

No. 641,119.

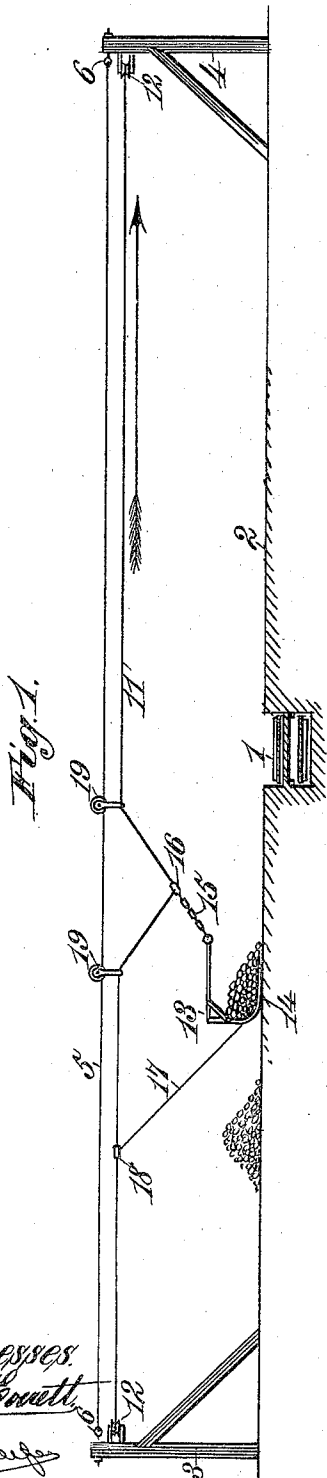
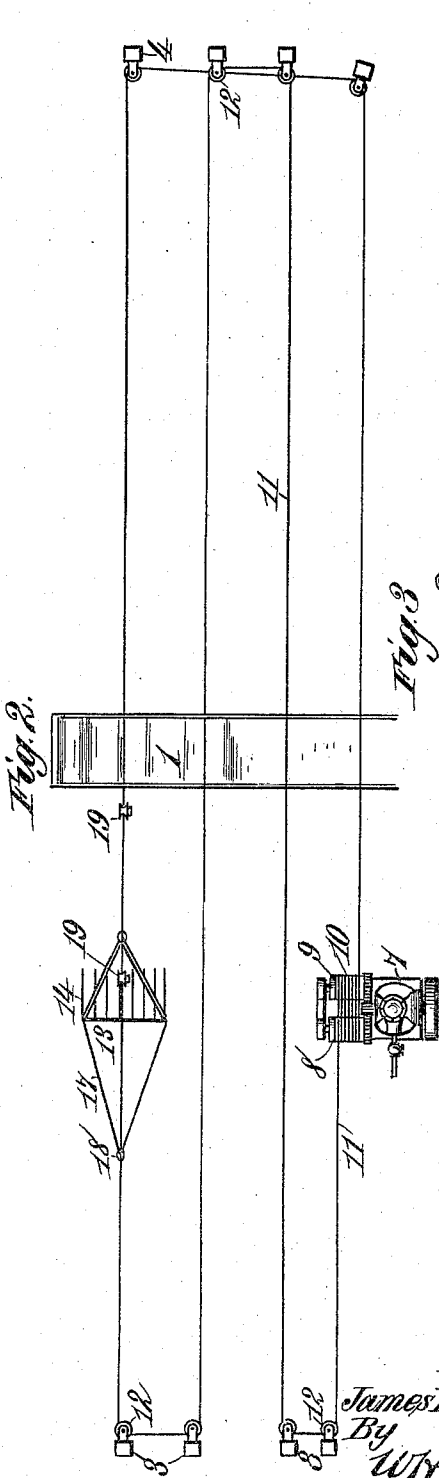
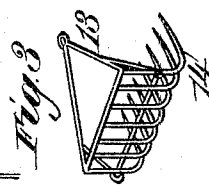
Patented Jan. 9, 1900.

J. P. KEMPER.

APPARATUS FOR HANDLING SUGAR CANE.

(Application filed Mar. 24, 1899.)

(No Model.)



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UNITED STATES PATENT OFFICE.

JAMES PARKERSON KEMPER, OF FRANKLIN, LOUISIANA.

APPARATUS FOR HANDLING SUGAR-CANE.

SPECIFICATION forming part of Letters Patent No. 641,119, dated January 9, 1900.

Application filed March 24, 1899. Serial No. 710,351. (No model.)

To all whom it may concern:

Be it known that I, JAMES PARKERSON KEMPER, a citizen of the United States, residing at Franklin, in the parish of St. Mary and State of Louisiana, have invented new and useful Improvements in Apparatus for Handling Sugar-Cane, of which the following is a specification.

My invention relates to the handling of sugar-cane and the like, one object of the same being to provide means whereby sugar-cane dumped in piles from carts may be delivered to a carrier or conveyer for transferring the same continuously to the interior of a sugar-factory.

A further object of my invention is to provide an improved form of rake for use in connection with the feeding apparatus.

The novel features of my invention will be defined in the claims.

In the drawings, Figure 1 is an elevation illustrative of my invention. Fig. 2 is a plan view. Fig. 3 is a detail perspective view of the rake.

Like reference-numerals indicate like parts in the different views.

