

No. 811,991.

PATENTED FEB. 6, 1906.

A. M. ACKLIN.
CABLE CONVEYER.
APPLICATION FILED NOV. 23, 1904.

3 SHEETS—SHEET 1.

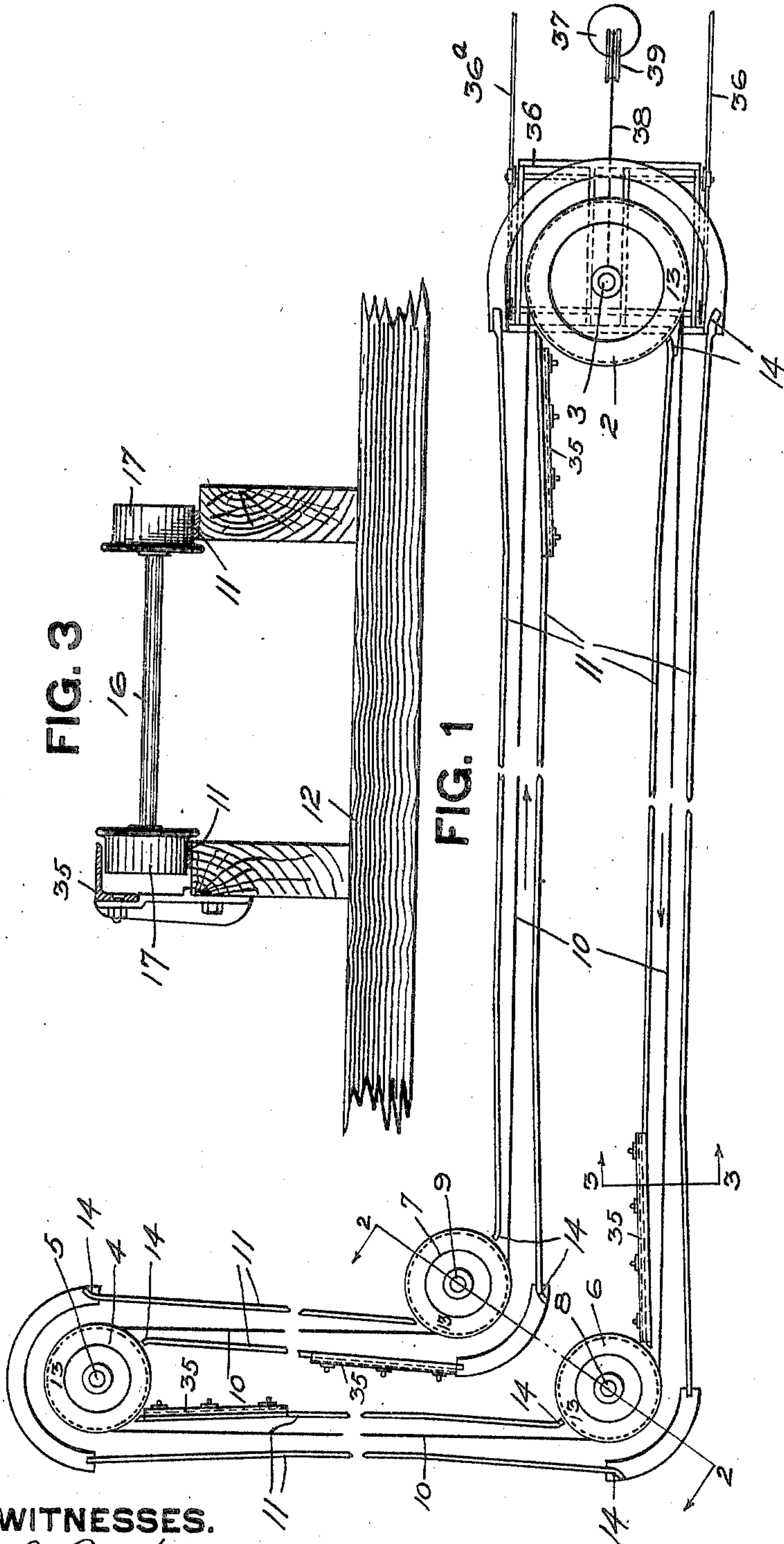


FIG. 3

FIG. 1

FIG. 2

WITNESSES.

