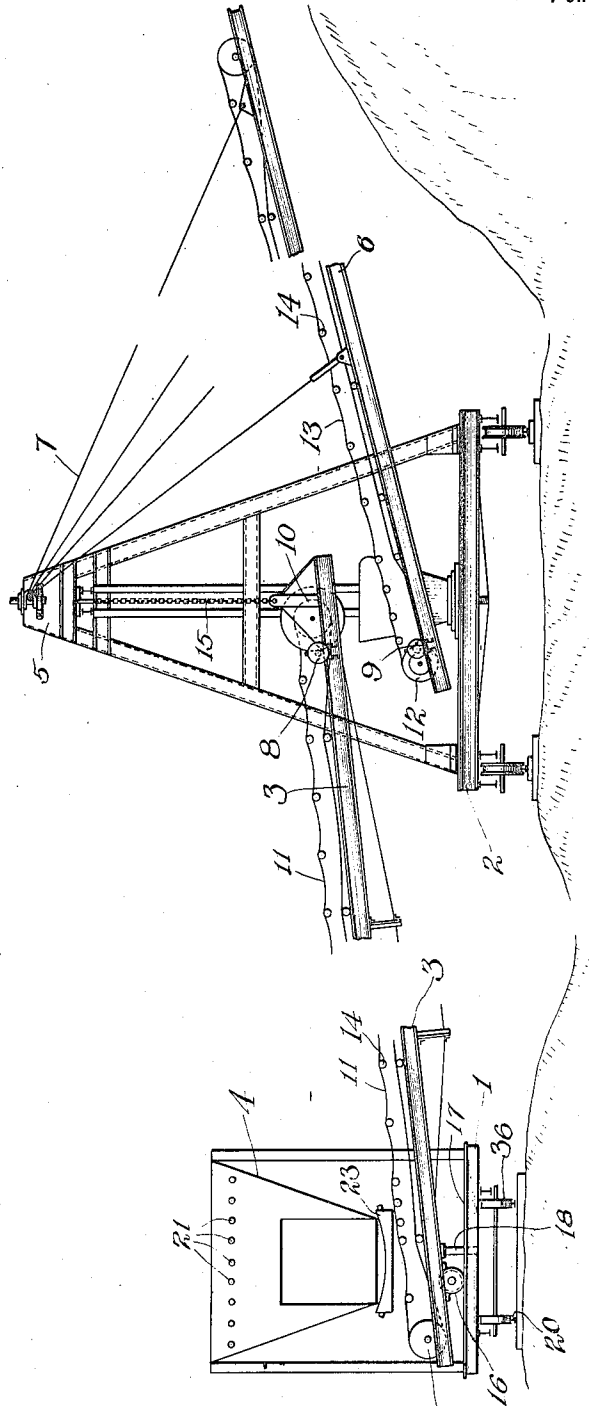


J. MENZIES.
CONVEYER FOR LEVEE CONSTRUCTION.
APPLICATION FILED APR. 27, 1914.

1,153,851.

Patented Sept. 14, 1915.
4 SHEETS—SHEET 1.

Fig. 1.



