

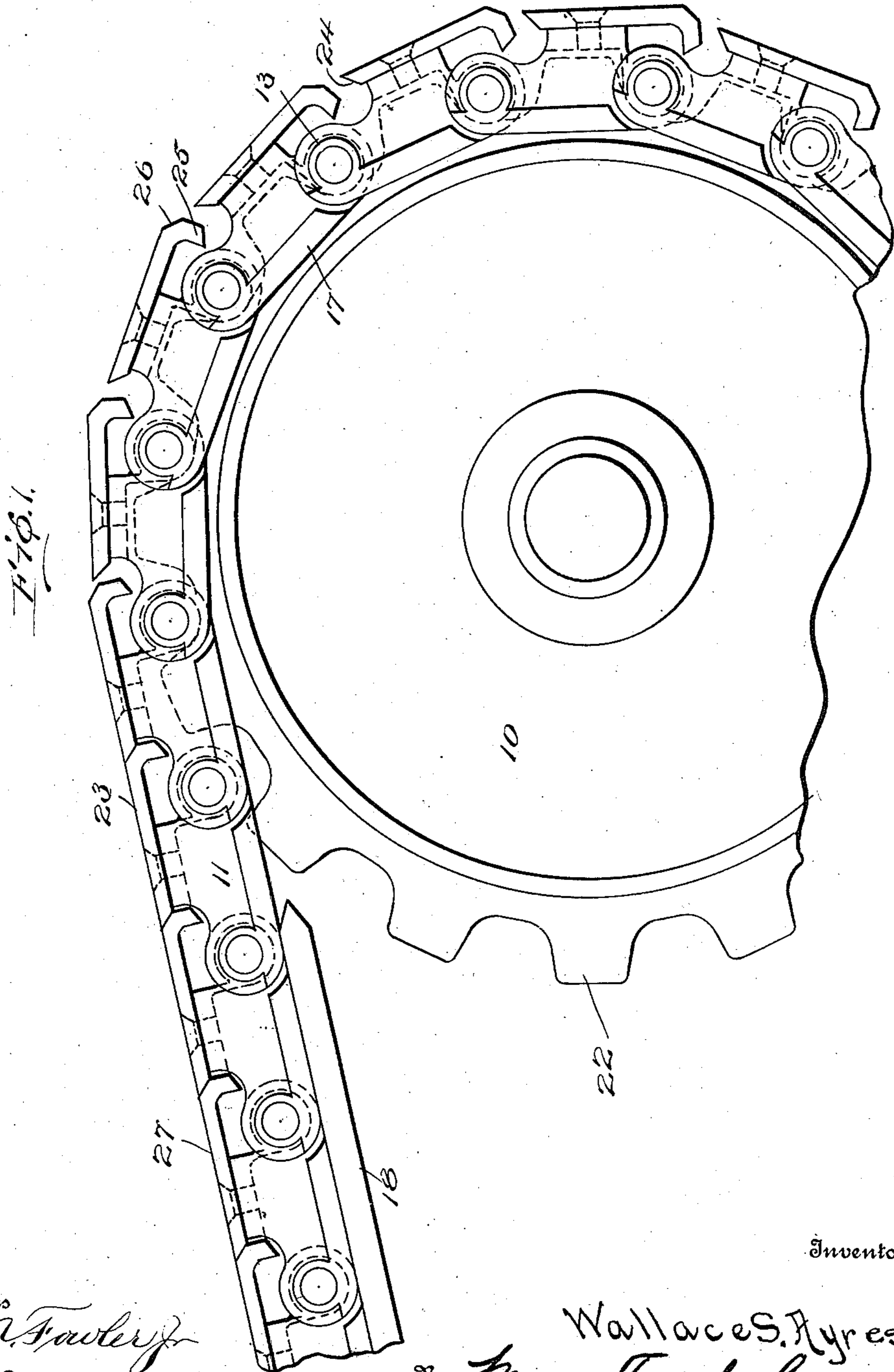
W. S. AYRES.  
CONVEYER.

APPLICATION FILED FEB. 24, 1909.

