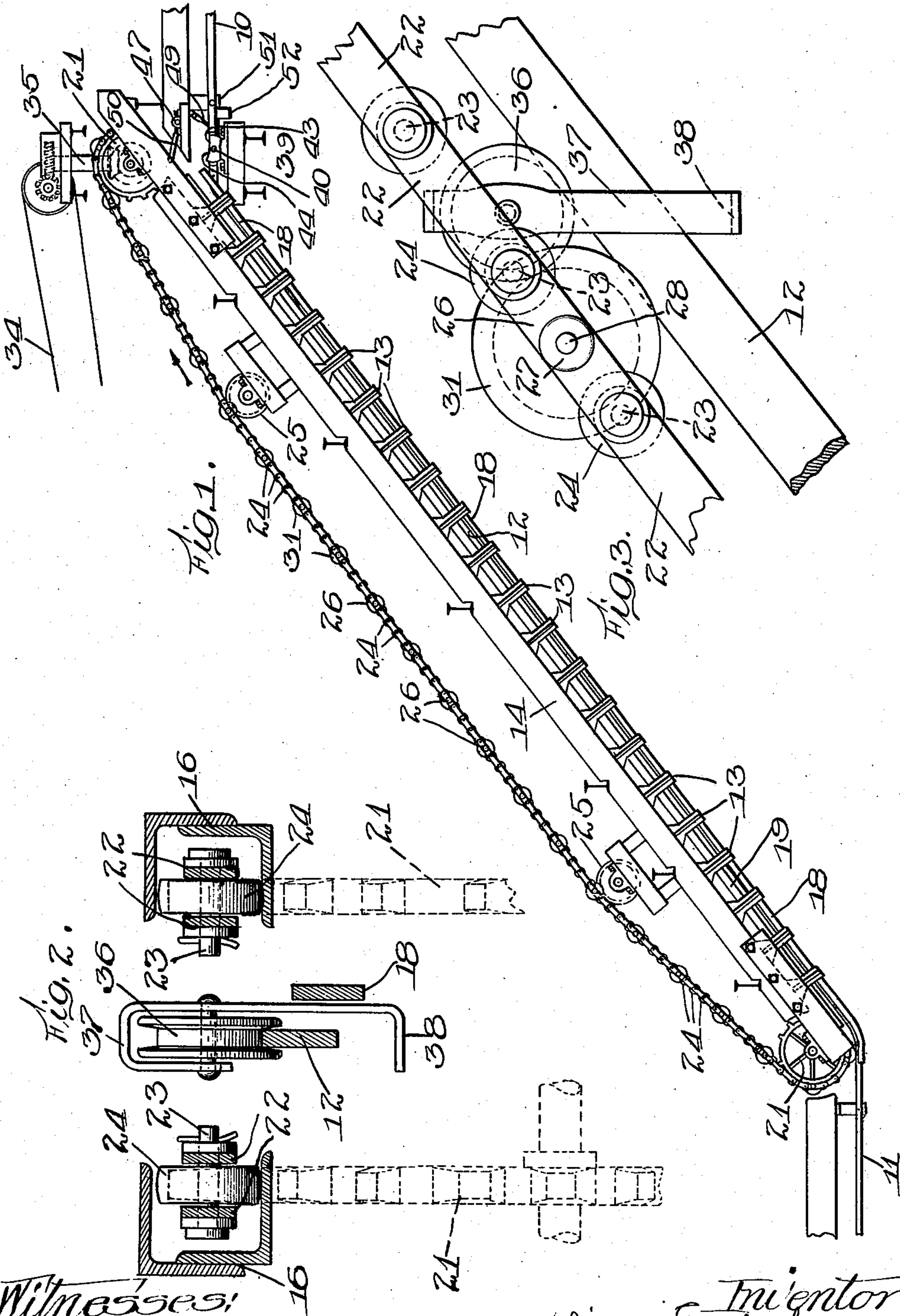


No. 881,212.

D. E. WASHINGTON. PATENTED MAR. 10, 1908.
CONVEYER.

APPLICATION FILED JULY 17, 1907.

4 SHEETS—SHEET 1.



Witnesses:
Ed. Perry
J. F. Johnson Jr.

Inventor:
Dixon E. Washington
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No. 881,212.