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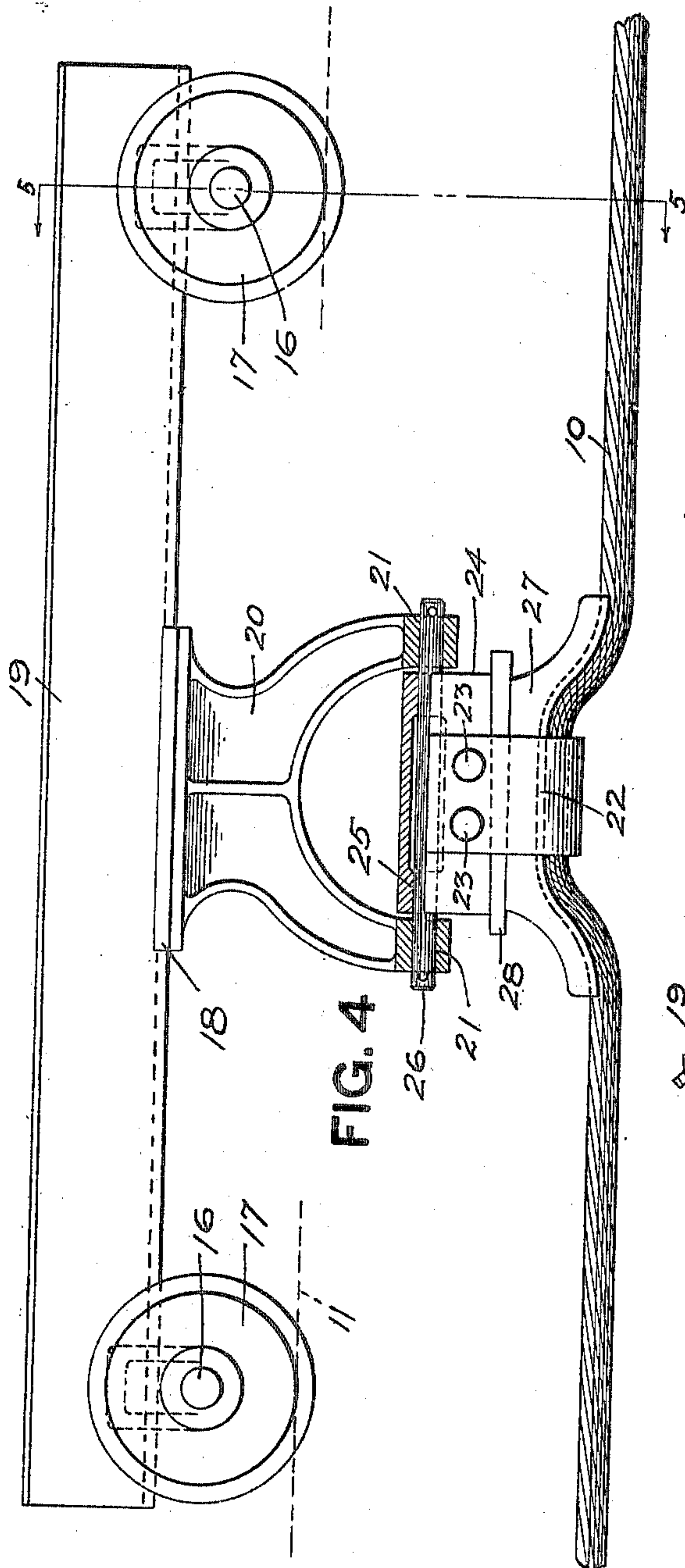


