

No. 732,519.

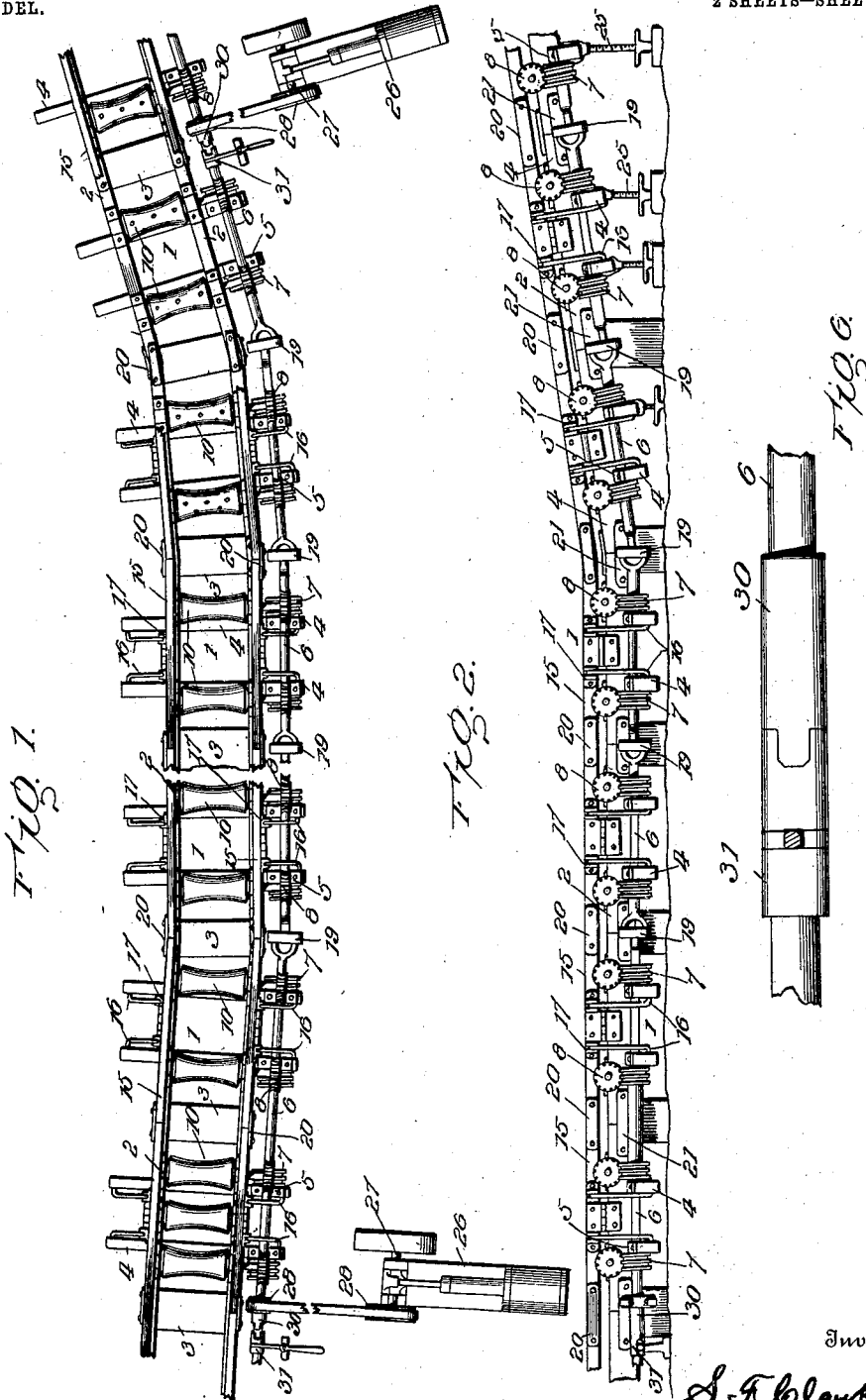
PATENTED JUNE 30, 1903.

S. F. CLAYPOOL.
LOG CONVEYER.

APPLICATION FILED DEC. 6, 1902.

