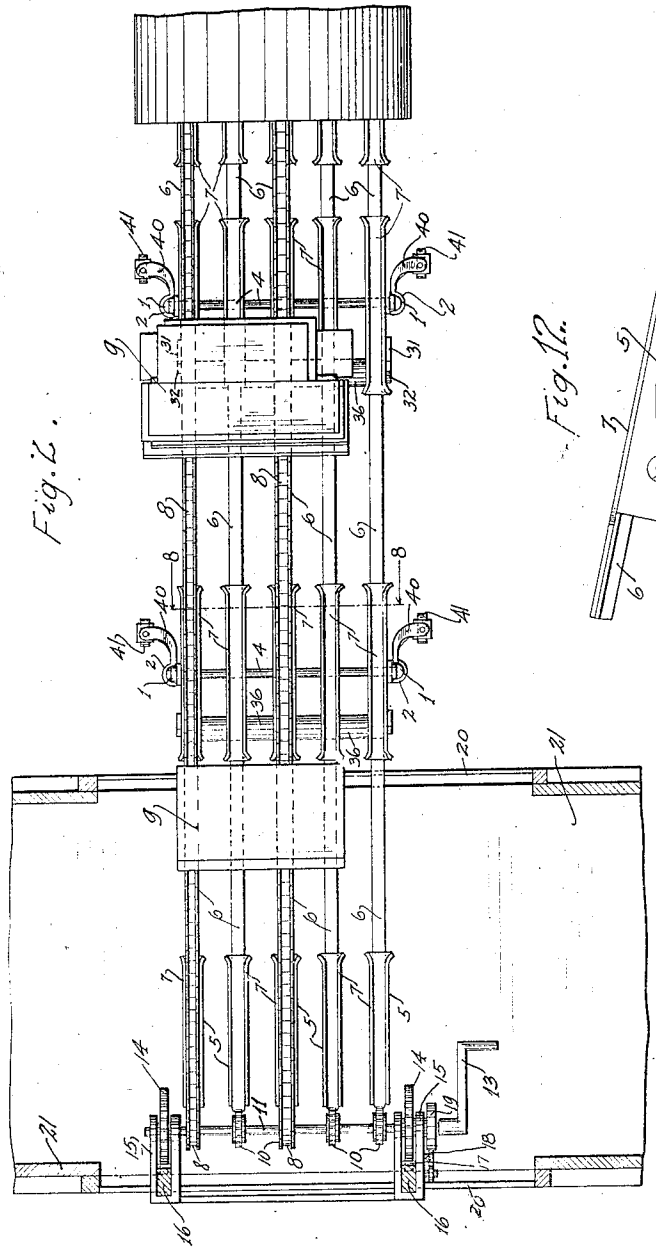
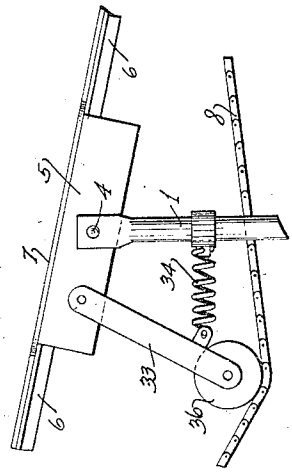


Fig. 12.



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4 SHEETS—SHEET 3.

Fig. 4.

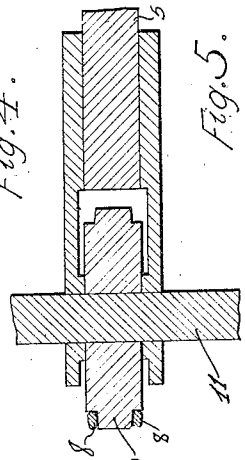


Fig. 5.

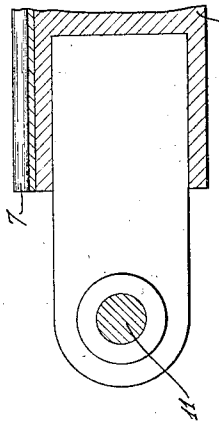


Fig. 6.

