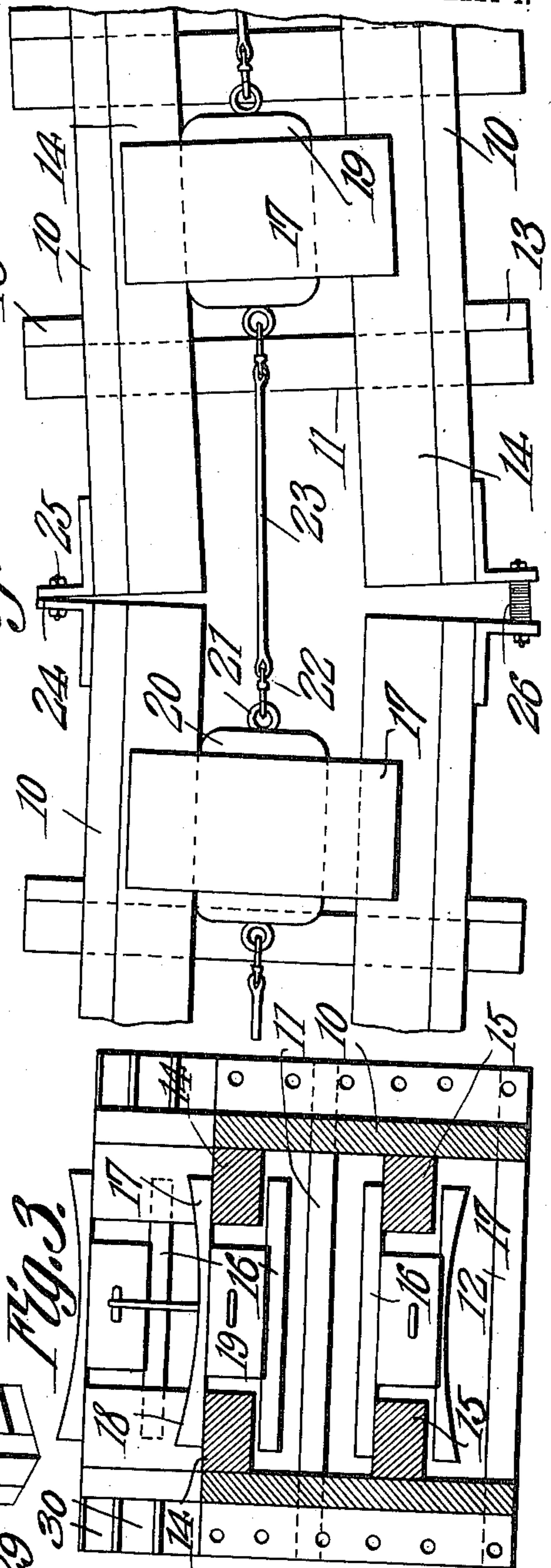
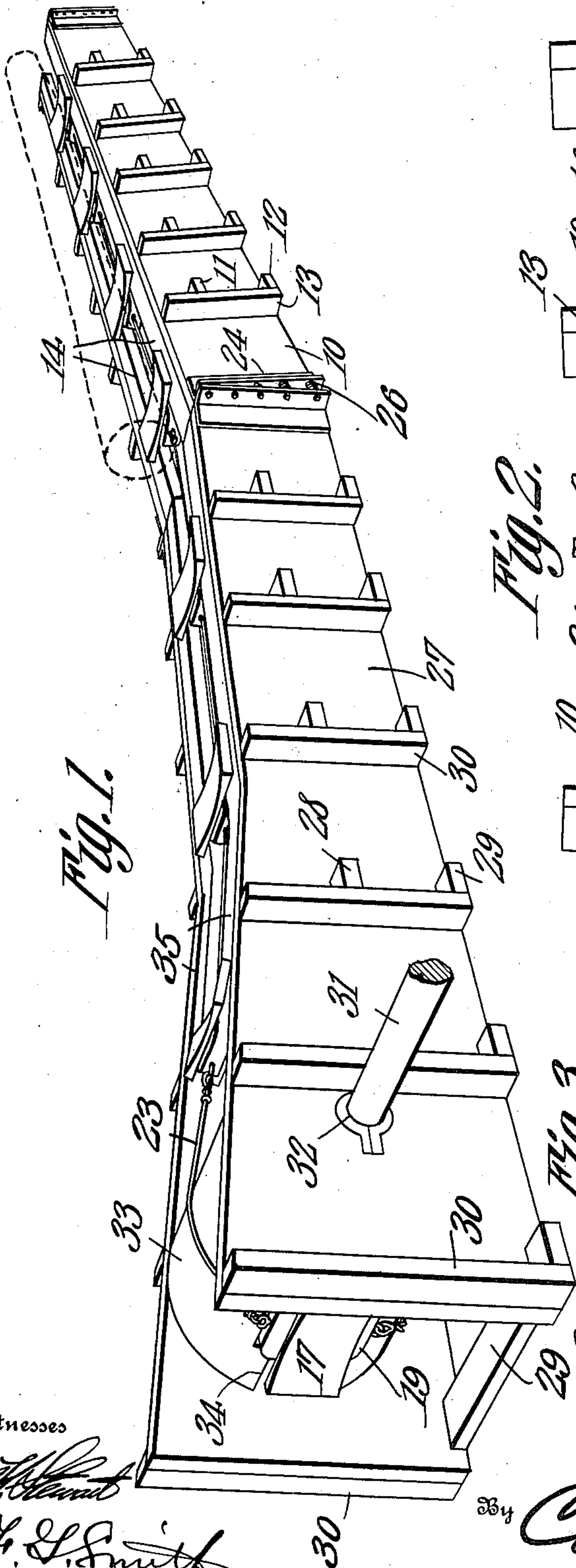