NO MODEL.

2 SHEETS—SHEET 1.



Witnesses

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334

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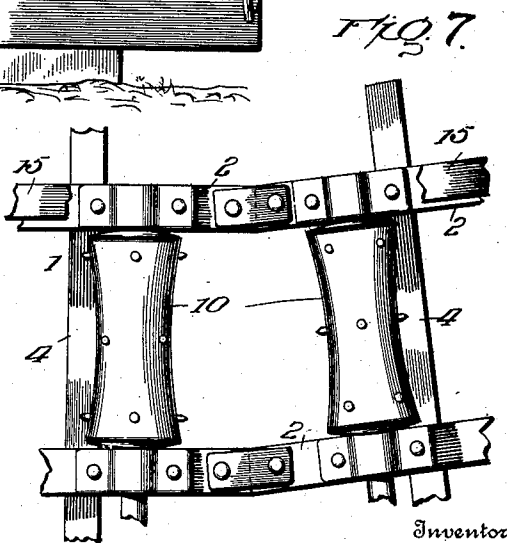
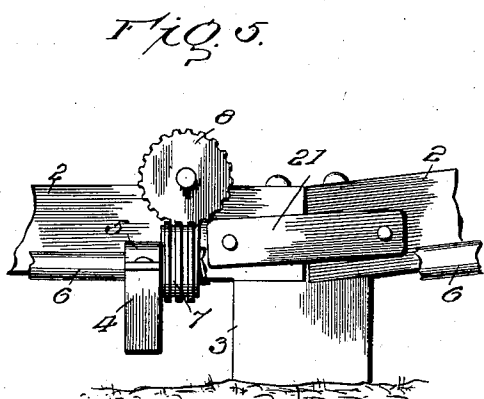
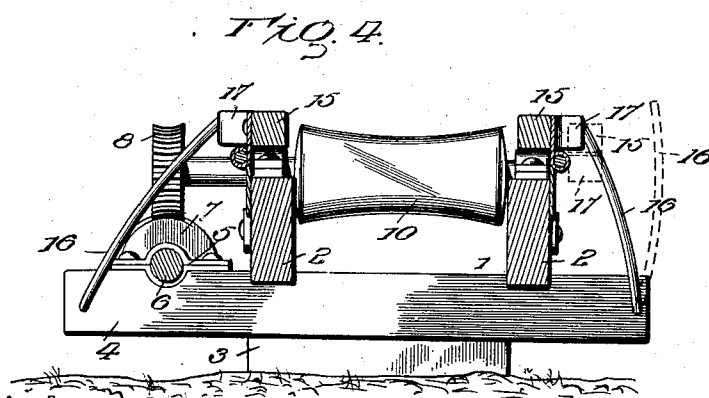
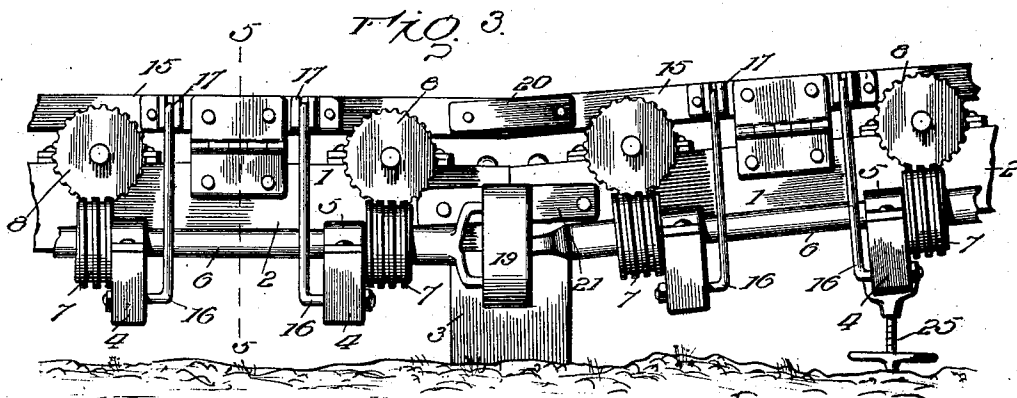
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UNITED STATES PATENT OFFICE.