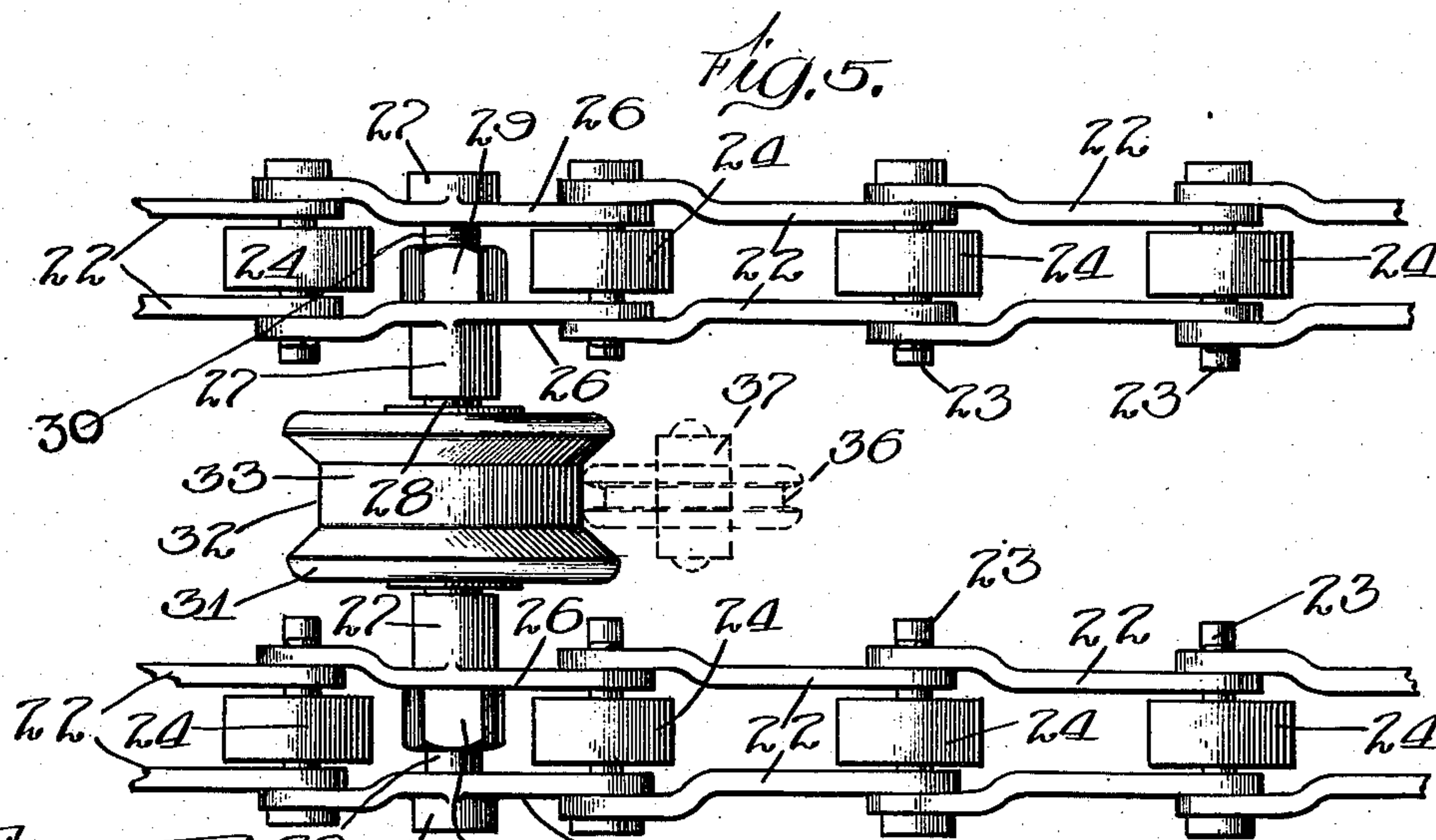
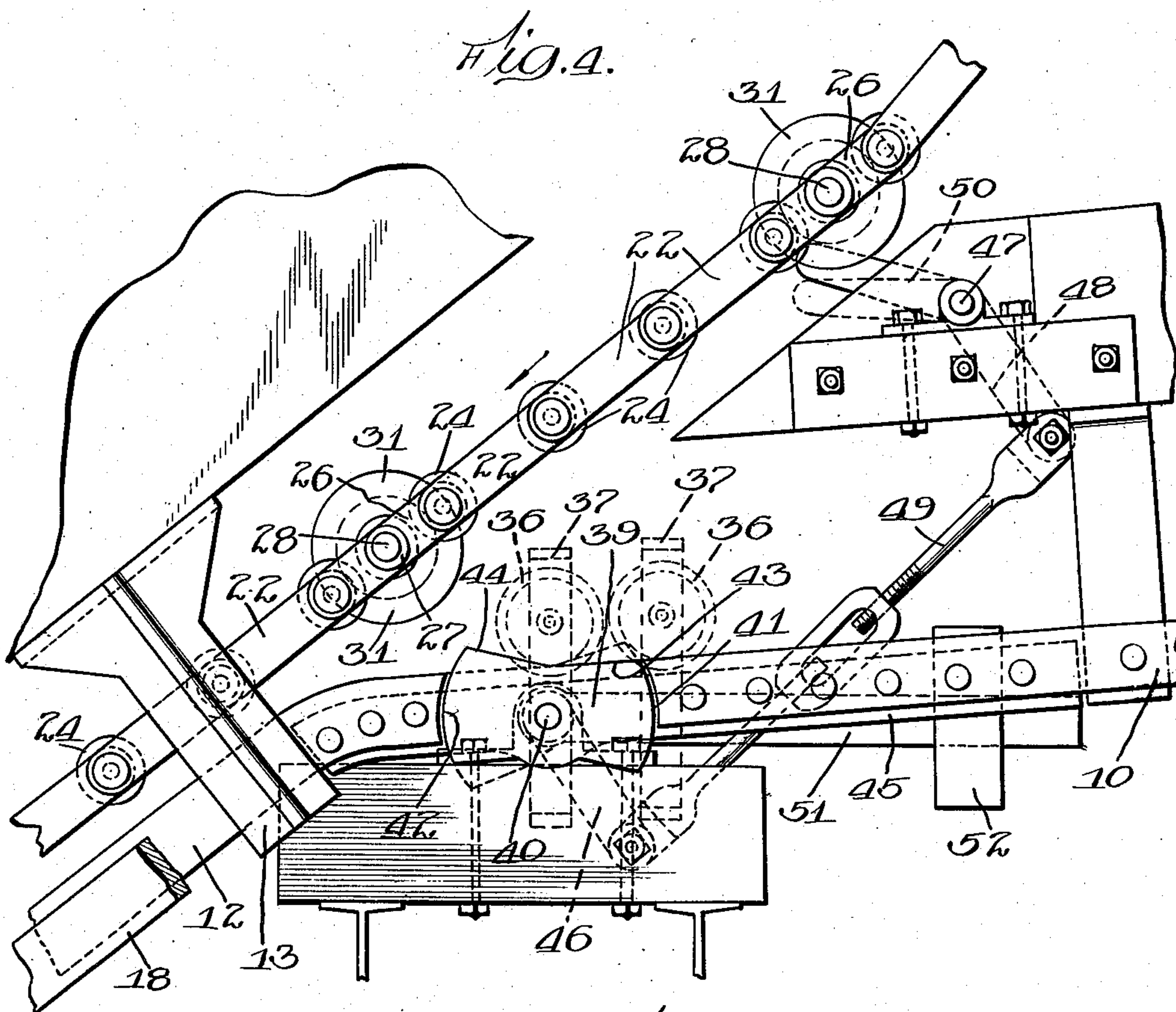
D. E. WASHINGTON.