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2 SHEETS—SHEET 1.



Witnesses  
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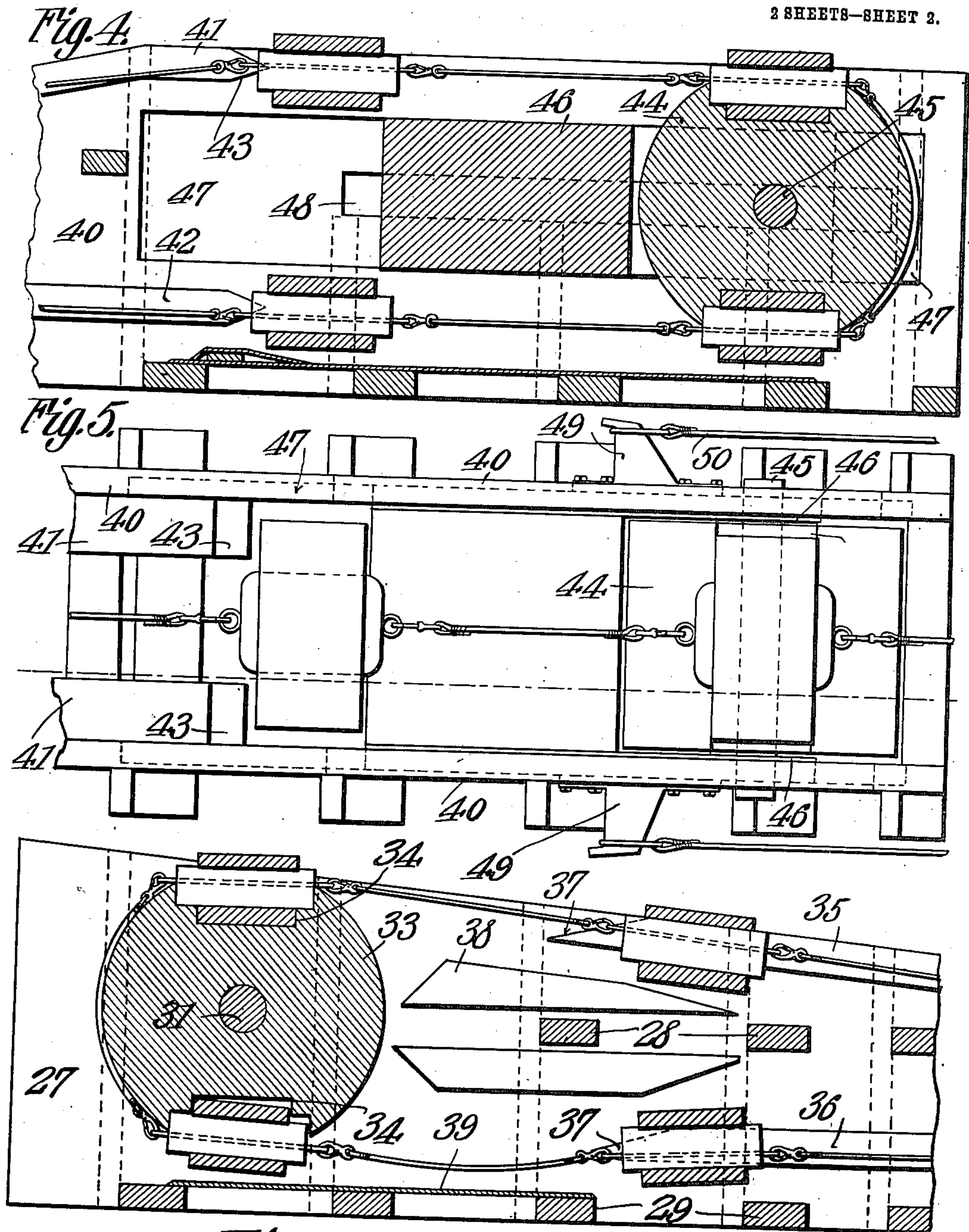


Fig. 6.  
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# UNITED STATES PATENT OFFICE.