SAMUEL F. CLAYPOOL, OF WEST FRANKLIN, PENNSYLVANIA.

LOG-CONVEYER.

SPECIFICATION forming part of Letters Patent No. 732,519, dated June 30, 1903.

Application filed December 6, 1902. Serial No. 134,131. (No model.)

To all whom it may concern:

Be it known that I, SAMUEL F. CLAYPOOL, a citizen of the United States, residing at West Franklin, in the county of Armstrong and State of Pennsylvania, have invented new and useful Improvements in Log-Conveyers, of which the following is a specification.

My invention relates to improvements in log-conveyers, and has for its object the conveying of logs, lumber, bark, and other similar objects.

The invention is intended to convey logs and other objects from point to point—as, for instance, from the woods to a sawmill, from a raft to a sawmill or to a point to be loaded upon cars, or from a yard to any desired point.

The invention relates to the construction to be hereinafter fully shown and described, whereby the conveyer is adapted to be used on grades, uneven surfaces, and on curves, and in the use of a long line, a particular construction and adaptation of parts whereby a plurality of engines or other sources of power can be operatively connected with the conveyer at various points throughout its length.

Figure 1 is a top plan view of a long line of the conveyer, showing a plurality of engines or other motive power connected therewith at predetermined points throughout its length. Fig. 2 is a side elevation of a long line of the conveyer, showing its adaptability to accommodate itself to uneven surfaces and to grades. Fig. 3 is a side elevation, on a relatively larger scale, of two sections of the conveyer, showing more in detail the specific construction thereof. Fig. 4 is a cross-sectional view on the line 5 5 of Fig. 3 and illustrating the side guide-rails and their adaptability to be swung to one side for a purpose to be hereinafter explained. Fig. 5 is an enlarged side view of the adjoining ends of two of the sections of which the conveyer is composed, showing the manner of bringing the ends together, whereby they are adapted to be moved vertically. Fig. 6 is a view showing a clutch connection by means of which one or more of the engines may be thrown out of gear with the conveyer. Fig. 7 is an enlarged top view of the adjoining ends of two of the sections of which the conveyer is

composed, showing the manner of bringing the ends together, whereby they are adapted to be turned laterally.

As illustrated more clearly in Figs. 1 and 2, the conveyer consists primarily of a plurality of sections 1. Each of these sections consists of parallel beams 2, to the under side of which are connected at suitable intervals supporting-blocks 3. Extending transversely to the parallel beams of each section are a suitable number of boards or beams 4, which have one of their ends projecting laterally outward and beyond the said parallel beams. These projecting ends are provided with suitable journal-boxes 5, in which is journaled a line-shaft or operating-shaft 6. This shaft 6 at proper intervals is provided with a plurality of worm-gears 7, which engage and operate the screw or worm gears 8, which are attached to the projecting journals or shafts of the conveying-rollers 10. These conveying-rollers 10 extend transversely to the beams 2 and are suitably journaled to the upper side thereof at proper intervals apart. When the line or operating shaft is rotated, the conveying-rollers are correspondingly rotated, and a log or other object placed upon these rollers is moved or conveyed thereby, as will be readily understood. These rollers or conveyers may in some instances be provided with spikes, as shown in connection with one of the sections of the conveyer herein illustrated. Journaled to the upper sides of the beams 2 are idlers in the form of rollers 10', which are located between the conveying-rollers for the purpose of preventing the downward tipping of the logs or other objects being conveyed, and thus prevent its forward end from passing under the conveying-rollers, as will be readily understood.

In some instances, as when conveying bark or other light objects, a platform or holder may be provided, which will rest upon the rollers and be conveyed thereby in the same manner as a log or a piece of lumber. Guide-rails 15 are arranged at the ends of these conveying-rollers directly over the upper edges of the parallel beams 2 and serve to prevent the logs or other objects being conveyed by the rollers from moving laterally therefrom. Preferably, though not necessarily, these guide-rails are hinged to the parallel beams

and are adapted to be turned outward. The object of this is to enable the logs or other objects to be more readily loaded upon the conveyer. The guide-rails are held in their proper positions through the medium of suitable stays 16, which have their lower ends pivotally connected with the projecting ends of the transverse beams 4 and their upper ends adapted to engage either directly the guide-rails or into suitable slotted sockets 17, attached to the outer sides of the guide-rails.

