

No. 653,827.

Patented July 17, 1900.

M. M. SUPPES.
SWITCH FOR ENDLESS CONVEYERS.

(Application filed May 14, 1900.)

(No Model.)

Fig. 4.

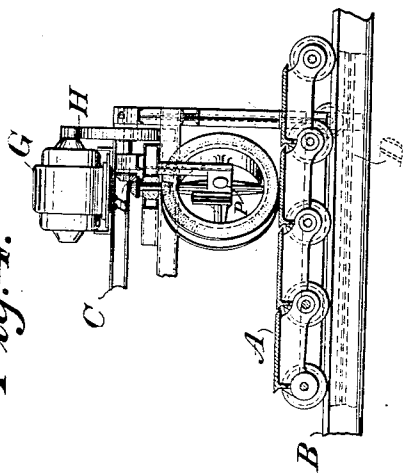


Fig. 3.

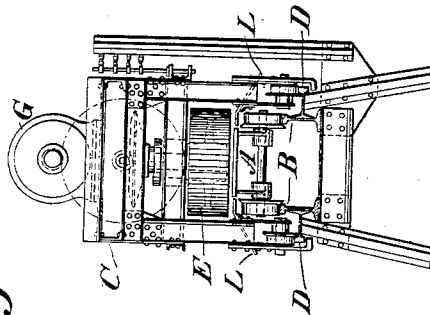


Fig. 1.

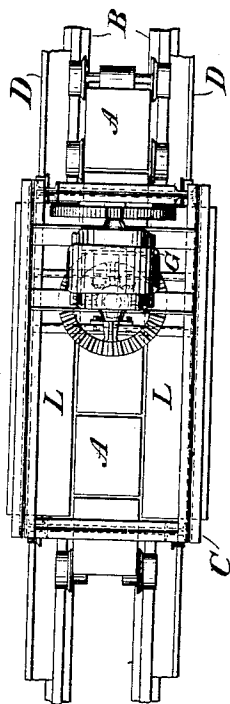
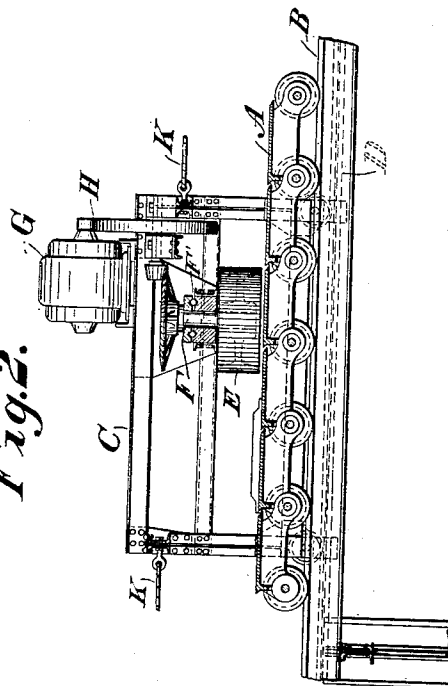


Fig. 2.



WITNESSES:

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UNITED STATES PATENT OFFICE.

MAXIMILIAN M. SUPPES, OF ELYRIA, OHIO.

SWITCH FOR ENDLESS CONVEYERS.

SPECIFICATION forming part of Letters Patent No. 653,827, dated July 17, 1900.

Application filed May 14, 1900. Serial No. 16,611. (No model.)

To all whom it may concern:

Be it known that I, MAXIMILIAN M. SUPPES, of Elyria, in the county of Lorain and State of Ohio, have invented a new and useful Improvement in Switches for Endless Conveyers, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, which form a part of this specification.

My invention has relation to an improved switch for use in connection with endless conveyers, such as are used in iron and steel plants for carrying pigs, billets, &c., from one point to another, the purpose of the switch being to cause the discharge of the pigs or billets from the side of the conveyer at any desired point.

The object of my invention is to provide a switch which is designed to effectually prevent the jamming at that point of the pigs or other articles on the conveyer by insuring their discharge as soon as they come in contact with the switch and by means of which the pigs may be discharged at either side of the conveyer and at any desired point along its length.

My invention, while adapted for other uses, has been more particularly designed for use in connection with conveyers for carrying pigs from pig-casting machines to the pig-yard. The pigs are more or less irregular in shape, being often tapered at their ends to a considerable extent and running to sharp edges, which gives them a tendency to jam and pile up upon coming in contact with any obstruction, such as a switch, and cause injury to the conveyer. This tendency my invention overcomes by providing a switch having a rotary movement of the proper character to roll the pigs off from the conveyer as fast as they come in contact with the switch. This switch is mounted upon a car or carrier which can be moved longitudinally to any desired point along the conveyer, and means are provided to control its motion, so as to cause the pigs to be discharged either to one side or the other, as may be desired.

My invention also consists in the novel construction and combination of parts, all as hereinafter described, and pointed out in the appended claims, reference being had to the

accompanying drawings, forming a part of this specification.