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4 SHEETS—SHEET 2.



Witnesses:

Witnesses:
 Geo. D. Perry
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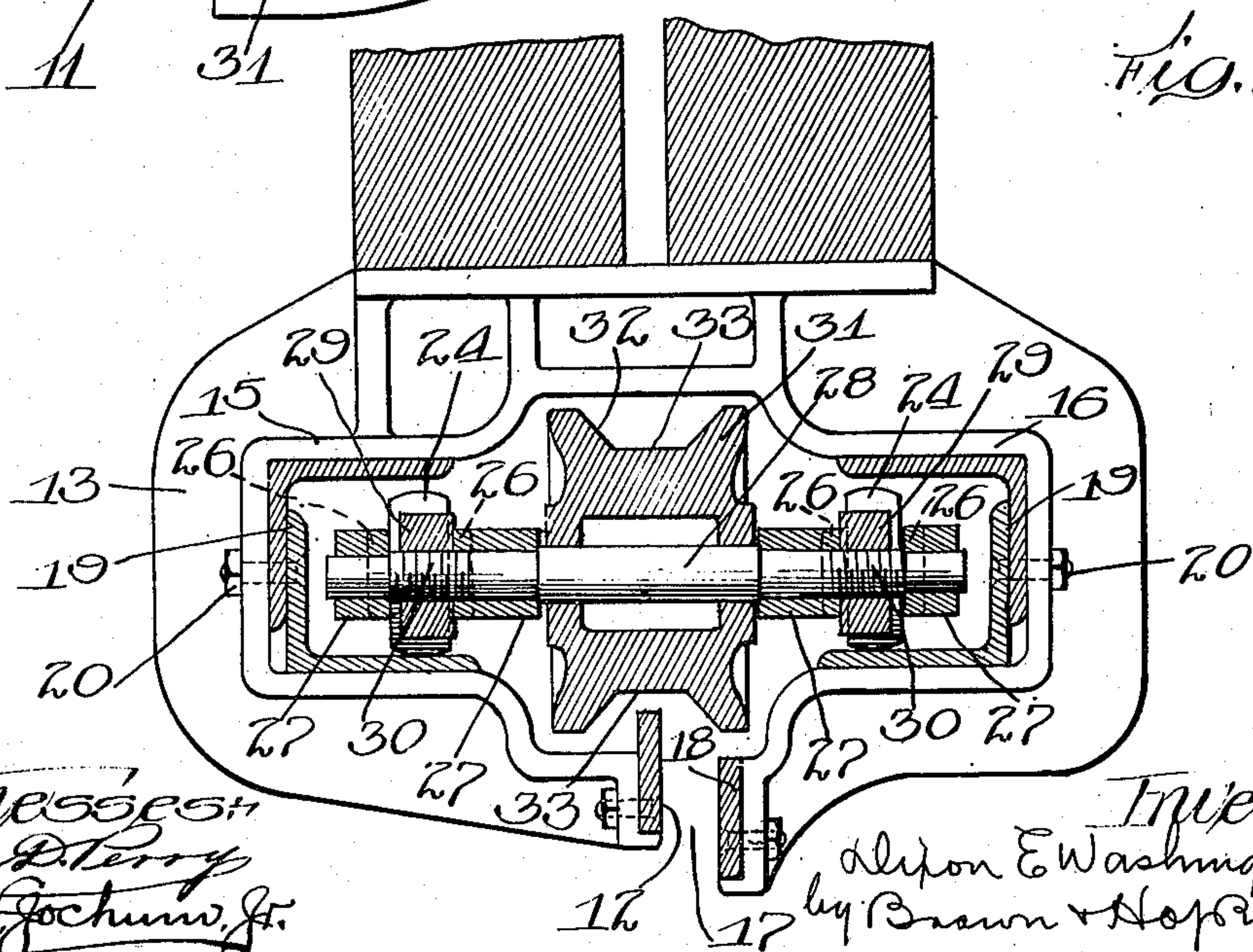
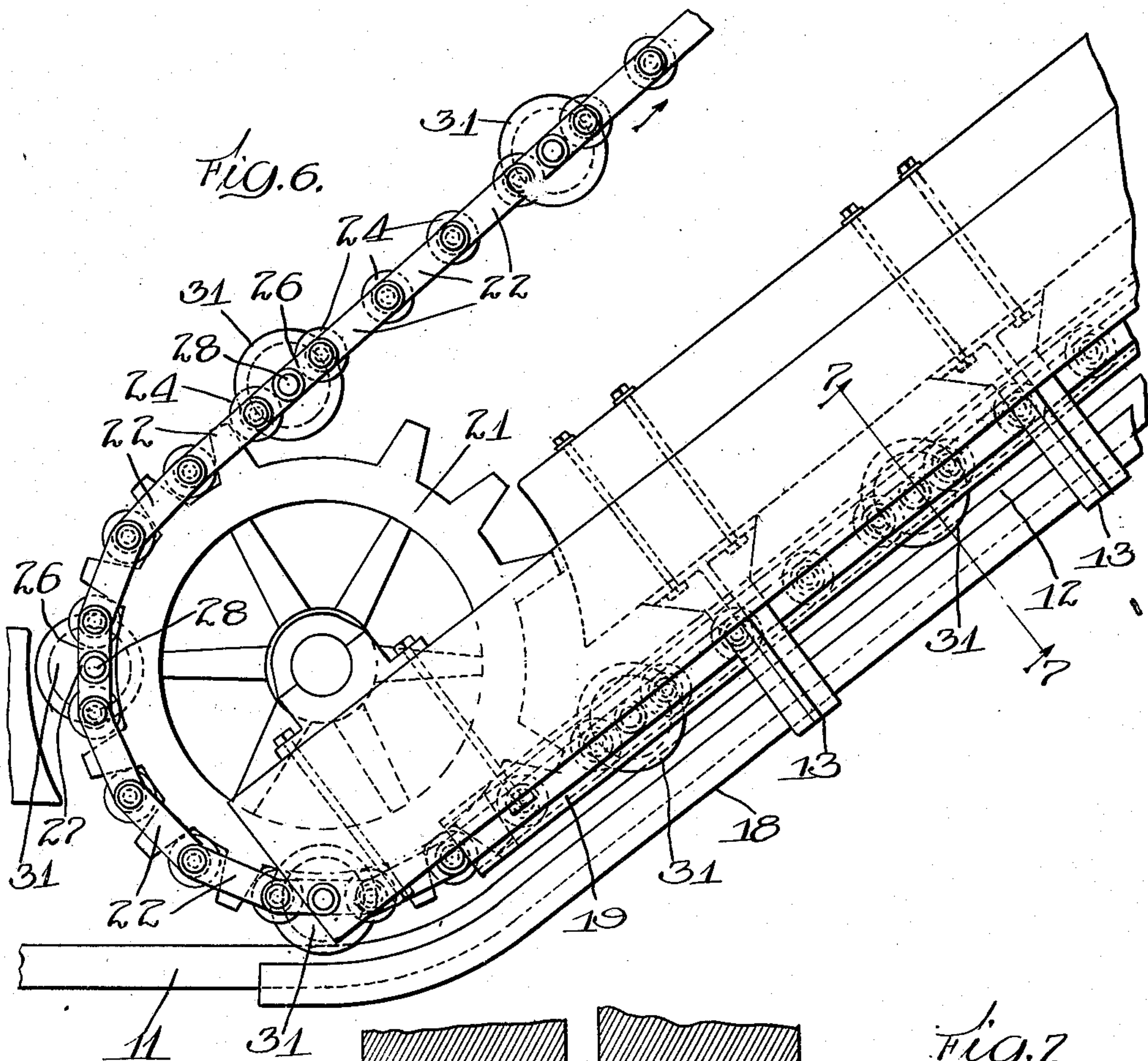
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by Nipon E. Washington Inventor:
Brown & Hopkins attys

