R. R. SCHUTT, DEC'D.
J. M. KEITH, EXECUTOR.
LOADING DEVICE.
APPLICATION FILED FEB. 1, 1921.

1,389,995.

Patented Sept. 6, 1921.

2 SHEETS—SHEET 1.

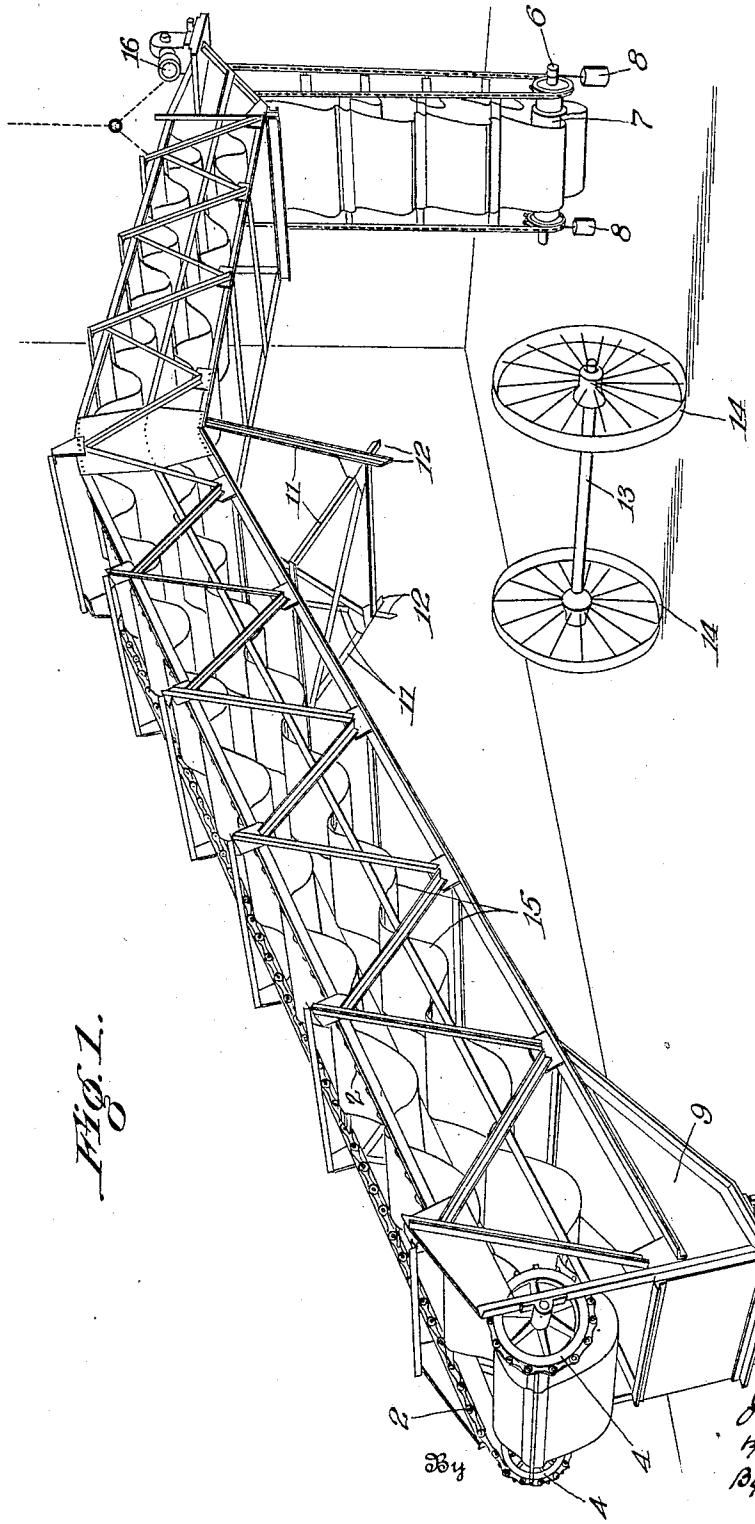

Fig. 1.

Inventor

John M. Keith, Executor
of Richard R. Schutt,
By Byrnes Townsend & Brickenstein
Attorneys

By

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2 SHEETS—SHEET 2.

Fig. 2.