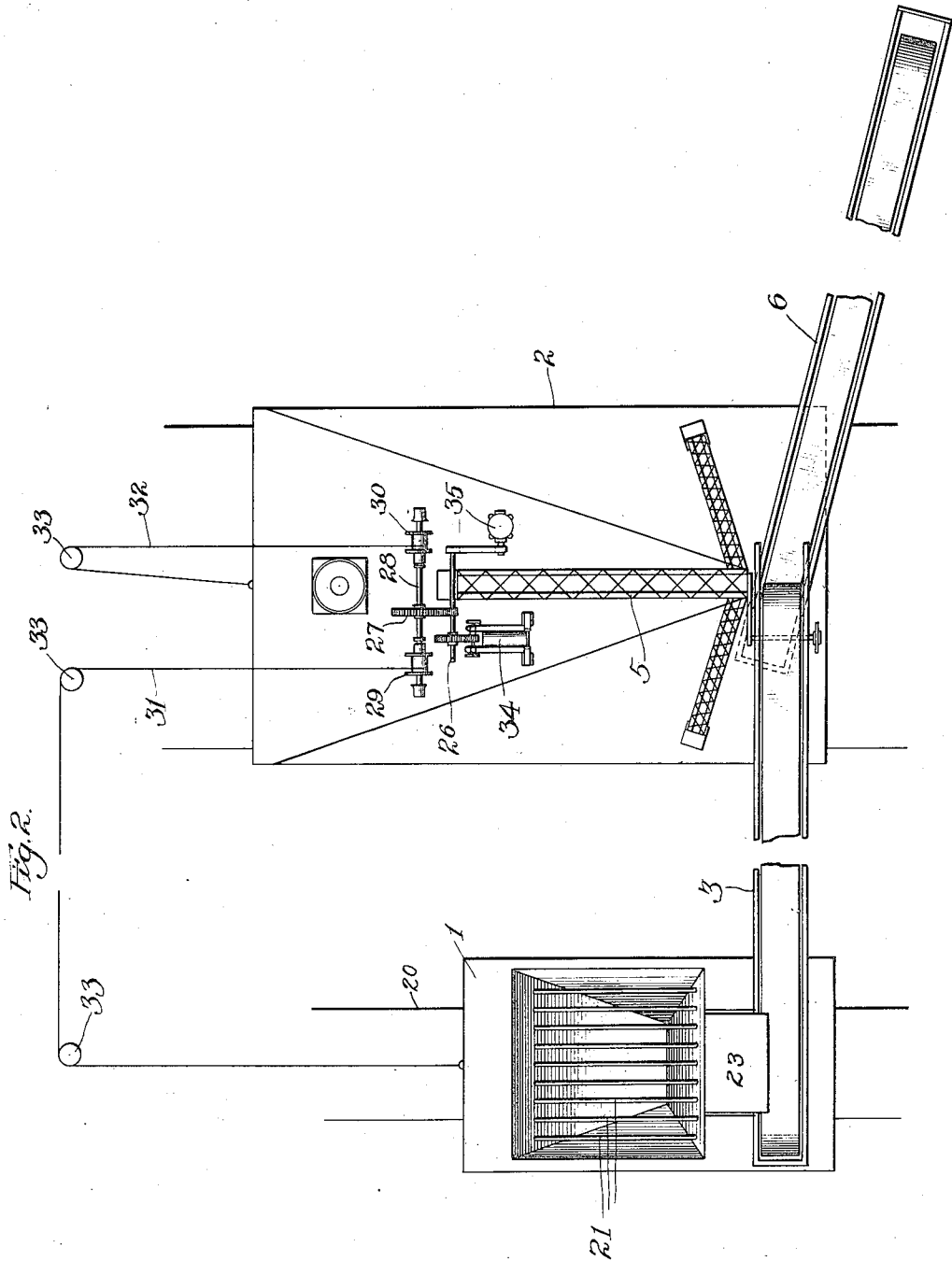
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4 SHEETS—SHEET 3.

Fig. 3.

