(No Model.)

J. P. KEMPER.

APPARATUS FOR STORING AND FEEDING SUGAR CANE ON CANE CARRIERS.

No. 601,149. Patented Mar. 22, 1898.

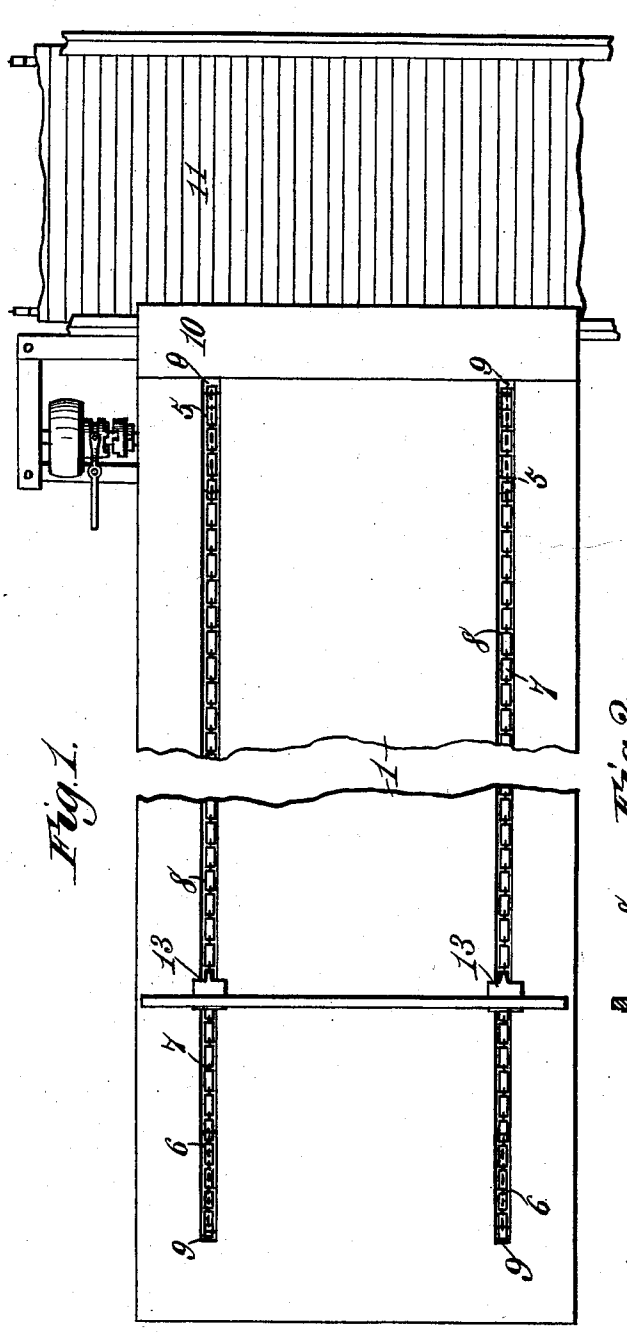


Fig. 1.

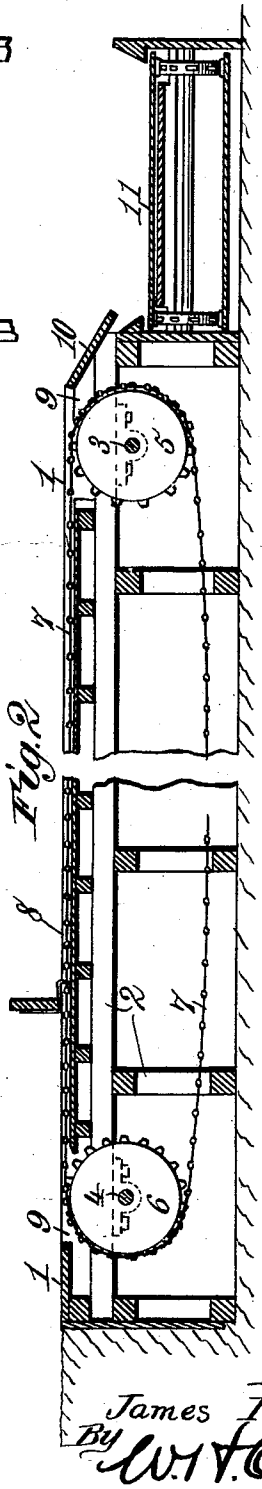


Fig. 2.