OSCAR TORSETH, OF EAU CLAIRE, WISCONSIN.

DEVICE FOR CONVEYING LOGS.

966,488.

Specification of Letters Patent.

Patented Aug. 9, 1910.

Application filed March 6, 1909. Serial No. 481,560.

*To all whom it may concern:*

Be it known that I, OSCAR TORSETH, a citizen of the United States, residing at Eau Claire, in the county of Eau Claire and State of Wisconsin, have invented a new and useful Device for Conveying Logs, of which the following is a specification.

It is the object of the present invention to provide improved means for use in conveying logs from place to place and especially from places where logging operations are being conducted to mills where the logs are cut into lumber, or to railroads or water landings, for further transportation.

Incidentally, the invention has as its object to obviate the making and use of logging roads such as are now commonly used in transporting logs and thereby enable those engaged in the logging operations to carry on the same at all seasons of the year and in any climate or place where timber is to be found. Furthermore, by removing the necessity of constructing logging roads, many young trees will be saved from destruction owing to the fact that the mechanism of the present invention occupies much less space than necessary in the construction of the ordinary logging roads.

The invention is embodied broadly speaking, in a conveyer which is made up of a plurality of sections which are detachably connected end to end and the principal feature of the invention resides in this sectional construction which renders it possible to move the conveyer from place to place with comparative ease, regardless of inequalities in the surface of the ground upon which it is placed or over which it is being moved. By constructing the device of a plurality of separably connected sections, it may be built up to any desired length and a further advantage accruing from such construction lies in the fact that the different sections of the conveyer can be readily separated for removal to other places and that such removal can be accomplished by taking up the rear section of the conveyer and placing it upon the traveling or conveying element of the section next ahead of it, and then sliding such section along on top of the remaining sections either by hand or application of other power.

In the accompanying drawings, Figure 1 is a perspective view of a length of the conveyer mechanism embodying the present in-

vention. Fig. 2 is a top plan view in detail of the meeting ends of two of the sections of the conveyer showing the manner of connecting the sections at an angle one with respect to the other whereby to change the course of travel of the conveyer. Fig. 3 is an end view of one of the sections. Fig. 4 is a vertical longitudinal sectional view through one end of one of the sections. Fig. 5 is a top plan view in detail of the said end of the section shown in Fig. 4, and Fig. 6 is a view in vertical longitudinal section through one end of another of the sections of the conveyer.

The conveyer embodying the invention, as heretofore stated, is made up of a plurality of sections and of the sections, there are three types, there being a section of one type located at one extremity of the conveyer, a section of another type located at the other extremity of the conveyer, and a plurality of sections of the third type interposed between the two end sections. The sections of the last named type will be first described and also the manner of connecting these sections, and subsequently the construction of the other sections which are located at the extremities of the conveyer will be described and also their relation to the other or intermediate sections.

In the drawings, and particularly in Figs. 1, 2 and 3 thereof, the intermediate sections of the conveyer are illustrated as comprised each of spaced parallel sides 10 which are connected in this relation by means of a plurality of transverse cleats or cross bars 11 which project at their ends through the sides 10 and extend transversely of the conveyer sections, and similar cleats 12 which are similarly arranged but in a plane below the plane occupied by the upper cleats 11. In order to brace the connection between the cleats 11 and 12 and the sides 10 which they connect and hold in spaced relation, other cleats or uprights 13 are secured at their edges to the outer faces of the sides 10, they being of a height equal to the height of the said sides, and to the rear or forward edges, as may be desired, of the said cleats 11 and 12 at the ends which project beyond the said sides 10. This construction is clearly shown in Figs. 1 and 2 of the drawings. Secured upon the inner face of each side 10 of each intermediate section at corresponding points and extending throughout the