In carrying out my invention I provide a carrier 1, of any suitable form and construction, leading from the yard of a sugar-factory to the interior thereof. On a level with or slightly above the surface of the carrier 1 the yard is provided with a flooring 2, upon which the cane or other material is dumped directly from the carts. The yard, of course, may be of any suitable dimensions, and along the sides thereof are arranged a series of suitably-braced uprights or posts 3 3 and 4 4. Connecting the posts 3 4 on opposite sides of the yard are supporting-wires 5 5, which are preferably parallel to each other and are provided with turnbuckles 6, by means of which said wires may be tightened and held taut. In connection with the parts above referred to I employ a double reversible engine or motor 7, provided with two parallel drums 8 9, each having guide-grooves 10 10 therein, as clearly shown in Fig. 2 of the drawings. Said grooves 10 on each drum are separate from each other and are in line with the corresponding grooves on the adjacent drum. Around the drums 8 9 is wound under suitable tension an endless cable 11, which fits

within the grooves 10. The said cable passes from the drum 8 around a sheave or pulley 12, adjacent to the upper end of the outer post 3, thence passes to the next adjacent post 3 and crosses the yard to the opposite post 4, thence passing to the adjacent post 4 and back across the yard to the opposite post 3, and thence in a similar manner to all of the posts, returning to the drum 9 of the engine in a direction opposite that from which it left the drum 8. The said cable is guided by all of the posts 3 and 4 by means of suitable sheaves or pulleys, as clearly illustrated in the drawings.

It will be understood, of course, that by operating the engine in one direction or the other the said cable will be caused to move in a corresponding direction. Attached to the cable 11 is a rake 13, illustrated in detail in Fig. 3 of the drawings, consisting of a plurality of blades or tines 14, suitably connected together and bent in substantially the form shown, provided with an upper substantially horizontal beam or frame and downwardly and forwardly extending engaging portions, the upper frame extending slightly beyond the ends or the points of the tines. The forward end of the horizontal frame is flexibly connected by a chain, wire, or other like means 15 with the cable 11 through the agency of a slotted clamp 16. (Clearly shown in Fig. 1 of the drawings.) The rear end of the rake is also connected to the cable 11 by means of a chain, wire, or other like device 17, attached to the tines adjacent to their lower ends and to the cable 11 by means of an adjustable clamp 18. The cable 11 is suspended from the supporting-wires 5, so as to prevent sagging thereof, by means of pulleys or blocks 19.

The operation of my device is as follows: By means of the clamps 16 and 18 the rake 13 may be attached to any part of the cable 11 and readily removed therefrom when required. Assuming the same to be attached to that portion of the cable 11 which moves directly beneath the inner supporting-wire 5 behind one of the piles of cane, the engine is actuated so as to move the cable 11 and the rake carried thereby in the direction of the arrow, Fig. 1. This action will cause the cable 11, in advance of the rake 13, to be drawn taut, with a slight slack just in the

rear of said rake, the result being that the tines of said rake will be held in engagement with the cane and will drag the same along the flooring 2 to the carrier 1. By properly controlling the engine the speed of movement of the rake may be regulated at will. When the rake reaches a point adjacent to the carrier, the speed of the engine will of course be decreased and the cane will be removed from the rake by operators supplied with forks or other suitable implements. When the load has been removed, the engine is reversed and the cable 11 caused to move in an opposite direction, carrying the rake 13 to the end of the yard from which the former pile of cane was dragged. This action causes a tightening of the cable 11 in the rear of the rake and a slack to be formed therein in front of the rake, the result being that the rake is elevated from its rear end and permitted to slide or freely pass over a pile of cane which is in position to be moved. The operation first above described is then repeated with similar results.

In practice enough cane will be supplied during the day to points in the path of movement of the rake 13 to supply the carrier 1, all surplus being dumped beneath the supporting-wires 5. At night, when the carts which supply the cane are not in use, it is of course necessary to change the position of the rake 13 and adjust the same upon the cable 11 beneath one of the other supporting-wires 5. This may be readily done, as hereinbefore stated, by means of the clamps 16 and 18. The said rake may also be reversed, so that it can operate in a reverse direction to drag the cane from the opposite side of the yard to the carrier, which is located at the center thereof.

While my invention has been described as a means for delivering sugar-cane to a carrier leading into a sugar-factory, it is of course not limited to this use, but may be employed in connection with any other material where a similar function is to be performed.

Having thus described my invention, what I desire to secure by Letters Patent is—

1. In an apparatus of the character described, the combination with a carrier, of a series of posts or standards on opposite sides of said carrier, supporting-wires connecting said posts in pairs, a reversible engine or motor, an endless cable operated by said engine and guided back and forth between said posts beneath said supporting-wires, a rake connected to said cable, and pulleys connecting said cable with said support.

2. In an apparatus of the character described, the combination with a carrier, of a series of posts located at opposite sides thereof, supporting-wires connecting said posts in pairs, a reversible engine or motor, an endless cable operated by said engine and extending back and forth between said posts beneath said supporting-wires, blocks or pulleys connecting said cable with said supporting-wires, and a rake detachably connected to said cable.

3. The combination with a reciprocating cable, of a rake having downwardly and forwardly extending tines, a flexible connection between the upper forward end of said rake and said cable, and a similar connection between the rear lower end of said rake and said cable.

4. The combination with a reciprocating cable, of a rake comprising an upper horizontal frame, and a series of downwardly and forwardly extending tines terminating in the rear of the forward end of said frame, a flexible connection between the forward end of said frame and said cable and a similar connection between the rear lower ends of said tines and said cable.

In testimony whereof I have hereunto set my hand in presence of two subscribing witnesses.

JAMES PARKERSON KEMPER.

Witnesses:

R. EMMET O'NIELL,
J. W. BERWICK.