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APPLICATION FILED JULY 17, 1907:

4 SHEETS—SHEET 3.



Witnesses
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J. F. Johnson, Jr.

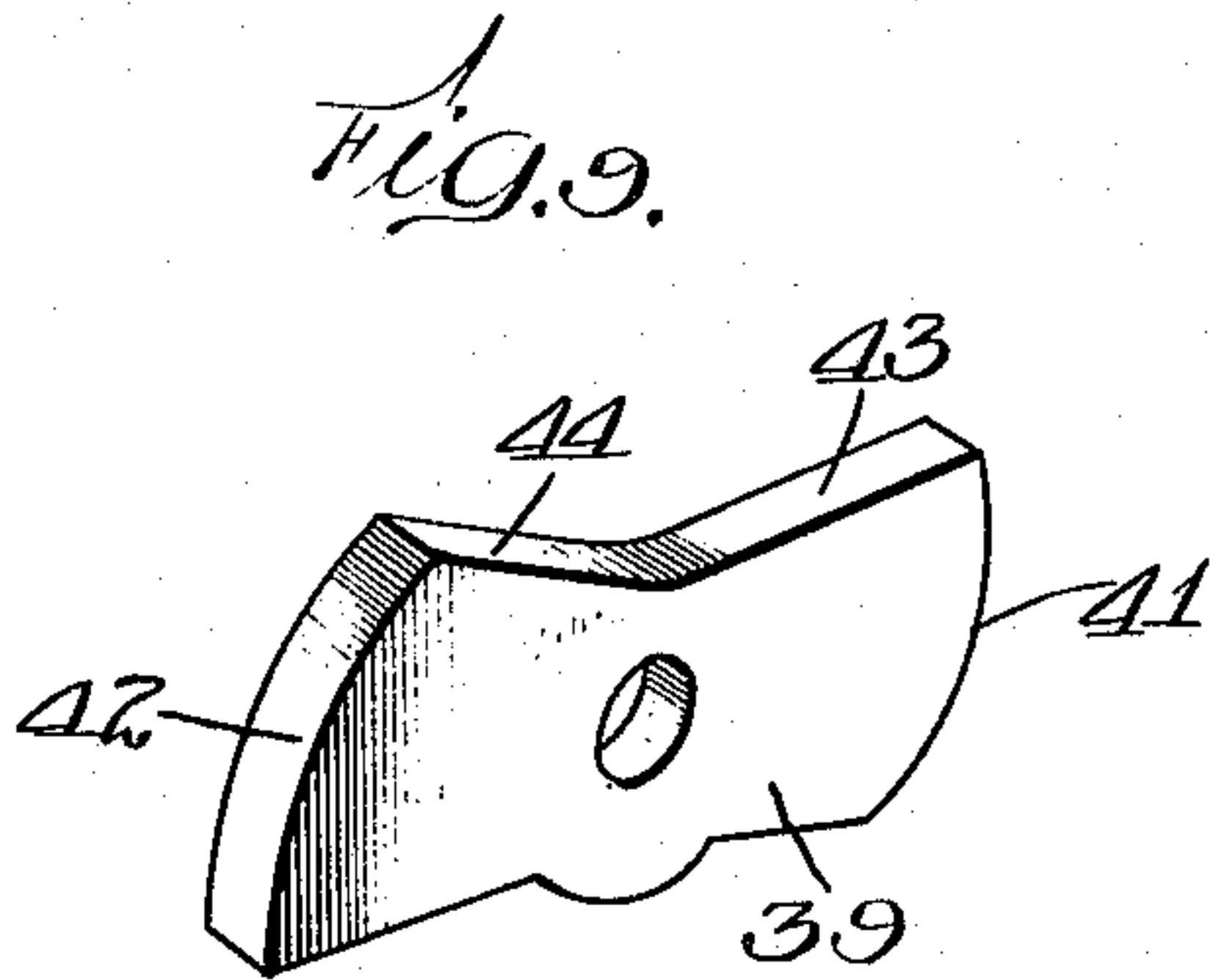
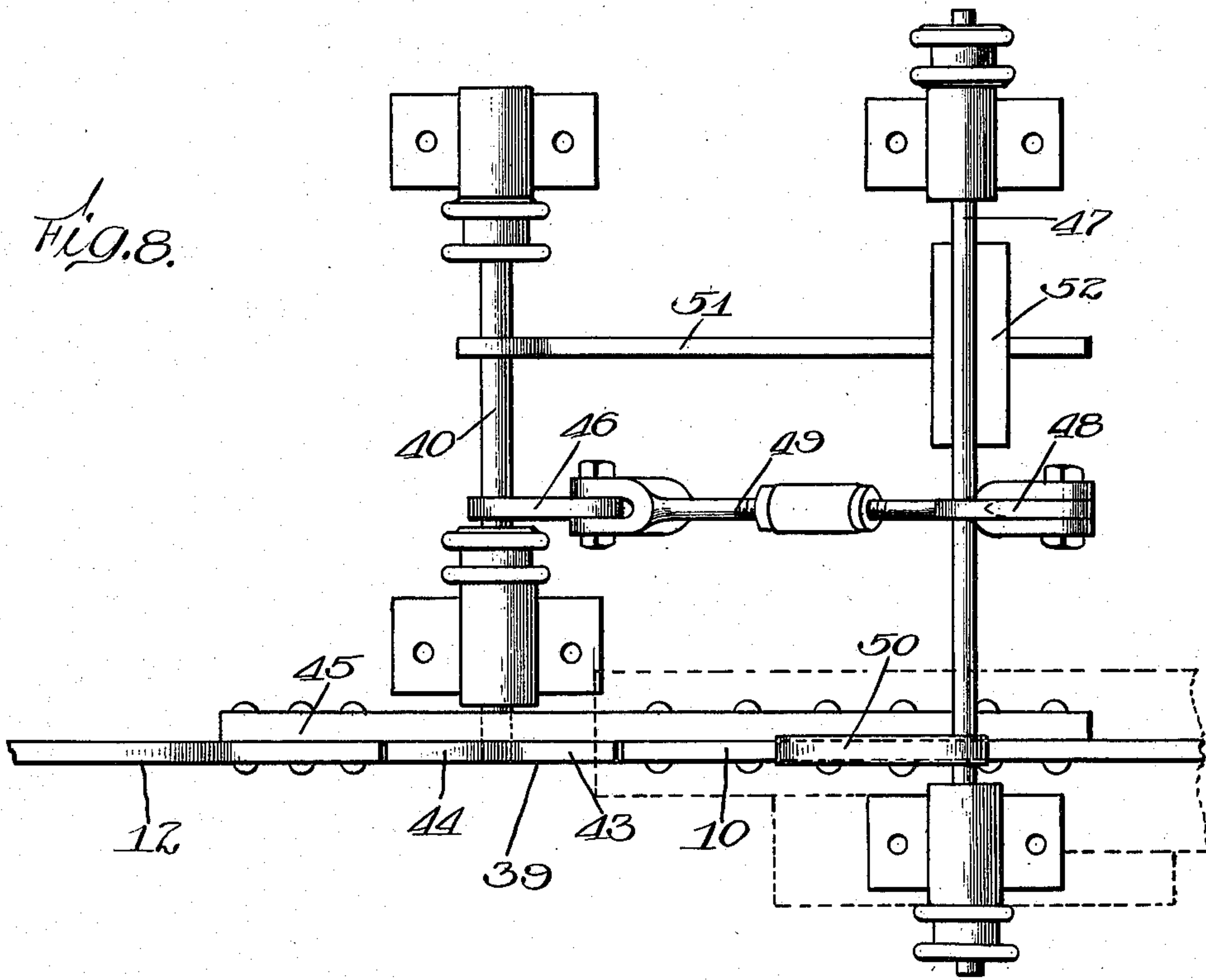
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No. 881,212.

D. E. WASHINGTON. PATENTED MAR. 10, 1908.
CONVEYER.

APPLICATION FILED JULY 17, 1907.

4 SHEETS—SHEET 4.



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UNITED STATES PATENT OFFICE.

DIXON E. WASHINGTON, OF CHICAGO, ILLINOIS, ASSIGNOR OF ONE-HALF TO CHARLES W. PATTON, OF CHICAGO, ILLINOIS.

CONVEYER.

No. 881,212.

Specification of Letters Patent.

Patented March 10, 1908.

Application filed July 17, 1907. Serial No. 384,155.

To all whom it may concern:

Be it known that I, DIXON E. WASHINGTON, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Conveyers, of which the following is a specification.

This invention relates to improvements in conveyers more particularly adapted for use in conveying or transporting beef and the like from one place to another during the different steps of dressing the same, and the primary object of the invention is to provide improved means for preventing the axial rotation or twisting of the hanger upon its supporting track due to the swinging movement or twisting of the heavy load, which would tend to displace the hanger.