FIG. 4

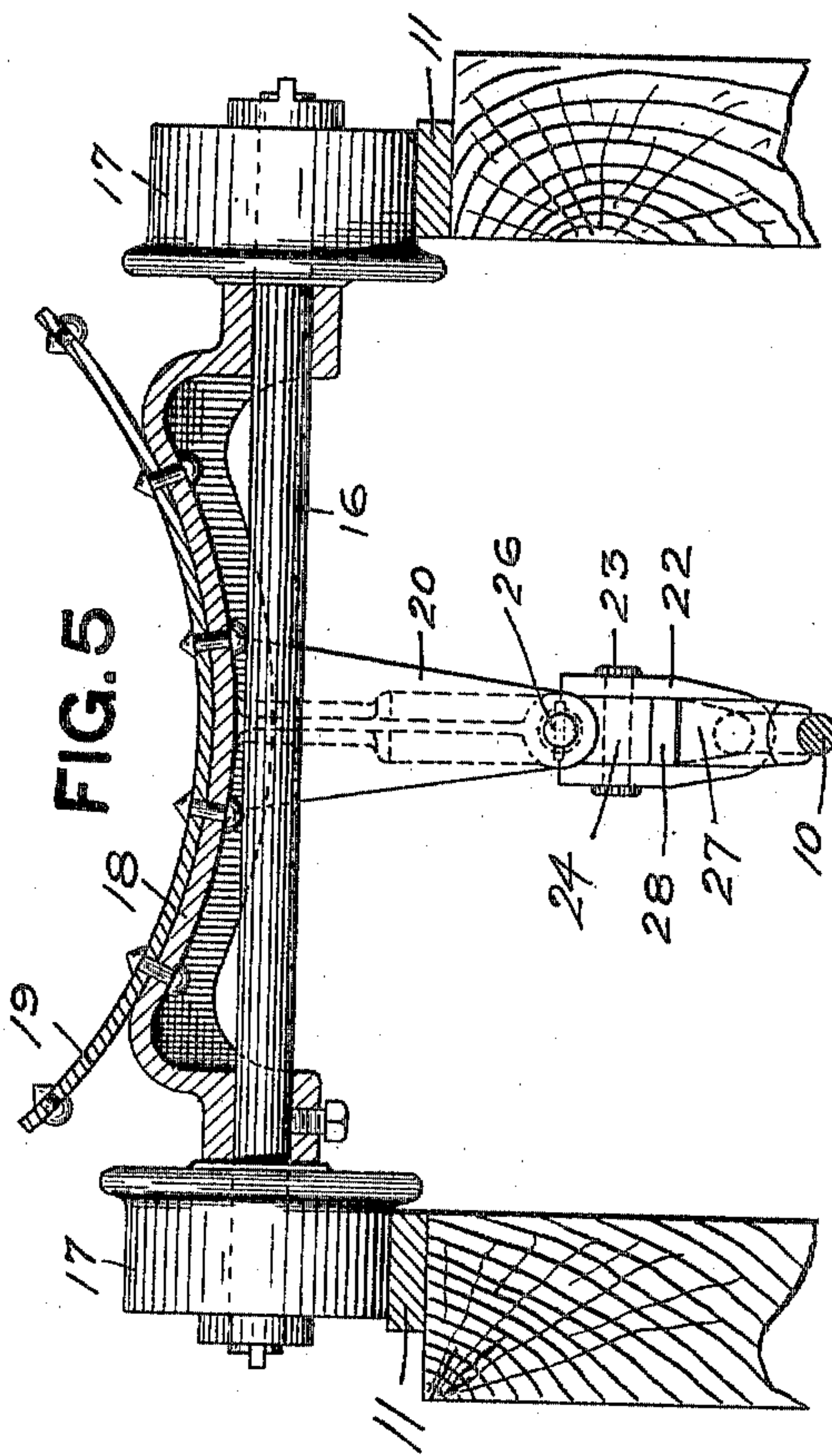


FIG. 5

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3 SHEETS—SHEET 3.