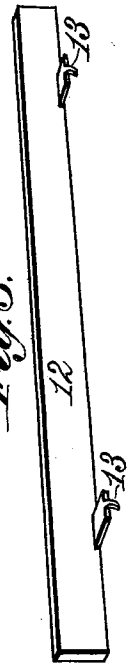


Fig. 3.

Witnesses.
Robert Everett.
F. B. Keeler

Inventor.
James P. Kemper
By W. H. Cook.
Atty.

THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

JAMES P. KEMPER, OF NEW ORLEANS, LOUISIANA.

APPARATUS FOR STORING AND FEEDING SUGAR-CANE ON CANE-CARRIERS.

SPECIFICATION forming part of Letters Patent No. 601,149, dated March 22, 1898.

Application filed September 27, 1897. Serial No. 653,216. (No model.)

To all whom it may concern:

Be it known that I, JAMES P. KEMPER, a citizen of the United States, residing at New Orleans, in the parish of Orleans and State of Louisiana, have invented certain new and useful Improvements in Apparatus for Storing and Feeding Sugar-Cane on Cane-Carriers; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the annexed drawings, making a part of this specification, and to the figures of reference marked thereon.

This invention relates to apparatus for feeding sugar-cane from a dump-table onto a cane-carrier for conveying it to a sugar-mill.

It is the main purpose of my invention to obviate the necessity of slings and hoisting devices and enable the cane-carts to be driven onto a table or platform and dump thereon the loads of cane consecutively, one load immediately behind another, throughout the length of said table, across which the carts are to be moved.

The invention consists in a dump-table located at a right angle to the usual endless carrier employed for conveying sugar-cane into a mill, endless sprocket-chains extended lengthwise of said table and sunk therein, so as not to disturb the cane stored thereon or interfere with driving a cart or running a car onto the table, mechanism for supporting and operating the said sprocket-chains, and a drag-bar detachably connected with the links of two parallel chains and designed to be extended across the table in rear of a load of sugar-cane, so that as the sprocket-chains are moved in the proper direction the load of cane will be drawn forward at any desired speed and deposited on the cane-carrier that is to convey it into the mill.

My invention also comprises features of construction and novel combinations of devices in mechanism for unloading and feeding sugar-cane, as hereinafter more particularly described and claimed.

In the annexed drawings, illustrating the invention, Figure 1 is a plan of my dump-table and cane-feeding apparatus in connection with the usual cane-carrier. Fig. 2 is a longitudinal section of the same. Fig. 3 is a view of the drag-bar detached.

The dump-table 1 should be about twelve feet wide, and it may have any desired length, according to the number of cane-carts or railroad-cars to be moved thereon or across the same and unloaded at about the same time, one load to be dumped immediately behind another throughout the length of the table.

To facilitate the passage of carts or cars onto and from the dump-table 1, it should be supported with its top at about the level of the ground, which may be excavated sufficiently to afford room for the table-supports and for the cane-feeding mechanism. Beneath the table 1 there is arranged a supporting-framework 2, of any suitable construction. There is mounted transversely beneath each end of the table a shaft, as 3 and 4, to each of which are secured two or more sprocket-wheels 5 and 6, about six feet apart, more or less, on their respective shafts. On the sprocket-wheels 5 and 6 are placed parallel sprocket-chains 7, that are extended very nearly the full length of the table. The uppermost portion of each sprocket-chain runs in a groove or guideway 8, formed longitudinally in the table-top, there being one such guideway for each chain, and the bottom of each groove is so arranged as to support the upper portion of the sprocket-chain in a position flush with the table-top along which the chains are moved. At the ends of the guideways 8 there are suitable openings or spaces 9 to permit engagement of the chains 7 with the sprocket-wheels on which they are carried.

One end of the dump-table 1 terminates in an incline 10, that partly overhangs the ordinary endless cane-carrier 11, which conveys the cane to the sugar-mill.