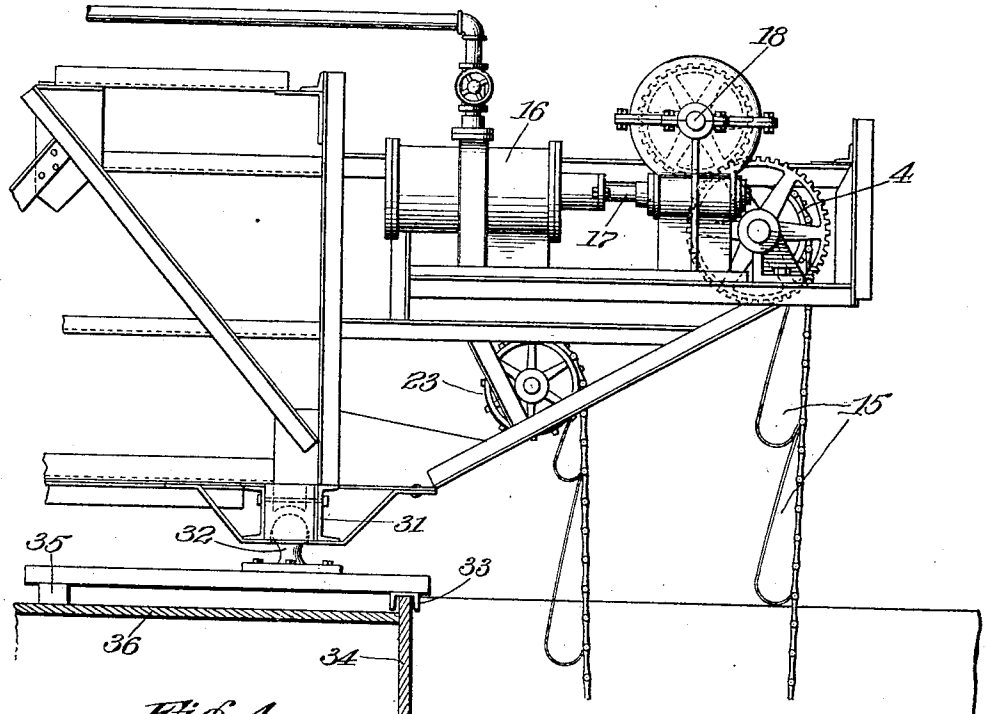


Fig. 4.

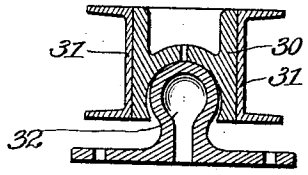
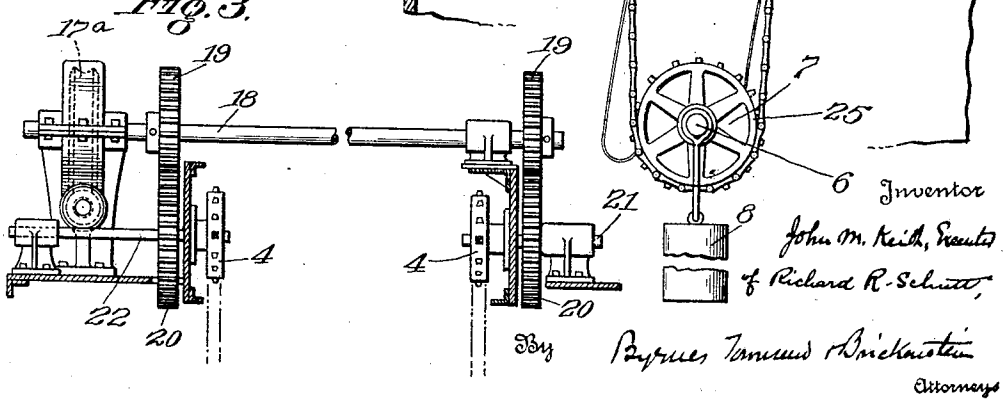


Fig. 3.



Inventor
John M. Keith, Executor
of Richard R. Schutt,
By Byrnes, Townsend & Brickenstein
Attorneys

UNITED STATES PATENT OFFICE.

RICHARD R. SCHUTT, DECEASED, LATE OF SAN JOSE, COSTA RICA, BY JOHN M. KEITH, EXECUTOR, OF SAN JOSE, COSTA RICA, ASSIGNOR TO UNITED FRUIT COMPANY, OF BOSTON, MASSACHUSETTS, A CORPORATION OF NEW JERSEY.

LOADING DEVICE.

1,389,995. Specification of Letters Patent. Patented Sept. 6, 1921.

Application filed February 1, 1921. Serial No. 441,693.

To all whom it may concern:

Be it known that RICHARD R. SCHUTT, deceased, who was a citizen of the United States of America, residing at San Jose, Costa Rica, did invent certain new and useful Improvements in Loading Devices, of which the following is a specification, and for which I have filed applications in Holland December 12, 1919; Haiti December 19, 1919; Great Britain December 15, 1919; France December 9, 1919; Belgium December 12, 1919; Santo Domingo March 22, 1920; Costa Rica January 28, 1920; Germany December 10, 1919; Uruguay October 19, 1920; Argentine October 11, 1920.