FIG. 6

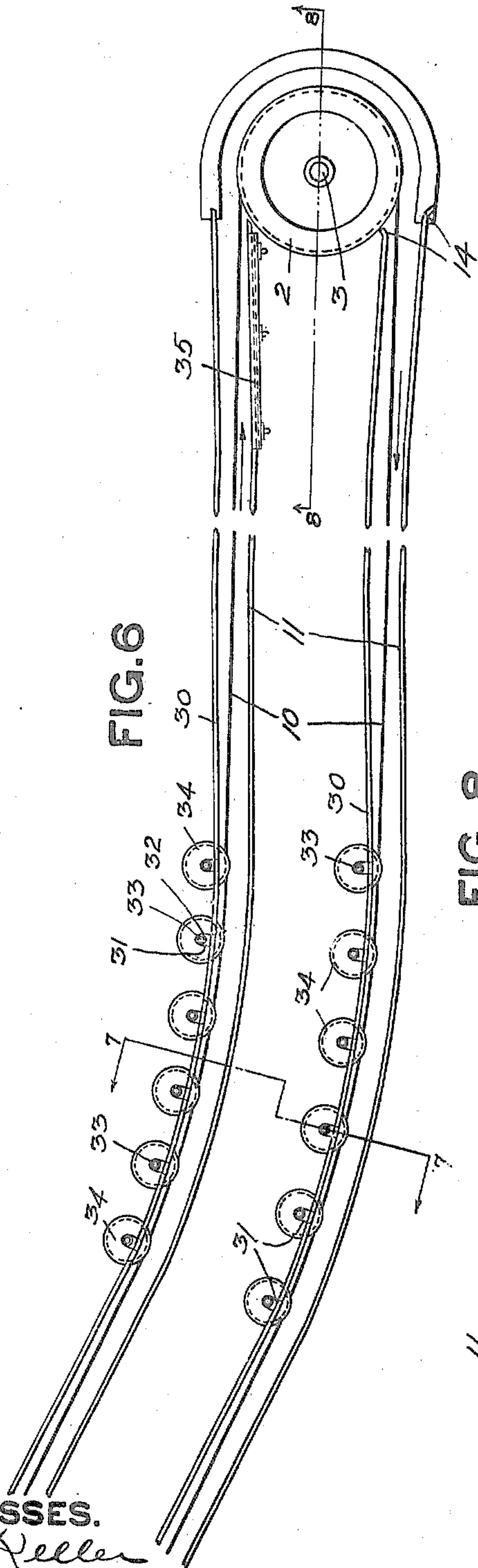


FIG. 8

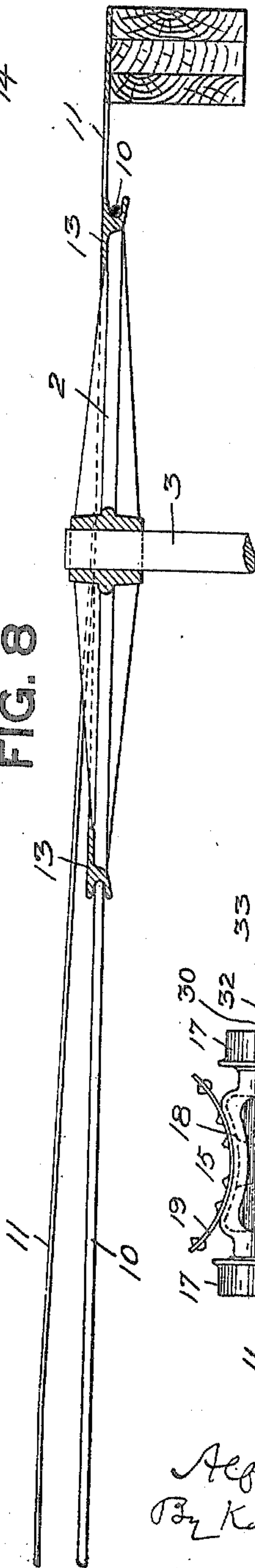
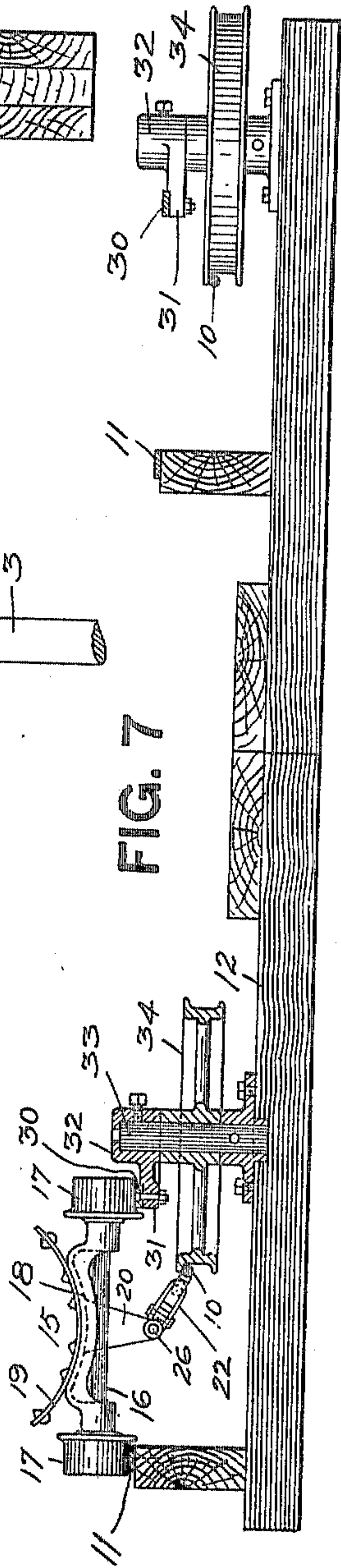


FIG. 7



WITNESSES.