A further object is to provide an improved endless conveyer adapted to be supported adjacent a supporting track upon which latter the hangers travel, the hangers being adapted to engage the conveyer as they move upon the track.

A further object is to provide an improved endless conveyer adapted to be supported adjacent an inclined track and so arranged with relation to the track as to be engaged by the supporting hangers which move upon the track so as to retard their descent.

A further object is to provide improved means for automatically feeding the hangers to the conveyer.

A further object is to provide an improved device of this character which will be simple, cheap and durable in construction, and efficient and effective in operation.

To the attainment of these ends and the accomplishment of other new and useful objects, as will appear, the invention consists in the features of novelty in the construction, combination and arrangement of the several parts hereinafter more fully described and claimed and shown in the accompanying drawings, illustrating an exemplification of the invention, and in which—

Figure 1 is a side elevation of an improved conveyer constructed in accordance with the principles of this invention. Fig. 2 is a sectional view, partly in elevation, showing the relation of the hanger upon the supporting track, the guide for the hanger, the conveyer and the guides for the conveyer. Fig. 3 is a detail side elevation of the conveyer and the hanger showing the relation of the two when

in operative position. Fig. 4 is a detail elevation of the automatic feeding device. Fig. 5 is a detail plan view of the conveyer proper. Fig. 6 is an enlarged elevation of one end of the conveyer. Fig. 7 is a detail sectional view on line 7—7 of Fig. 6. Fig. 8 is a detail plan view of the automatic feeding device. Fig. 9 is a detail perspective view of the switch or stop.

Referring more particularly to the drawings and in this exemplification of the invention, the numeral 10 designates one section of an overhead supporting track, and 11 designates another section, which is spaced from and arranged below the section 10, such, for example, as being arranged upon a lower floor of a building. Disposed between and arranged to connect the sections 10 and 11 is an inclined track section 12, which is supported in any desired manner preferably by means of spaced brackets 13, shown more clearly in Fig. 7 of the drawings. This track section 12 is so arranged that the extremities thereof will stand respectively in line with the track sections 10 and 11 to form a continuation thereof. The brackets 13 may themselves be supported by suitable beams 14. The brackets 13 are preferably provided with offset portions 15 on one side of the track 12 and a similar offset portion 16 on the other side of the track section 12, as shown more clearly in Fig. 7 of the drawings. These brackets are also provided with an open space 17 adjacent the track section 12 and arranged adjacent said space and supported by the brackets is a guide track 18, which is spaced from the track section 12 and so arranged with relation thereto that the upper edge of the guide track will be disposed below the upper edge of the track section 12 so that the guide track 18 will be arranged to one side of the track section 12 so as not to interfere with the movement of the hanger upon the track section 12. Arranged on each side of the track section 12 and supported within the offset portions 15 and 16 of the brackets 13, are channel members or guides 19, so arranged that the open sides thereof will be disposed toward the track section 12 and spaced therefrom and said channel members may be secured in position in any desired or suitable manner, preferably by means of screws or bolts 20, passing through a portion of the brackets 13 and the channel members 19.

Arranged adjacent each end of the channel members 19 is a sprocket wheel 21 and passing around the respective sprocket wheels is an endless belt 22, comprising 5 spaced links connected by pivot pins 23 and supported by these pivot pins, and within the links are pulley wheels 24. These belts are so arranged that the lower runs thereof will travel within the respective channel 10 members 19 with the pulley wheels 24 resting upon the base of the channel members. The upper runs of the belts are adapted to pass over suitable supporting wheels or pulleys 25 which are arranged above the respective 15 channel members 19 and are supported in suitable bearings upon the beams 14.

The links 26 of the belts 22 are provided with bearings 27 intermediate the pulley wheels 24, and journaled on these bearings 27 20 are the extremities of an axle 28, which are so arranged as to extend across the space formed between the two endless chains and said axle is held from displacement in any desired or suitable manner, preferably by means of nuts 25 29, which engage threaded portions 30 on said axles preferably between the links of the respective chains, as shown more clearly in Fig. 5 of the drawings. These axles 28 and supporting links 26 are arranged at intervals 30 throughout the lengths of the endless chains, and supported by each axle 28 and disposed between the chains is a wheel or pulley 31, which is provided with a grooved periphery 32 so located as to stand directly above the 35 upper edge of the track section 12. This groove is of such a depth that the bottom 33 thereof will be spaced above the upper edge of the track section 12, so that the pulley or wheel 31 will be held aloof from the track section. The pulley or wheel 31 is also of such 40 a width as to substantially fill the space between the extremities of the bearings 27 between the chains so as to prevent the said pulley or wheel from moving longitudinally upon the axle 28, as shown more clearly in 45 Figs. 5 and 7 of the drawings.

When in position, the chains or belts are arranged on each side of the track section 12 and in such position that the pulleys 24 will 50 travel within the channel members 19 and motion may be transmitted to the endless belts in any desired or suitable manner, such as by means of a power belt 34, which may be geared up to one of the sprocket wheels 21 55 by means of an intermediate shaft 35, as shown more clearly in Fig. 1 of the drawings.

A suitable grooved pulley wheel 36 is adapted to rest and move upon the track section 12 and supported by said pulley wheel 60 36 is a suitable hanger 37, and said hanger is so constructed that one side thereof will extend below the track section 12 and project through the space formed between the track section 12 and the guide track 18 and terminate in a laterally projecting portion 38 65

below the guide track 16 and extending beneath the track section 12 so that when an article, such as a beef, is suspended by the hanger, the center of gravity thereof will be below the supporting track section.