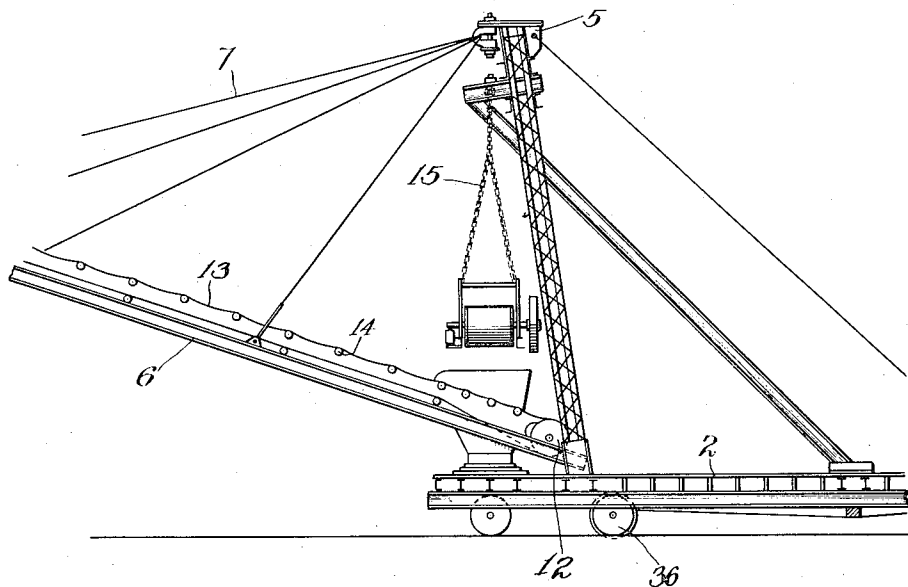
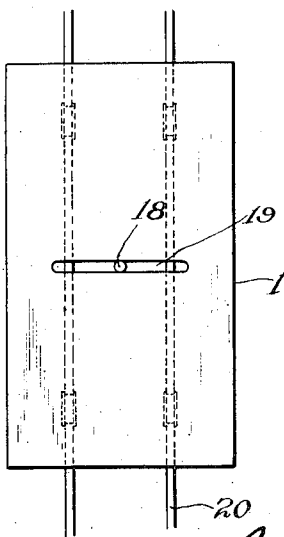


Fig. 4.



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4 SHEETS—SHEET 4.

Fig. 5.

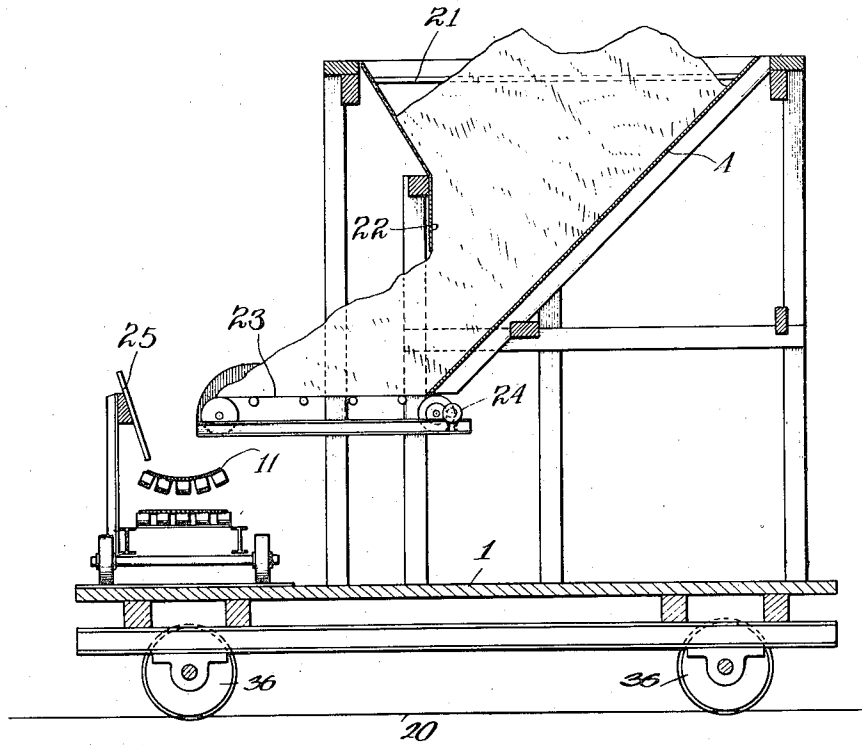
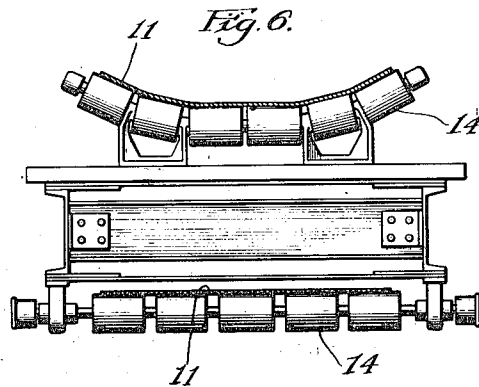


Fig. 6.