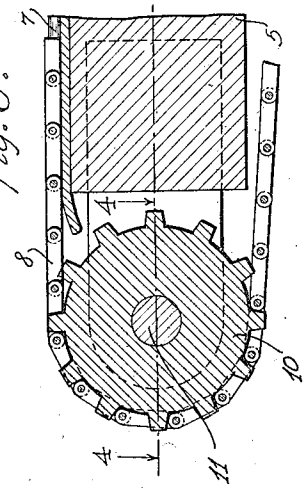
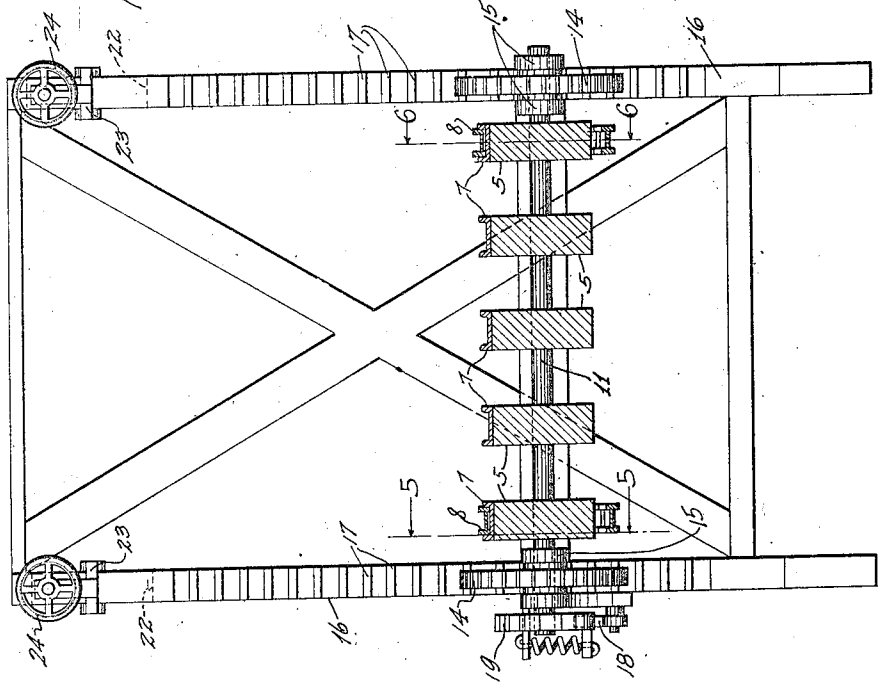


Fig. 3.



Witnesses

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4 SHEETS—SHEET 4.

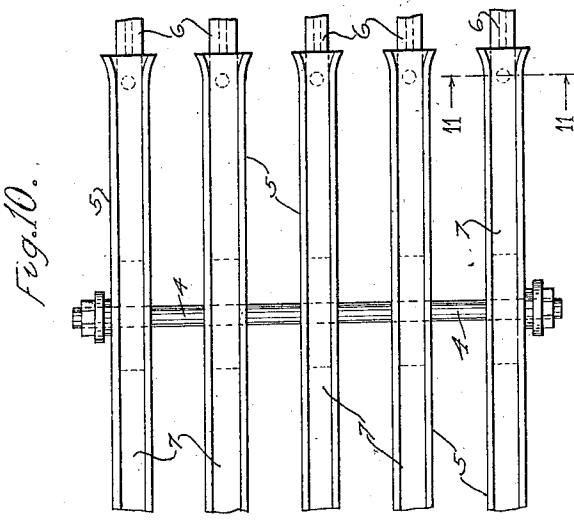


Fig. 10.

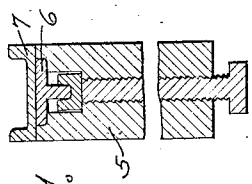


Fig. 11.