In operation the endless belts will move in the direction indicated by the arrow in Fig. 1 and the hangers 37 will be fed from the track section 10 to the inclined track section 12. As the belts are moved, the pulleys or wheels 70 31 will be brought adjacent the track section 12 and will extend across said track in the path of movement of the hangers 37, so that when the hangers are fed, one at a time, from the track section 10 to the inclined 75 track section 12, the pulley wheel 36 of the hanger will engage and rest against the adjacent pulley wheel 31 supported by the endless belts. When the hangers are on the inclined section 12, they will tend to move 80 along said section under the influence of gravity but will be retarded in their movement by the movement of the endless belts, the pulley wheel 36 engaging the base 33 of the peripheral groove 32 of the wheels or 85 pulleys 31, will tend to reduce the friction and the flanges of the pulleys or wheels 31 formed by the groove 32 will prevent lateral displacement of the hangers while the guide track 18 between which and the track section 90 12 a portion of the hanger 37 projects will prevent the hanger from being axially rotated under the influence of the rotary movement which the swinging movement of the heavy weight supported thereby would 95 tend to impart thereto. When the hanger reaches the lower extremity of the track section 12, the engaging pulley or wheel 31 will pass out of engagement therewith, up over the adjacent sprocket wheels 21, and the 100 hanger may be moved in any desired manner and to a suitable place upon the track section 11. It will thus be seen that the hangers may be conveniently fed from an upper 105 to a lower story of a building. The pulleys or wheels 31 are suitably spaced from each other throughout the lengths of the endless belts so that when two or more hangers are moving upon the track section 12, the hangers or the loads supported thereby will not 110 interfere or contact with each other.

Any suitable means may be provided for automatically feeding the hangers from the track section 10 to the track section 12 and a simple and efficient means for accomplishing 115 this purpose comprises a switch or stop designated generally by the reference numeral 39, which is pivotally supported by means of a suitable shaft 40 at the junction of the track sections 10 and 12. This switch or 120 stop 39 is provided with enlarged extremities 41, 42, of such a size that the edges 43, 44, thereof will be disposed at an angle to each other, as shown more clearly in Figs. 1 and 9 of the drawings. The adjacent ends of the 125 130

track sections 10 and 12 may be connected in any desired or suitable manner, such as by means of a connecting bar or member 45, which extends across the space formed between the adjacent ends of the sections 10 and 12 within which the switch or dog 39 is located and the edge of said bar or member 45 is preferably located below the edge of the track sections 10 and 12 so as to be in such a position that the pulley 36 on the hangers 37 will not engage said member.

In the present exemplification of the invention, the track section 10 is preferably arranged on a slight inclination, as shown more clearly in Fig. 4 of the drawings and in the normal position of the switch or stop 39 the edge 43 will be in line with and form a continuation of the upper edge of the track section 10 and the edge 44 will be disposed above the edge of the track section 10, so that when a hanger is moved upon the track section 10 and with the switch or stop in its normal position, the pulley 36 will ride upon the face 43 of the stop or switch 39 and will be retarded in its forward movement by the inclined face 44, as shown in full lines in Fig. 4 of the drawings. When the stop or switch 39 is moved about its axle to the position, as shown in dotted lines in Fig. 4, the inclined face 44 will be lowered into the same plane as the upper edge of the track section 10, which will permit the hanger supported thereon to advance into such a position as to engage the approaching pulley wheel 31 on the lower run of the endless conveyer, at the same time the edge 43 will be raised to the dotted position as shown in Fig. 4, causing the end 41 of the switch or stop 39 to assume a position in the path of movement of the next advancing hanger to form a stop therefor and will hold said hanger in such position until the stop or switch 39 is moved back into its normal position to permit the hanger to advance upon the stop or switch to be held in such position by the inclined face 44.

Any suitable means may be provided for automatically rocking the stop or switch 39 and a suitable and efficient means for accomplishing this purpose will now be described.

Depending from the shaft 40 is an arm 46. Journaled in suitable bearings mounted upon a suitable support preferably above the stop or switch 39 is a shaft 47 and depending from said shaft is an arm 48, which is connected to the arm 46 in any desired or suitable manner, preferably by means of an adjustable connecting rod or bar 49, preferably of the turn buckle construction. The shaft 47 is preferably located adjacent the path of movement of the lower runs of the endless belts and projecting from said shaft 47 is an arm 50, the extremity of which is disposed within the path of movement of the pulleys or wheels 31, so that as the belts are moved, the advancing wheel or pulley 31 adjacent the

extremity of the arm 50 will engage and depress said arm to rock the shaft 47 and through the medium of the arm 48, the connecting bar 49 and the arm 46 will rock the shaft 40 and also the switch or dog 39. The pulleys or wheels 31 which are supported by the endless conveyers are so spaced from each other that when one of the pulleys is in engagement with the extremity of the arm 50 another pulley will be adjacent the track section 12 and in such a position as to be engaged by the hanger just as it is released by means of the switch or stop.

If desired, an additional arm 51 may be provided on the shaft 40 and upon which is mounted a suitable weight 52 so as to return the switch or stop 39 to its normal position when the wheel or pulley 31 has passed out of engagement with the extremity of the arm 50.

In order that the invention might be fully understood by those skilled in the art, the details of the foregoing embodiment thereof have been thus specifically described but

What I claim as new and desire to secure by Letters Patent is:—

1. In a device of the class described, the combination of a track, a hanger supported by the track, means for preventing axial movement of the hanger upon the track, and means adjacent the track adapted to be engaged by the hanger for controlling the movement of the hanger.

2. In a device of the class described, the combination of a track, a guide adjacent to and parallel with the track, a hanger supported by the track, a portion of the hanger extending between the track and guide, the guide being located in close proximity to the track to prevent axial movement of the hanger, and means adjacent the track adapted to be engaged by the hanger for controlling the movement of the hanger upon the track.

3. In a device of the class described, the combination of an inclined track, a hanger supported by and movable on the track, means for preventing displacement of the hanger, an endless conveyer supported adjacent the track, means for operating the conveyer, and means operatively related to the conveyer and cooperating with the hanger for controlling the movement of the hanger upon the track.