As before stated, the conveyer is made up of a plurality of sections, and these sections can be of any suitable length. The line or operating shaft is also made up of sections, and the sections of the line-shaft are of a length corresponding to the length of the sections of the conveyer proper or of a length corresponding to the length of the beams 2 of each of the sections. Connecting the adjacent ends of the sections of the line or operating shaft are universal joints or couplings 19, by means of which the line or operating shaft will freely operate, whether the sections be arranged on a grade, as illustrated in Fig. 2, or be turned to form a curve, as illustrated in Fig. 1. It should also be noted that the guide-rails are made up of sections corresponding to the length of the sections 1 and that they are hinged together by means of suitable plates or hinges 20, whereby they are adapted to be moved relatively vertically to accommodate the conveyer to a grade or can be turned laterally to accommodate the conveyer to a curve. Likewise the adjacent ends of the sections 1 are connected by plates 21 in a similar manner to the connections of the guide-rails.

From this description it will be observed that the universal couplings or connections are located at a point coinciding or concentric with the hinged connections of the several sections and also that the hinged connections between the guide-rails are located at and coincide with the hinged connections between the sections 1 and also are located at or coincide with the location of the universal joints or connections in the line or operating shaft.

If necessary to elevate any one or more of the sections at any particular point throughout the line or to support it at a point above the surface of the ground, suitable screw-jacks or other suitable members 25 may be provided for this purpose. Referring now particularly to Fig. 1, which illustrates the several engines or other powers connected at suitable intervals throughout the length of the conveyer, it will be noted that the conveyer is actuated by an operative connection between the engine and the line-shaft. The engines 26 will preferably consist of gas or oil engines, though other forms of engines may be provided. The engine-shafts 27 are connected with the line or operating shaft through the medium of belts which pass around suitable pulleys 28. At these points

the line or operating shaft is provided with a clutch device and by means of which the power may be thrown onto or removed from the line-shaft.

The object of providing the belt connection is to provide a connection which is capable of a slipping movement whereby the several engines will apply power to the line-shaft at a corresponding speed—that is to say, where one engine is running a little faster than another the belt will permit a slipping action between that engine and the line-shaft and the engines will adjust themselves to each other. It will be understood that these engines will be placed from a quarter to a half a mile apart along the line of the conveyer, and through the medium of this slipping connection they will, as just stated, accommodate themselves to each other in respect to their speed.

The clutch connection located on the line-shaft consists of a rigid member 30, connected to the line-shaft, and a sliding coacting member 31. One of these members is loose upon the line-shaft and adapted to rotate freely thereon and will carry the pulleys around which the belts of the engines pass, while the other member will slide on the line-shaft, but will not rotate independently thereof. The clutch member is of such a shape, as herein illustrated, as will permit the rotation of the clutching device in either direction.

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

1. A conveyer of the character described, comprising a plurality of sections having universal connections between the same, a plurality of rollers journaled thereto and extending transverse thereof, a worm-gear carried by each of said rollers, a sectional shaft extending parallel the beams and provided with coacting worm-gears, and means for operating the said shaft.

2. A conveyer of the character described, comprising a plurality of sections having universal connections between the same, a plurality of transverse rollers journaled thereto, a worm-gear carried by each of said rollers, a line-shaft formed in sections coinciding with the sections of the conveyer, the ends of the sections of the line-shaft provided with universal couplings, worm-gears carried by the line-shaft and with the worm-gears of the rollers, and means for operating the line-shaft.

3. A conveyer of the character described, comprising a plurality of sections having universal connections between the same, a line-shaft composed of sections coinciding with the sections of the conveyer, universal connections between the ends of said sections of the shaft, rollers carried by the conveyer-sections and means carried by the shaft for rotating said rollers.