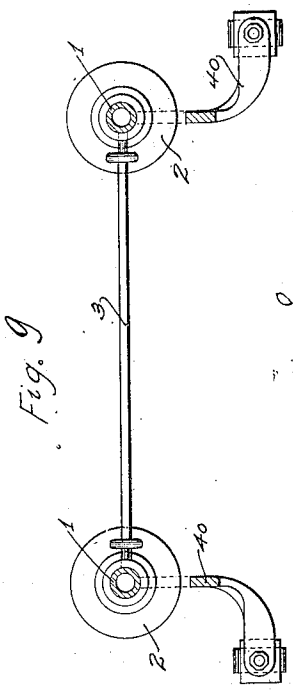


Fig. 9

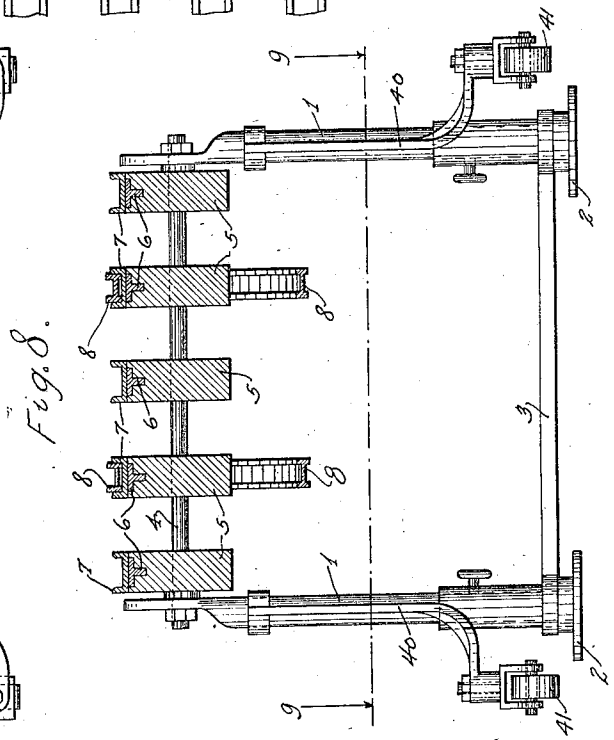


Fig. 8.

Witnesses

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UNITED STATES PATENT OFFICE.

HERMAN KAUKAINE, OF VIRGINIA, MINNESOTA.

PORTABLE CONVEYER.

1,224,384. Specification of Letters Patent. Patented May 1, 1917.

Application filed November 4, 1915. Serial No. 59,608.

To all whom it may concern:

Be it known that I, HERMAN KAUKAINE, a citizen of Russia, residing at Virginia, in the county of St. Louis, in the State of Minnesota, have invented certain new and useful Improvements in Portable Conveyers, of which the following is a specification.

This invention relates to improvements in portable conveyers and its object is to produce a device of this class adapted primarily for use in loading or unloading freight cars although it may be employed for other purposes. Means for adjusting the device longitudinally as well as transversely also form a feature of the invention. With the foregoing and other objects in view the invention consists in the combination and arrangement of parts to be hereinafter fully described in the following specification, pointed out in the appended claims and illustrated in the accompanying drawings which form a part of said specification and in which:—

Figure 1 is a vertical sectional view through a freight car showing the application of my invention which is shown in side elevation.

Fig. 2 is a top plan view of the device, the car being shown in horizontal cross section.

Fig. 3 is a view partly in section and partly in front elevation and is taken on line 3—3 of Fig. 1.

Fig. 4 is a section on line 4—4 of Fig. 6.

Fig. 5 is a vertical sectional view on line 5—5 of Fig. 3.

Fig. 6 is a vertical sectional view on line 6—6 of Fig. 3.

Fig. 7 is a view, partly in section, through the top that may be employed to protect the working parts from the weather when in operation.

Fig. 8 is a cross section through Fig. 2 on line 8—8.

Fig. 9 is a section on line 9—9 of Fig. 8.

Fig. 10 is an enlarged plan view of a portion of the track.

Fig. 11 is an enlarged sectional view on line 11—11 of Fig. 10.

Fig. 12 is an enlarged view of a modified form of chain tightener that may be employed.

Like reference characters indicate corresponding parts throughout the several views.

The reference numerals 1 denote adjustable telescoping legs which stand upon bases 2 and are connected by braces 3 and said legs carry the transverse shafts 4 whereon longitudinally grooved blocks 5 are supported that carry the ends of the conveyer-bed-sections 6 which telescope into the said blocks. By moving the bed sections toward each other, or into the blocks 5, the length of the conveyer is decreased and by moving the bed sections away from each other or partly withdrawing them from the grooved portions of the said blocks the length of the conveyer is increased. In Fig. 8 of the drawings the manner of disposing the bed sections in the blocks 5 is clearly shown, said bed sections being T-shaped in cross section. To the bed sections the track 7 is secured over which the conveyer chain 8 travels that carries the merchandise 9 from the point of loading to the point of unloading. Upon the said shaft 4 a plurality of blocks 5 are arranged and the conveyer chains, two in number, are adapted to be removably arranged to travel over any two of said blocks or over any two sets of bed sections thereby making the width of the conveyer adjustable. The conveyer chains run from the bed sections over the cogs 10 loose upon a transverse shaft 11 opposite one end of said sections and over similar cogs arranged upon another transverse shaft 12 opposite the other end of the bed sections, which form the conveyer bed.