4. In a device of the class described, the combination of a track, a hanger supported by and movable on the track an endless conveyer adjacent the track, means for operating the conveyer, and means projecting from the conveyer and arranged within the path of movement of the hanger for retarding the movement of the hanger.

5. In a device of the class described, the combination of an inclined track, an endless conveyer supported adjacent the track, a

hanger supported by and movable on the track, and means projecting from the conveyor, extending across and out of engagement with the track and adapted to be engaged by the hanger whereby the movement of the hanger upon the track will be retarded.

6. In a device of the class described, the combination of an inclined track section, a hanger supported by and movable upon the track, spaced endless belts supported adjacent the track, and means supported by the belts and extending across the track within the path of movement of the hanger and out of engagement with the track, and adapted to be engaged by the hanger for retarding the movement of the latter upon the track.

7. In a device of the class described, the combination of an inclined track section, a hanger supported and movable upon the track, spaced endless belts supported adjacent and respectively on each side of the track, and an anti-friction roller disposed between and supported by the belts out of contact with the track, said roller being disposed within the path of movement of the hanger and adapted to be engaged thereby for retarding the movement of the hanger upon the track.

8. In a device of the class described, the combination of an inclined track section, a hanger supported by and movable upon the track, spaced endless belts supported adjacent the track, one of said belts being disposed on each side of the track, an anti-friction roller disposed between the belts and supported by the belts out of contact with the track, said roller being disposed within the path of movement of the hanger and adapted to be engaged thereby for retarding the movement of the hanger upon the track, and means for imparting motion to the belts.

9. In a device of the class described the combination of an inclined track section, a hanger supported by and movable upon the track, an endless belt supported adjacent and on each side of the track, means for connecting said belts, said means extending across and out of contact with the track and adapted to be engaged by the hanger, means for moving the belts, and supporting guides for the belts adjacent the track.

10. In a device of the class described the combination of an inclined track section, a hanger supported by and movable upon the track, an endless belt supported adjacent and on each side of the track, means for connecting said belts, said means extending across and out of contact with the track and adapted to be engaged by the hanger, means for moving the belts, a supporting guide for each belt adjacent the track and anti-friction rollers journaled to the belts and movable on the guides.

11. In a device of the class described the

combination of an inclined track section, a hanger supported by and movable upon the track, an endless belt supported adjacent each side of the track and spaced therefrom, a supporting guide for each of the belts, anti-friction rollers journaled to the belts and movable in the guides, an axle supported by the belts and extending across the track, an anti-friction roller journaled on the axle, said roller being disposed within the path of movement of the hanger and out of engagement with the track, and means for moving the belts to control the movement of the hanger upon the track.

12. In a device of the class described, the combination of an inclined track section, a hanger supported by and movable on the track, an endless belt adjacent each side of and spaced from the track, supporting guides for the belts, an axle supported by the belts and extending across the track, a grooved pulley journaled on the axle, said pulley standing astride of the track and out of contact therewith, and adapted to be engaged by the hanger, and means for moving the belts to retard the movement of the hanger upon the track.

13. In a device of the class described the combination of a track, hangers adapted to move upon the track, means for controlling the movement of the hangers on the track, and means for automatically feeding the hangers to the track.

14. In a device of the class described the combination of a track, hangers adapted to move upon the track, means for controlling the movement of the hangers upon the track and means for intermittently feeding the hangers to the track.

15. In a device of the class described the combination of a track, hangers adapted to move upon the track, means for controlling the movement of the hangers on the track, and means operatively related to the first said means for automatically feeding the hangers to the track.

16. In a device of the class described, the combination of a track provided with an inclined section, hangers supported by the track and movable upon the inclined section, means for retarding the movement of the hangers on the inclined section, and means operatively related to the first said means for intermittently feeding the hangers to the inclined section.

17. In a device of the class described, the combination of an overhead support having an inclined track section, hangers on the support adapted to move by gravity on the inclined track section, a stop for retaining the hangers on the support, means for controlling the movement of the hangers on the inclined track section, mechanism for releasing the hangers to feed the hangers to the inclined

section and means operatively related to the said controlling means for intermittently operating the said releasing mechanism.

18. In a device of the class described, the combination of a support having an inclined track section, hangers movable upon the support and also movable by gravity on the inclined section, means for controlling the movement of the hangers on the inclined section, a stop for retaining the hangers on the support, means operatively related to the said controlling means for moving the stop to feed the hangers to the inclined track section and means for returning the stop to its normal position.

19. In a device of the class described the combination of a support, an inclined track section adjacent the support, hangers on the support, said hangers being adapted to move on the inclined track, means for controlling the movement of the hangers on the inclined track, a stop, a portion of the stop being adapted to normally stand within the path of movement of the hangers for retaining the same upon the support, and means operatively related to the first said means for moving the said stop out of the path of movement of one of the hangers to release said

hanger, and moving another portion of the stop into the path of movement of a succeeding hanger for restraining the latter.

20. In a device of the class described the combination of a support, an inclined track section adjacent the support, hangers on the support, said hangers being adapted to move on the inclined track, means for controlling the movement of the hangers on the inclined track, a stop, a portion of the stop being adapted to normally stand within the path of movement of the hangers for retaining the same upon the support, means operatively related to the first said means for moving said stop out of the path of movement of one of the hangers to release said hanger and moving another portion of the stop into the path of movement of a succeeding hanger for restraining the latter, and means for returning the stop to its normal position.

In testimony whereof I have signed my name to this specification, in the presence of two subscribing witnesses, on this 20th day of June, A. D. 1907.

DIXON E. WASHINGTON.

Witnesses:

C. H. SEEM,

J. H. JOCHUM, Jr.