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UNITED STATES PATENT OFFICE.

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CONVEYER FOR LEVEE CONSTRUCTION.

1,153,851.

Specification of Letters Patent. Patented Sept. 14, 1915.

Application filed April 27, 1914. Serial No. 834,717.

To all whom it may concern:

Be it known that I, JAMES MENZIES, a citizen of the United States of America, and a resident of New Orleans, parish of Orleans, and State of Louisiana, have invented certain new and useful Improvements in Conveyers for Levee Construction, of which the following is a specification.

In the construction of levees, it is frequently desirable to obtain material therefor at a considerable distance from the levee in order to avoid removing material close to the levee and as a consequence, make the latter more susceptible to the erosive action of the water. Also a better grade of material for this purpose is frequently found close to the low water-mark of a river. Under such circumstances, in the reconstruction and building of levees, it has been customary to employ a plurality of dredging machines, spaced apart and arranged to successively carry the material to the levee.

The main object of this invention is to provide a portable belt conveyer particularly adapted for the construction of levees.

Further objects of the invention are to provide improvements in the construction of boom and horizontal conveyers permitting the supporting trucks of the latter to be movable relatively to each other and the supported conveyer, in order that the said horizontal conveyer may be disposed at various angles—both horizontally and vertically—to compensate for differences in ground level and discharge at some fixed point while obtaining material at various points radiating from said fixed point.

An illustrative embodiment of this invention is shown in the accompanying drawings, in which—

Figure 1 is a side elevation partly broken away of apparatus, constructed according to this invention. Fig. 2 is a plan view partly diagrammatic. Fig. 3 is a detail in side elevation of one of the supporting trucks and connections partly broken away. Fig. 4 is a plan of another truck. Fig. 5 is a detail in section of a receiving hopper and connections for feeding material to the conveyer. Fig. 6 is a detail in section of the horizontal conveyer.

The apparatus shown in the drawings is adapted to receive material for levee construction purposes from a dredging machine and then transport the material the desired distance, delivering it to a boom conveyer properly constructed for depositing the material at the points desired along the levee.

Referring to the drawings, a pair of trucks 1 and 2 are shown supporting a more or less horizontally disposed conveyer 3. The truck 1 also carries a receiving hopper 4, and the truck 2 is provided with a suitable mast 5, from which are suspended the conveyer 3 and a swinging boom conveyer 6.

The latter is suitably supported by stays or tackle 7 that it may be shifted to different angular positions with respect to the truck 2. With this arrangement, material which is deposited in hopper 4 is fed by the conveyer 3 to the boom conveyer 6, which serves to carry the material to the desired points on the levee.

The operating mechanism of the conveyers is driven by motors 8 and 9 respectively, having gear connections for driving the belt pulley 10 for the belt 11 supported on conveyer 3, and a belt pulley 12 for the belt 13 supported on boom conveyer 6. Motors 8 and 9 receive current from a generator 35 mounted on platform 2 and driven by an engine 34 also supported on said platform.

The conveyers may be of any desired construction involving a suitable supporting frame carrying driving pulleys and idlers or troughing rollers 14 for supporting the belt as shown in Fig. 6.

The conveyer 3 is shown hung at one end from mast 5 by chains 15 in such manner that it may be swung radially of truck 2 while always discharging on the boom conveyer 13 above the pivotal center of the same, thus providing a construction which permits both the conveyer 11 and conveyer 13 to be set at different horizontal angles with respect to each other without interfering with the passage of material from conveyer 11 to conveyer 13. At its receiving end it is supported by rollers 16, resting on the surface of truck 1. The receiving end of the conveyer is also provided with a pin

18 extending through a slot or way 19 in truck 1. The pin 18 acts as a pivot about which the conveyer may be moved, and also prevents the conveyer from rolling off the truck when it is shifted longitudinally of the conveyer. The truck is preferably supported by rollers 36 running on shiftable tracks and sleepers 20. With this arrangement the truck 1 may be run for a limited distance along the tracks 20 while the truck 2 remains stationary, the mounting of the conveyer 3 on the truck 1 permitting the conveyer to shift relatively of the truck to compensate for the difference in distance between the trucks 1 and 2 and their different angular settings. It is therefore possible to shift the truck 1 and apparatus supported thereon to suit the convenience of the dredging machine feeding material into hopper 4, while the boom conveyer 6 is permitted to operate over the same section of the levee. The same arrangement permits truck 2 to be moved as required by the progress of the work while truck 1 remains at some point where there happens to be an unusual quantity of material.