The said shaft 11 terminates in a square end adapted to receive the crank or handle 13 whereby it may be rotated to rotate large cogs 14 arranged between the ends of brackets 15, in which said shaft 11 is journaled, which brackets are slidably arranged upon racks 16 the teeth 17 of which are in mesh with the said cogs 14 whereby one end of the conveyer is raised or lowered. A pawl 18 carried by one bracket 15 engages a ratchet 19 on shaft 11 to retain said shaft in adjusted relation with the racks. The lower ends of the racks 16 are preferably beveled to engage with the door guide bar 20 of the car 21 and the upper ends of said racks are slotted longitudinally as at 22 to receive pins carried by the angular arms 23 which may be movably secured to one side of the car 21 by the adjusting screws 24 which together with the said members 20 support the racks in position.

In a suitable framework 25 the engine 26 is supported, the piston 27 of which is connected to an eccentric on a transverse shaft 28 which shaft also carries a cog wheel 29 in mesh with a cog wheel 30 of shaft 12 whereby said shaft is rotated to drive the conveyer chains. The said blocks 5 that are supported by one pair of legs 1 are provided with adjustable chain tighteners comprising wheeled racks 31 adapted for engagement with pawls 32 to retain them in adjusted relation; or said racks may be displaced by wheeled arms 33 connected by springs 34 with legs 1; this form of chain tightener being automatic in its action. Another set of blocks 5 (see Fig. 1) is provided with the chain guides 36 which facilitate the operation of the chain. When it is desired to protect a portion of the conveyer from the weather, dust, etc., curved supports 37 may be bolted to the ends of the shafts 4 to carry a covering frame 38 having a suitable top 39 as shown in Fig. 7. When the conveyer is adjusted as desired, and previously described, it may be manually loaded at one end and unloaded at the other in the ordinary manner.

Angular arms 40 carried by the legs 1 are provided with wheels 41 and when the conveyer is not in use and it is desired to move it from place to place the said legs may be partially telescoped to permit the wheels 41 to carry the weight of the conveyer which may then readily be moved as desired, together with the engine frame provided with wheels 42.

What is claimed is:—

1. In a conveyer comprising conveyer-bed-sections, blocks adapted to carry the ends of said conveyer-bed-sections, legs for said blocks, transverse shafts arranged opposite the ends of said conveyer-bed-sections, cogs carried by said shafts, conveyer chains arranged to travel over said cogs and over said conveyer-bed-sections, and driving means for said cogs.

2. In a conveyer comprising conveyer-bed-sections, blocks adapted to telescopically carry the ends of said conveyer-bed-sections, vertically adjustable legs for said blocks, transverse shafts arranged opposite the ends of said conveyer-bed, cogs carried by said shafts, conveyer chains arranged to travel over said cogs and over said conveyer-bed-sections, and driving means for said cogs.

3. In a conveyer comprising conveyer-bed-sections, longitudinally grooved blocks adapted to adjustably carry the ends of said conveyer-bed-sections, vertically adjustable legs for said blocks, transverse shafts arranged opposite the ends of the conveyer bed formed by said conveyer-bed-sections, cogs carried by said shafts, conveyer chains arranged to travel over said cogs and over said conveyer-bed-sections, automatic chain tightening means carried by said blocks for engagement with said conveyer chains, and driving means for said cogs.

4. In a conveyer comprising conveyer-bed-sections, parallel blocks arranged in series and adapted to telescopically carry the ends of said conveyer-bed-sections, vertically adjustable legs for said blocks, transverse shafts arranged opposite the ends of said conveyer-bed, cogs carried by said shafts in alinement with the said parallel blocks, conveyer chains arranged to travel interchangeably over said cogs and over said conveyer-bed-sections, and driving means for said cogs.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in the presence of two subscribing witnesses.

HERMAN KAUKAINE.

Witnesses:
CARL A. ONKKA,
JENNIE S. LOFBACK.