length of the sections are track beams or guides 14, these beams or guides being located in a plane substantially coincident with the plane of the upper edges of the sides 10 of the sections, and similar track beams 15 are secured at corresponding points upon the said inner faces of the sides 10 in a plane below but parallel to the plane occupied by the beams 14. The cleats 11 occupy a plane intermediate of the plane occupied by the two pairs of track beams 14 and 15. The track beams 14 and 15 of each pair are designed to support and guide between them the carriers of the conveyer, and each of these carriers comprises a plate 16 which is preferably plane on both sides, a plate 17 which is plane on its under side and has its upper face concaved transversely from edge to edge as indicated by the numeral 18, and a block 19 which is interposed between the two plates and serves to connect the same in spaced relation, the blocks 19 being of a width less than the distance between the opposing edges of the track beams 14 or 15 between which it travels and the two plates 16 and 17 being spaced apart a distance slightly greater than the thickness of the track beam 14 so as not to bind the beams while traveling thereon it being understood that each beam 14 or 15 of each pair is received between the edges of the plates 16 and 17 at one side thereof and are in this manner supported for travel lengthwise of the conveyer.

As is clearly shown in Fig. 2 of the drawings, the block 19 projects at its forward and rearward ends beyond the corresponding edges of the plates 16 and 17, as indicated by the numeral 20, and has secured to it at each end an attaching eye 21 with which is detachably connected a snap fastening or coupling 22 arranged one at each end of a connecting cable 23 it being understood that by the employment of such cable 23 and snap couplings 22 connecting with the eye 21, the carriers may be connected in a continuous series and, as will presently be made clear, are even connected in an endless series and are caused to travel in such relation as are the elements of an ordinary endless conveyer. It will be understood of course that by concaving the upper faces of the plates 17 transversely, the plates are adapted to support logs of various diameters and that the logs will not be liable to roll from position upon the said plates.

As heretofore stated, the intermediate sections just described are designed to be connected in a series and in order that such connection may be had between the sections an attaching or connecting flange is secured upon the outer face of each side 10 of each section at each end thereof and projects at right angles from the said face, each of the flanges being provided with a plurality of

bolt openings extending in a vertical series parallel to the edge thereof. When it is desired to connect two of the conveyer sections together, they are disposed end to end with their flanges, indicated by the numeral 24, one against another and with their bolt openings in registration. Bolts 25 are then engaged in the openings in the abutting flanges 24 and the sections are in this manner connected. When it is desired or found necessary, owing to inequalities in the surface of the ground, to have one section of the conveyer extend upwardly at an angle from the other section, washers 26 are disposed, several on the second bolt from the uppermost one, more on the third from the uppermost bolt, and in increasing numbers until the lowermost bolt is reached and supplied, it being understood that by increasing the number of washers upon the bolts in downward order of succession, the lower ends of the connecting flanges 24 will be spaced apart a considerably greater distance than will the upper portions of the flanges, and that consequently one of the conveyer sections will be inclined upwardly from the other. When it is desired to have the one section extend downwardly at an incline from the other section, the order of increase in the number of washers upon the bolt is of course the reverse of that above described so that the upper ends of the flanges will be spaced apart a greater distance than will the lower portions thereof. It will further be understood in connection with the description of this feature of the invention that should it be desired to have one of the sections of the conveyer extend in the same horizontal plane with an adjacent section but laterally at an angle with respect thereto, this result may be accomplished by interposing between the flanges 24 at one side of the sections a number of washers sufficient to secure the desired angle of extent of the first mentioned sections and bolts without washers disposed thereon are employed for the purpose of connecting the flanges at the other sides of the sections.

One of the terminal sections of the conveyer, as will be presently more specifically explained, embodies in its structure a power wheel over which the endless series of carriers are trained and this wheel is of course driven from any suitable source of power such as a stationary engine or the like, and the other terminal section of the conveyer embodies also a wheel over which the endless series of carriers and their connecting cables are trained, this latter wheel being adjustable so that the series may be drawn taut and will not sag. The said first mentioned terminal section of the conveyer is comprised, as in the case of the intermediate sections, of sides 27 which correspond to the sides 10, transverse cleats 28 and 29



which connect the said sides in spaced relation as in the case of the cleats 11 and 12 respectively and correspond thereto, and vertical cleats or uprights 30 which correspond to the uprights 13 of the intermediate sections. A shaft 31 is journaled in suitable bearings 32 upon the sides 27 of the said terminal section and fixed upon this shaft for rotation therewith is a power wheel in the form of a solid cylinder or drum 33 provided in diametrically opposite side portions or areas with recesses or seats 34 of a shape and size to receive each one of the carriers of the conveyer, it being understood that power is to be applied from any suitable source to the shaft 31 and that upon rotation of this shaft and consequent rotation of the drum 33, the carriers will be caused to successively seat in the recesses or seats provided in the peripheral or circumferential surface of the drum and the pull exerted upon the connecting cable between each of said carriers and the one which follows will serve to hold the entire series in the manner of an ordinary endless conveyer, one stretch of the series and the connecting cable being supported by the track beams 14 heretofore described and the lower stretch being supported by the track beams 15, the plates 16 of the lower stretch resting upon the upper sides of the said track beams 15 and the carriers of the lower stretch being in this manner held against contact with the surface of the ground.