After a load of cane is dumped onto the table 1, crosswise of the same, there is connected with the chains 7 a detachable drag-bar 12, placed across the table immediately behind a load of cane. The chains are then set in motion toward the cane-carrier 11 by means of power applied to that sprocket-wheel shaft 3 which is nearest the cane-carrier. Power may be applied to this shaft 3 through a friction-clutch or other device connecting with the motor, which may be an engine provided for that purpose, or the shaft 3 may be geared with the sugar-mill or other available power source.

The drag-bar 12 is about as long as the table is wide, and it is provided at suitable points with hooks 13, adapted to be detachably engaged in links of the two or more parallel sprocket-chains. Thus as the chains 7 are set in motion toward the cane-carrier the load of cane in front of the bar 12 will be dragged forward and will pass over the incline 10 onto the carrier 11, which has its movement in a direction at right angles to the length of the dump-table 1 and sprocket-chains 7, mounted therewith. It will be obvious that the sprocket-chains 7 may be driven at such speed as to cause the cane to be fed onto the carrier 11 as rapidly or slowly as may be desired. This may be accomplished by means of any suitable mechanism for varying the speed of the driving-gear or for stopping and starting at will. As soon as the chains 7 carry the drag-bar 12 to a point over the sprocket-wheels 5 the downward movement of said chains will draw their links off from engagement with the hooks 13, thus automatically releasing the bar 12, which may be lifted by the operator and placed again in engagement with the chains 7 at a point behind another load of cane.

The dump-table or storage-table 1 may be furnished with any desired number of sprocket-chains, such as described, and, if desired, it may be crossed by railway-tracks for running car-loads of cane thereon. When railway-tracks are provided, they will be laid in short lengths spaced apart for passage of the chains 7 and will be depressed sufficiently below the top of the dump-table 1 so as not to interfere with the required operation of the drag-bar. By means of the detachable drag-bar the sprocket-chains are made to drag the dumped loads of cane one after another to the feeding-point or cane-carrier 11 at any speed desired and with any required intermission in the operation of the mechanism. The cane may be conveniently unloaded onto the dump-table 1 either from carts or from railway-cars, and it will be obvious that a drag-bar and operating mechanism similar to that described may be employed to pull a load of cane from a car.

What I claim as my invention is—

1. In apparatus for feeding sugar-cane, the combination with a cane-carrier, of a dump-table onto which loads of cane are to be dumped, sprocket-chains mounted in said table, a drag-bar adapted to be placed across said table and detachably engaged with said sprocket-chains at the rear of a load of cane, and means for imparting movement to the chains to cause the said bar to drag a load of cane to the said cane-carrier, substantially as described.

2. In apparatus for feeding sugar-cane, the combination of a dump-table to receive loads of cane dumped thereon from carts or cars, sprocket-chains mounted in said table and having their uppermost portions flush with the table-top, sprocket-wheels to support and drive said chains, and a drag-bar adapted to be placed across said table immediately behind a load of cane and provided with hooks to detachably engage the sprocket-chains, whereby movement of the chains will cause the said bar to drag a load of cane along the table toward its end, and the said bar being automatically detachable from the chains by drawing away of the chain-links from the hooks on said bar at a point above the chain-driving wheels, substantially as described.

3. In apparatus for feeding sugar-cane, the combination of the cane-carrier, a dump-table having at one end an incline overhanging the said carrier, sprocket-chains mounted in the table and having their uppermost portions flush with the table-top, sprocket-wheels to support and drive said chains, and a drag-bar provided with hooks adapted to be detachably engaged with the sprocket-chains at the rear of a load of cane on said table, substantially as described.

4. In apparatus for feeding sugar-cane, the combination with a cane-carrier, of a dump-table, carrier mechanism mounted in said table and extended longitudinally thereof, and a drag-bar adapted to be extended across said table immediately behind a load of cane thereon and detachably connected with said carrier mechanism, substantially as described.

In testimony whereof I have hereunto subscribed my name in the presence of two witnesses.

JAMES P. KEMPER.

Witnesses:
O. A. TUGEVANT,
C. H. HUGHES.