In the drawings, Figure 1 is a plan view showing the application of my invention to a conveyer. Fig. 2 is a side elevation, partly in section, of the same. Fig. 3 is an end view, and Fig. 4 is a partial side view showing a modification.

The letter A designates an endless conveyer of any suitable construction and running on an elevated track B.

C is a car or carriage which spans the conveyer and runs on a second and wider track D.

E is a large cylindric drum or roller carried by a short vertical shaft F, journaled in the frame of said car or carriage and of a diameter somewhat greater than the width of the conveyer. This drum is situated directly over the conveyer, with its under surface adjacent to the upper surface of the conveyer, in which position it forms a barrier for the pigs carried by said conveyer. The drum may be driven in various ways; but I prefer to mount an electric motor G on the car or carriage C and gear it to the shaft F, as indicated at H, or in any other suitable manner. This motor can be readily controlled from a distance and can be reversed to reverse the direction of rotation of the drum to cause the discharge of the pigs to either side of the conveyer, as may be desired. I have shown but one bearing F' for the shaft F and prefer to employ a ball-bearing, such as indicated, in order to carry the weight of the drum without undue friction.

The car or carriage C can be moved longitudinally of the conveyer by means of ropes or cables K, connected thereto and operated by any suitable power, (not shown,) or it may be moved in any other convenient manner. It is preferably provided with the laterally arranged and inclined plates L to facilitate the discharge of the pigs.

In the modification shown in Fig. 4 the revolving drum or roller is shown as being mounted on a horizontal instead of a vertical axis, supported in bearings P, which can be moved in a horizontal plane to give the drum or roller an oblique position across the conveyer in one direction or the other, according to which side it is desired to discharge the

pigs. I prefer, however, to employ the arrangement first described, wherein the drum rotates about a vertical axis.

It will be readily seen that the rotary movement of the drum will quickly move the pigs to and off one side of the conveyer and that it will not be possible for them to become piled or jammed at the switch. I prefer to rotate the drum at a somewhat-greater rate of speed than the speed of the conveyer.

I do not wish to limit myself to the particular construction, arrangement, and combination of parts which I have herein shown and described, as various mechanical changes and modifications may be made without departing from the spirit and scope of my invention.

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

1. The combination with a conveyer, of a side-discharge switch therefor, consisting of a drum or roller situated in the path of movement of objects carried by the conveyer, and means for rotating said drum or roller.

2. The combination with an endless traveling conveyer, of a side-discharge switch therefor, consisting of a drum or roller above and adjacent to said conveyer, and means for rotating said drum or roller in a manner to cause it to discharge objects on the conveyer coming in contact therewith to either side of said conveyer.

3. The combination with an endless traveling conveyer, of a side-discharge switch therefor, comprising a drum or roller above and adjacent to said conveyer, and means for rotating the same at a speed greater than that of the conveyer.

4. The combination with an endless traveling conveyer, of a side-discharging device or switch therefor, comprising a cylindric drum journaled above and adjacent to the conveyer, and means for rotating said drum in either direction.

5. The combination with an endless traveling conveyer, of a car or carriage spanning the same and movable longitudinally thereof, a drum or roller on said car or carriage over and adjacent to the carrying-surface of the conveyer, and means for rotating said drum or roller.

6. The combination with an endless traveling conveyer, of a car or carriage spanning the same and movable longitudinally thereof, a drum or roller journaled on said car or carriage adjacent to the carrying-surface of the conveyer, and a motor mounted on the car or carriage and geared to the shaft of said drum or roller.

7. The combination with an endless conveyer, of a car or carriage spanning the same and movable longitudinally thereof, a drum or roller journaled on said carriage adjacent to the carrying-surface of the conveyer, means for rotating said drum or roller, and laterally arranged and inclined plates secured to the car or carriage at the sides of the conveyer.

8. The combination with an endless conveyer, of a cylindrical drum or roller journaled vertically over and adjacent to the carrying-surface of the conveyer, said drum or roller being of greater diameter than the width of the conveyer, and means for rotating the same.

9. The combination with an endless conveyer, of a cylindrical drum or roller journaled vertically above and adjacent to the carrying-surface of the conveyer, said drum or roller having a diameter greater than the width of the conveyer, and means for rotating said drum or roller at a speed greater than that of the conveyer.

10. The combination with an endless conveyer, of a rotating switch above and adjacent to the carrying-surface of the conveyer, and arranged to effect a side discharge of objects carried by the conveyer.

11. The combination with an endless conveyer, of a rotating switch above and adjacent to the carrying-surface of the conveyer, and arranged to effect a side discharge of objects carried by the conveyer, together with means for moving said switch longitudinally of the conveyer.

In testimony whereof I have affixed my signature in presence of two witnesses.

MAXIMILIAN M. SUPPES.

Witnesses:

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D. W. LAWRENCE.