The invention relates to a device for transferring material from a dock to a ship or vice versa and comprises a framework carrying a series of load carrying pockets supported on endless chains which are driven by an engine mounted on the frame.

The invention will be understood from the accomanying drawings, in which—

Figure 1 is a perspective view of the device;

Fig. 2 is a detail showing the end of the device mounted over the hatch of a ship;

Fig. 3 is another detail showing the chain driving mechanism; and

Fig. 4 is a detail of the ball and socket mechanism used on the deck end of the device, when in operation.

Referring to the drawings, 1, is the girder frame of sufficient length to extend from the dock to the hatch. This frame carries a pair or roller chains 2, on which are supported in any suitable manner as by cross bars, a series of flexible pockets 15, for receiving the bunches of bananas, bags of sugar, or other articles. The rollers travel along suitable flanges on the girder frame. At each end of the frame is mounted a shaft carrying near its ends sprocket wheels 4, 4, with which mesh the links of the chain. The chains are preferably made in detachable sections, each carrying several pockets, and are long enough to provide a depending bight, 5, adapted to extend down into the hold of the ship, this bight having at its lower end a pair of sprocket wheels 25 mounted on a cross shaft 6 which carries a roller 7. Weights 8, are attached to the ends of the shaft 6. The pockets are made of any suitable strong flexible material, such as canvas, and are secured to cross bars whose ends are fastened to the chains.

At the inboard end of the girder frame is provided an extension frame carrying at its lower end wheels, 10, 10. Midway of the girder frame are provided downwardly extending inclined beams, 11, 11, suitably braced to the girder frame. The beams 11 and 11 cross each other and their projecting ends 12, 12, form bearings for the shaft 13 of a truck having wheels, 14, 14.

At the outer end of the frame, as shown in Figs. 2 and 4 is provided a ball and socket joint whose parts are preferably made of bronze. The female member, 30, is bolted to the channel beams 31. The male member, 32, is bolted to planking having at one end a channel 33 for engaging the edge of the hatch 34, and at the other end, a block 35 resting on the deck 36.

At the ship end of the girder frame is mounted on a platform a motor, 16, shown as a rotary steam engine, although an electric motor might be used, whose shaft 17 drives through a worm and worm wheel 17^a, a shaft 18 mounted on bearings in the girder frame. Pinions 19 on the shaft 18 drive gears 20, 20 on shafts 21, 22, journaled in the frame, these shafts carrying the sprocket wheels 4, 4. Idlers 23, 23, guide the lower runs of the chains.

The engine 16 may be provided with a flexible hose by which connection may be made to a steam-line on the ship. Suitable means, such as a chain and ring are provided on the outboard end for attaching hoisting chains. Bight 5, may be made of proper length to reach ship-holds of varying depths. The lengths of chain which form the bight 5 are collected, when the device is not in use, at the dock end of the machine, where they may be supported on brackets, carried by the frame.

The whole device can therefore be moved about on the wheels 10 and 14. When it is to be put in operation, the engine end of the device is hoisted on to the ship and lowered on to the ball bearing located at the edge of the hatch. The motor is then operated to lower the bight 5 into the hold, a sufficient number of chain sections being used to enable the end of the bight to reach the hold desired. The motor is then operated to drive the conveyer in the loading or un-

loading direction. When loading from a dock, the bunches of bananas, or other articles, are loaded from the dock into the pockets and carried up and across the girder frame and down to the delivery end of the machine, where they are removed.

Obviously the machine can be operated in either direction and is adapted for use either in loading or unloading. The wheels 10 on the dock end and the ball and socket on the ship end enable the whole frame structure to accommodate itself to movements of the ship relative to the dock.

I claim:

1. A load handling machine of the type described comprising a frame constructed and arranged to extend from a point on a ship to a point outside the ship, a conveyer carried by the frame for transferring material between said two points, means including a universal motion element for supporting one end of the frame on the ship and means for movably supporting the other end of the frame outside the ship.

2. Apparatus according to claim 1 including a removable truck adapted to engage the frame intermediate its ends.

3. Apparatus according to claim 1 in which the frame consists of members disposed at an angle to each other to define a centrally elevated portion.

4. Apparatus according to claim 1 in which the means for movably supporting the shore end of the conveyer is a wheeled support.

5. Apparatus according to claim 3 including frame elements depending from the central portion and a removable truck adapted to engage the said frame elements.

JOHN M. KEITH,
Executor of the estate of Richard R. Schutt, deceased.