4. A conveyer consisting of a plurality of sections, some of the sections hinged to move

relatively in a vertical direction and other of the sections hinged to move relatively in a horizontal or lateral direction, a plurality of rollers journaled to the sections and extending transverse thereof, a line-shaft extending parallel the said sections, the line-shaft made up of sections corresponding in length to the length of the sections of the conveyers, and universal couplings connecting the ends of the line-shaft, the universal couplings located at and coinciding with the hinged points of the said several sections of the conveyer, and means for operating the line-shaft, substantially as described.

5. A conveyer consisting of a plurality of sections, a line-shaft extending parallel the sections, a plurality of rollers journaled to the several sections and carrying worm-gears, the line-shaft carrying worm-gears engaging the gears of the rollers, a plurality of engines operatively connected with the line-shaft at various points throughout its length, the connections between the engines and the line-shaft being of a slipping character, substantially as described.

6. A conveyer of the character described, consisting of a long supporting-framework carrying a plurality of transversely-journaled conveying-rollers, the said rollers provided with worm-gears, a line-shaft extending parallel with the said supporting-framework and carrying worm-gears engaging the gears of the rollers, a plurality of engines located at various points throughout the length of the supporting-frame, and slipping connections between the said engines and the line or operating shaft, substantially as described.

7. A conveyer of the character described comprising a long supporting-framework carrying a plurality of transversely-journaled conveying-rollers, an operating member extending parallel with the framework, a plurality of engines located at various points throughout the length of the framework, operating connections between the operating member and the said conveying-rollers, and slipping connections between the engines and the said operating member, substantially as described.

8. A conveyer of the character described, comprising an elongated framework carrying a plurality of conveying-rollers, means for operating the conveying-rollers, a plurality of engines located at various points throughout the length of the framework and slipping connections between the engines and the operating means, substantially as described.

9. A log-conveyer of the character described comprising a long supporting-framework carrying a plurality of transversely-journaled conveying-rollers, an operating member extending throughout the length of the framework and operatively connected with the said rollers, a plurality of engines located at various points throughout the length

of the framework, and operative connections between the engines and the said operating member, whereby the engines are tied together and cooperate to rotate the rollers throughout the length of the framework at practically a uniform speed, substantially as described.

10. A conveyer of the character described comprising an elongated framework carrying a plurality of conveying-rollers, means for rotating the rollers, a hinged guide-rail located at opposite ends of the rollers and extending parallel with the framework, and means for moving the hinged guide-rails in their operative position and permitting them to be turned to facilitate the loading of the conveyers, substantially as described.

11. A conveyer of the character described comprising a plurality of sections having their ends hinged together, a plurality of rollers journaled at each section, an operating member extending longitudinal the sections and divided into sections corresponding to the length of the aforesaid conveying-sections, universal couplings connecting the sections and the operating member located at and coinciding with the hinged points of the several sections, guide-rails situated at opposite ends of the rollers and extending parallel with the said sections, the guide-rails made in sections corresponding with the conveyer-sections and also with the operating-member sections, substantially as described.

12. A conveyer of the character described, comprising a plurality of sections, some of the sections hinged to move relatively in a vertical direction, and other of the sections hinged to move relatively in a horizontal or lateral direction, rollers carried by said sections, a line-shaft formed of sections coinciding with the sections of the conveyer and having universal connections between their ends, means carried by the shaft for rotating said rollers, and means for rotating said shaft.

13. A conveyer of the character described, comprising a plurality of sections, some of the sections hinged to move relatively in a vertical direction, and other of the sections hinged to move relatively in a horizontal or lateral direction, rollers carried by said sections, a line-shaft formed of sections coinciding with the sections of the conveyer and having universal connections between their ends, means carried by the shaft for rotating said rollers, and a plurality of engines located at various points throughout the length of the sections of the conveyer and slipping connections between the engines and shaft.

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

SAMUEL F. CLAYPOOL.

Witnesses:

J. D. DAUGHERTY,
J. C. MOORHEAD.