As is clearly shown in Fig. 6 of the drawings, which figure is a vertical longitudinal sectional view through the end portion of the above mentioned terminal section of the conveyer, the upper pair of track beams is indicated by the reference numeral 35 and the lower pair by the reference numeral 36, the beams 35 adjacent their ends which are presented in the direction of the drum 33, being inclined upwardly so as to gradually elevate the carriers and guide them onto the said drums; the track beams of the pair 36 however have all portions in the same horizontal plane. It will be observed from the said Fig. 6 of the drawings that the ends of the track beams 35 and 36 which are presented in the direction of the power wheel 33, are beveled as at 37 so as to permit the carriers to readily leave and be guided onto the said beams, and in order to limit the sagging or drop of the carriers as they leave the upper tracks 35, there is provided, in a plane immediately beneath the plane of the tracks, a transverse inclined supporting plate 38 upon which the carriers may fall and be guided to the wheel 33 should the connecting cable be slack. For the same purpose, a plate 39 is secured upon the lower cleats 29 of the said terminal section of the conveyer and extends beneath the power wheel 33 and it is over this plate that the

carriers are drawn immediately prior to being engaged by the beveled ends of the lower tracks 36 and guided thereonto.

The other terminal section of the conveyer is substantially identical in its structural details as the first described terminal section and, in Figs. 4 and 5 of the drawings, illustrating this terminal section, its side walls are indicated by the numeral 40, its upper track beams by the numeral 41, and its lower track beams by the numeral 42, the track beams 41 and 42 being beveled at their ends as indicated by the numeral 43 so as to provide for guiding the carriers onto the track-ways after they have passed over the drum which is mounted in this terminal section. The drum just mentioned is indicated by the numeral 44 and is identical in its construction with the drum 33 it however being idle or in other words fixed upon a shaft which is rotated only through the medium of the endless series of carriers traveling therearound and actuated by the shaft 31 and drum 33 of the first described terminal section. The shaft upon which the drum 44 is mounted is indicated by the numeral 45 and is journaled at its ends in bearings 46 which are slidably adjustably mounted in recesses 47 formed in the opposing faces of the sides 40 of the said terminal sections, the said side walls of the sections being formed also with slots 48 through which project the ends of the shaft and attaching bracket hooks 49 with which are engaged extension elements which may be in the nature of cables or chains 50, these cables or chains being connected to some suitable tensioning means whereby the bearings 46 may be adjusted in the recesses 47 in which they are disposed and thereby tighten the endless series of carriers and connecting cables.

From the foregoing description of the invention it will be seen that there is provided a conveyer made up of a plurality of sections which may be readily connected and disconnected and which may be moved one over the other whereby to build up the conveyer progressively in any direction desired and that means is also provided whereby the sections may be connected so that one will extend at an angle to another and thereby provide for change in the direction of extent of the conveyer when found necessary, and that this means is of such character that the sections may be adjusted to extend not only upwardly or downwardly at an angle one from another but also laterally at an angle one from another.

What is claimed is:—

1. In a conveyer, a plurality of sections provided each at each end with flanges, the said sections being disposed end to end, bolts passed through the corresponding flanges at the meeting ends of the sections, and washers



upon the bolts at one side of the sections between the flanges through which the bolts engage whereby to space said flange and hold the sections at an angle laterally with respect to each other.

2. In a conveyer, a plurality of sections provided each at each end with flanges, the said sections being disposed end to end, bolts passed through the corresponding flanges at the meeting ends of the sections, and washers upon certain of the bolts whereby to so space said flanges at corresponding ends as to hold the sections at an angle with respect to each other vertically.

3. In a conveyer, a plurality of sections

provided each at each end with flanges, the said sections being adapted for disposal end to end, bolts engaged through the flanges and connecting the sections in such relation, and washers disposed upon the bolts in unequal numbers whereby to adjust the sections to extend one at an angle with respect to another.

In testimony that I claim the foregoing as my own, I have hereto affixed my signature in the presence of two witnesses.

OSCAR TORSETH.

Witnesses:

M. B. HUBBARD,  
ALMA LIEN.