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UNITED STATES PATENT OFFICE.

ALFRED M. ACKLIN, OF PITTSBURG, PENNSYLVANIA, ASSIGNOR TO HEYL & PATTERSON, INC., OF PITTSBURG, PENNSYLVANIA, A CORPORATION OF PENNSYLVANIA.

CABLE CONVEYER.

No. 811,991.

Specification of Letters Patent.

Patented Feb. 6, 1906.

Application filed November 23, 1904. Serial No. 234,020.

To all whom it may concern:

Be it known that I, ALFRED M. ACKLIN, a resident of Pittsburg, in the county of Allegheny and State of Pennsylvania, have invented a new and useful Improvement in Cable Conveyers; and I do hereby declare the following to be a full, clear, and exact description thereof.

My invention relates to cable conveyers, and more especially to that class of cable conveyers in which suitable trucks or other carriers are clamped to an endless cable, the endless cable being arranged on sheaves, so as to convey the trucks traveling on suitable tracks from one point to another in factories or mills where such devices are employed for handling the product.

The object of my invention is to provide a cable conveyer of this character in which the cable may be extended along in a straight line any suitable distance and then directed off at an angle thereto, thereby greatly increasing the range of use of such conveyer.

To these ends my invention comprises, generally stated, an endless cable engaging sheaves, a series of trucks or carriers clamped to said cable, and a swinging connection between said clamps and said trucks whereby said trucks may travel in a normal position, while at the same time the clamp is adapted to adjust itself to the travel of the cable in passing around the sheaves, so as to assume a position at right angles, or approximately, to the axis of said sheaves.

To enable others skilled in the art to make and use my invention, I will describe the same more fully, referring to the accompanying drawings, in which—

Figure 1 is a diagrammatic view of a cable conveyer embodying my invention. Fig. 2 is an enlarged cross-section on the line 2 2, Fig. 1. Fig. 3 is an enlarged cross-section on the line 3 3, Fig. 1. Fig. 4 is an enlarged side view of a truck and a portion of the cable, showing the connection between the truck and cable. Fig. 5 is a cross-section on the line 5 5, Fig. 4. Fig. 6 is a plan view of a portion of a cable conveyer, showing a different form of curve. Fig. 7 is a cross-section on the line 7 7, Fig. 6; and Fig. 8 is a section on the line 8 8, Fig. 6.

Like numerals indicate like parts in each of the figures.

In the drawings the numeral 2 designates a

horizontal sheave mounted on the vertical shaft 3, and the numeral 4 designates a sheave mounted on the vertical shaft 5. The sheaves 6 and 7 are of smaller diameter and are mounted on the vertical shafts 8 and 9. An endless cable 10 engages the sheaves 2, 4, 6, and 7 in the manner indicated, and any suitable power may be applied for driving said cable in the direction indicated by the arrows.

Arranged in connection with the cable 10 is the track 11, supported upon suitable framework 12. At the points where the sheaves are located the track is discontinued on one side, the wheels of the truck at this point resting and traveling upon the upper rim 13 of the sheaves, which is widened for this purpose. Furthermore, the rails of the track 11 are slightly curved where the truck leaves the sheaves, as indicated at 14, so as to direct the wheels of the truck onto the track after leaving the upper rim of the sheave, as clearly indicated.

The truck 15 may be of any suitable construction, that shown being adapted for carrying bundles of fencing in a wire-mill, and said truck comprises the axles 16, wheels 17, the body 18, with the curved plate 19, adapted to receive the bundle of fencing. Depending from the body 18 is the bracket 20, with the bearings 21 therein. In order to clamp the truck to the cable 10, I prefer to employ the form of clamping device set forth and claimed in an application filed by me on the 14th day of August, 1904, Serial No. 219,268, and I have accordingly illustrated such a cable-clamp in connection with my invention. This consists of the strap or stirrup 22, secured by the pins 23 to the hanger 24, said hanger having the bearing 25, through which the pin or rod 26 passes, which also passes through the bearings 21 of the bracket 20, so as to form a swinging or hinged connection between the bracket 20 and the hanger 24. Supported within the stirrup 22 is the clamping-block 27, and interposed between said clamping-block and the hanger 24 is the clamping-wedge-block 28. The shape of the clamping-block 27 is such that when the parts are connected in the manner shown a bow shape is imparted to the cable at the point of clamping, so that said cable is free to pass around a sheave having a plain groove therein and a notched or seated sheave is dispensed with.