The hopper 4 as shown in the drawings is preferably provided with fixed bars 21 for breaking the earth or clay as it is dumped into the hopper. The hopper is also provided with an adjustable gate 22 for regulating the amount of material which leaves the hopper, and below this gate, as shown in Fig. 5, is a feeder 23 in the form of a short conveyer belt driven by an electric motor 24. The feeder 23 is driven at such speed as is necessary to properly load conveyer belt 11. A baffle plate 25 carried by truck 1 is suitably located opposite feeder 23.

The conveyer 3 carries material to boom conveyer 6, depositing it directly upon the receiving end of the latter, according to the arrangement shown in Fig. 2. The boom conveyer in turn carries the material upwardly, depositing it on the levee as desired, having considerable range of movement and not making necessary the movement of the apparatus along the line of the levee with undue frequency. The drive shaft 26, receiving power from engine 34, has a belt and pulley connection 27 for driving a shaft 28. This shaft carries a pair of winding drums 29 and 30 separately clutched thereto for cables 31 and 32 passing around blocks 33 and secured at their ends to the trucks 1 and 2. The supports for blocks 33 are omitted from the drawings, but are intended to be staked at desired positions for the purpose of providing a purchase whereby the entire apparatus may be shifted along the line of work by the operation of drums 29 and 30.

It is believed that the operation of the device is apparent from the foregoing, but it may be briefly recapitulated as follows: The material which is used in the construction of a levee is deposited in hopper 1 and is then fed from this hopper by the feeder 23 to conveyer 3. The latter carries it toward the levee, finally depositing it on the receiving end of the swinging boom conveyer 6, which carries the material upwardly and deposits it on the levee where required. The apparatus is designed to be adaptable to varying service conditions and to meet the needs for the class of work for which it is particularly designed, in that one truck may remain stationary while the other is shifted. If there is considerable material to be removed at some one point, it may be properly distributed along the levee at little expense, and also when it is desirable to deposit considerable material at any particular section of the levee, the truck 1 which carries the receiving hopper may be moved radially of truck 2 on which the boom is mounted, permitting the material to be removed from a considerable area with little inconvenience to the operators.

Although but one specific embodiment of this invention has been herein shown and described, it will be understood that numerous details of the construction shown may be altered or omitted without departing from the spirit of this invention as defined by the following claims.

I claim:—

1. A conveying system comprising a horizontally disposed frame and belt conveyer mounted thereon, a truck for supporting one end of said conveyer, and connections between said frame and truck, permitting a horizontal pivotal movement of the conveyer on the truck, and a relative movement between the conveyer and truck longitudinally of the conveyer, and a truck having connections for pivotally supporting the opposite end of said conveyer.

2. A conveying system comprising a horizontally disposed frame and belt conveyer mounted thereon, a truck for supporting one end of said conveyer, and connections between said frame and truck, permitting horizontal pivotal movements of the conveyer on the truck and relative adjustment between the conveyer and truck longitudinally of the conveyer, and a truck for supporting the opposite end of said conveyer having connections for permitting a universal pivotal movement of the conveyer with respect to said last mentioned truck.

3. A conveying system comprising a pair of trucks, a conveyer suspended from a frame mounted on one of said trucks at one end, and at its other end being supported by

the remaining truck by connections permitting both a longitudinal and a pivotal horizontal movement of the conveyer with respect to the truck, and a boom conveyer
5 pivotally mounted on the first mentioned truck below the suspended discharge end of said first mentioned conveyer.

Signed at New Orleans, this 21st day of April, 1914.

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Witnesses:

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