It is apparent that owing to the hinged or swinging connection between the clamping device and the bracket of the truck said clamp is adapted to assume any desired position, so as to conform to the travel of the cable, and that it is accordingly possible by such construction to have the truck travel upon a horizontal track in a normal position while the cable passes around sheaves mounted in a horizontal position.

In Figs. 6 and 7 I have illustrated my invention in connection with a plant in which the conveyer makes a gradual curve, and in such a case the inner rail 30 is supported on projections 31 on the sleeves 32 and secured to the vertical shafts 33, which support the guide-pulleys 34. In this case the clamp instead of assuming a horizontal position would assume an inclined position with reference to the sheave and is free to assume any angle which may be found necessary in the travel of the truck. A guard 35 is employed where the truck approaches the sheaves to prevent the truck from being derailed.

In order to hold the cable taut, the sheave 2 is mounted on the carriage 36, running on rails 36^a. A weight 37 is attached to the rope 38, passing over the pulley 39, said rope being connected to the carriage 35.

When my improved cable conveyer is in use, the bundles of fencing are placed upon the trucks at a suitable point and are carried to the point of delivery, the trucks always traveling in a normal position upon the tracks, or where the track is broken by the location of the sheaves the wheels of the truck pass onto the rim of the wheel and when they pass therefrom are guided by the bent end 14 of the rail, so as to be directed onto the rail beyond the sheave.

It will be apparent that when the cable is traveling in the direction indicated by the arrows when passing around the sheave 2 the clamp will be in a horizontal position and that when said clamp leaves sheave 2 it will gradually assume a vertical position at a point between said sheave 2 and sheave 6. As it approaches sheave 6 it will gradually assume a horizontal position. The same is true of the position of said clamp between sheaves 6 and 4. When the clamp leaves sheave 4, it will gradually assume a vertical position, but as it approaches sheave 7 it will gradually swing into a horizontal position, but to the opposite side from that assumed by it in passing around the other sheaves.

By my invention it is possible to employ a cable conveyer in which the direction of travel of the cable conveyer may be changed to a direct right angle to that of its original direction of travel or may be gradually curved so as to pass off in a different direction. This makes it possible for this cable conveyer to

be used in places where by the old arrangement it was impossible to use a cable conveyer, whereby the use of the cable is greatly extended and its efficiency greatly enhanced.

What I claim is—

1. In a cable conveyer, the combination of two or more sheaves, an endless cable engaging same, a truck or carriage, a track for same, and an intermediate flexible connection between said truck and cable adapted when connected to the cable to swing into a position at right angles, or approximately, to the axes of said sheaves.

2. In a cable conveyer, the combination of two or more sheaves, an endless cable engaging same, a truck or carriage, a track for same, and an intermediate hinged connection between said truck and cable adapted when connected to the cable to swing into a position at right angles, or approximately, to the axes of said sheaves.

3. In a cable conveyer, the combination of two or more sheaves, an endless cable engaging same, a truck or carriage, a track for same, and a swinging clamp between said truck and cable adapted when connected to the cable to swing into a position at right angles, or approximately, to the axes of said sheaves.

4. In a cable conveyer, the combination of two or more sheaves, an endless cable engaging same, a truck or carriage, a track for same, a bracket extending down from said truck, and a swinging clamp connected to said bracket and adapted to engage said cable and when connected to the cable to swing into a position at right angles, or approximately, to the axes of said sheaves.

5. In a cable conveyer, the combination of two or more sheaves, an endless cable engaging same, a truck or carriage, a track for same, a bracket extending down from said truck having bearings therein, a clamp connected to said cable, said clamp having a bearing therein, and a pin passing through said bearings in said bracket and clamp, said clamp when connected to the cable being adapted to swing into a position at right angles, or approximately, to the axes of said sheaves.

6. In a cable conveyer, the combination of two or more sheaves, an endless cable engaging same, a truck or carriage, a track for same, the upper faces of said sheaves forming a support for said truck in passing over same, and an intermediate flexible connection between said truck and cable.

In testimony whereof I, the said ALFRED M. ACKLIN, have hereunto set my hand.

ALFRED M. ACKLIN.

Witnesses:

ROBERT C. TOTTEN,
G. C. RAYMOND.