1,136,578.

Patented Apr. 20, 1915.

3 SHEETS—SHEET 1.



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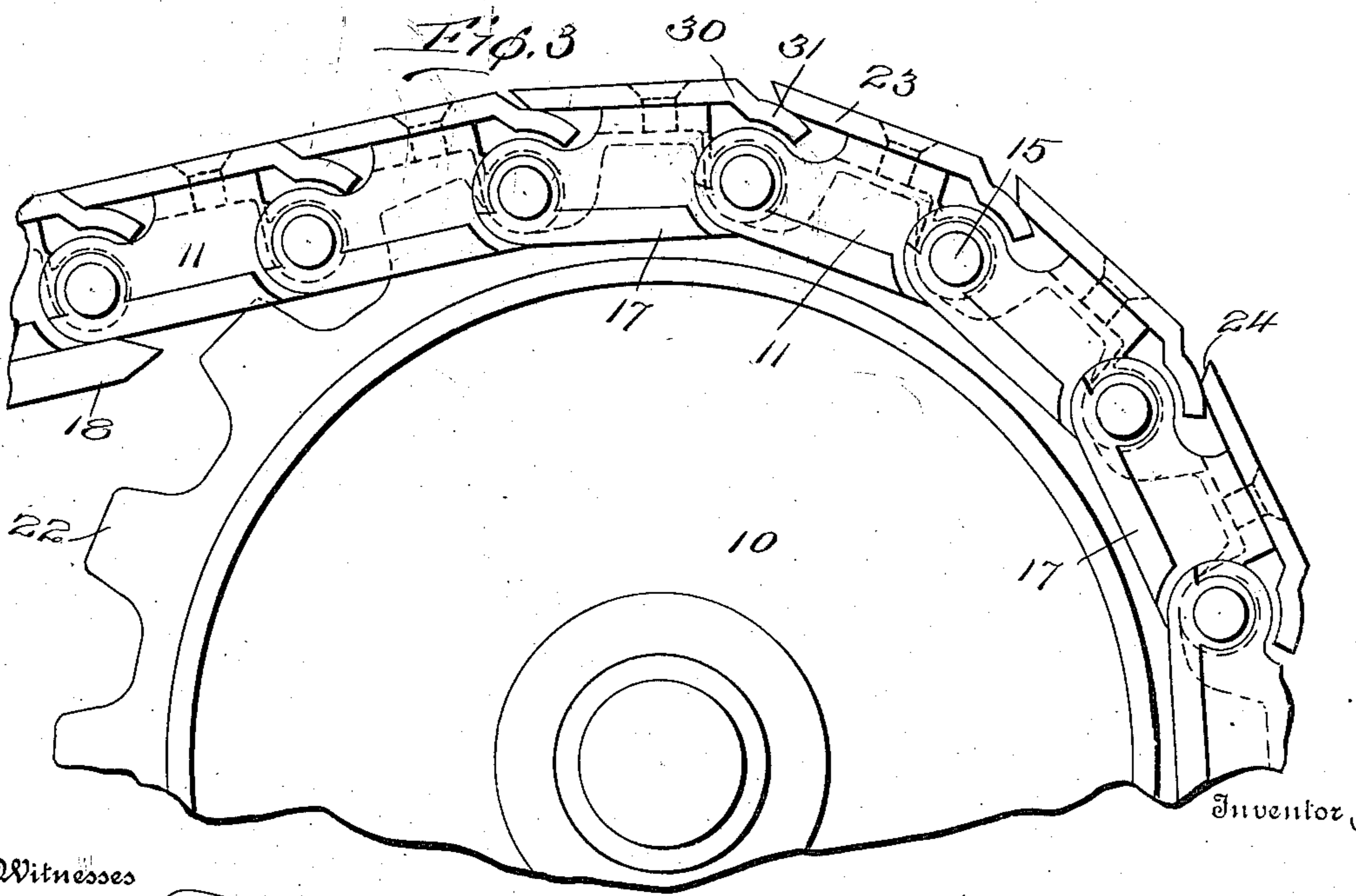
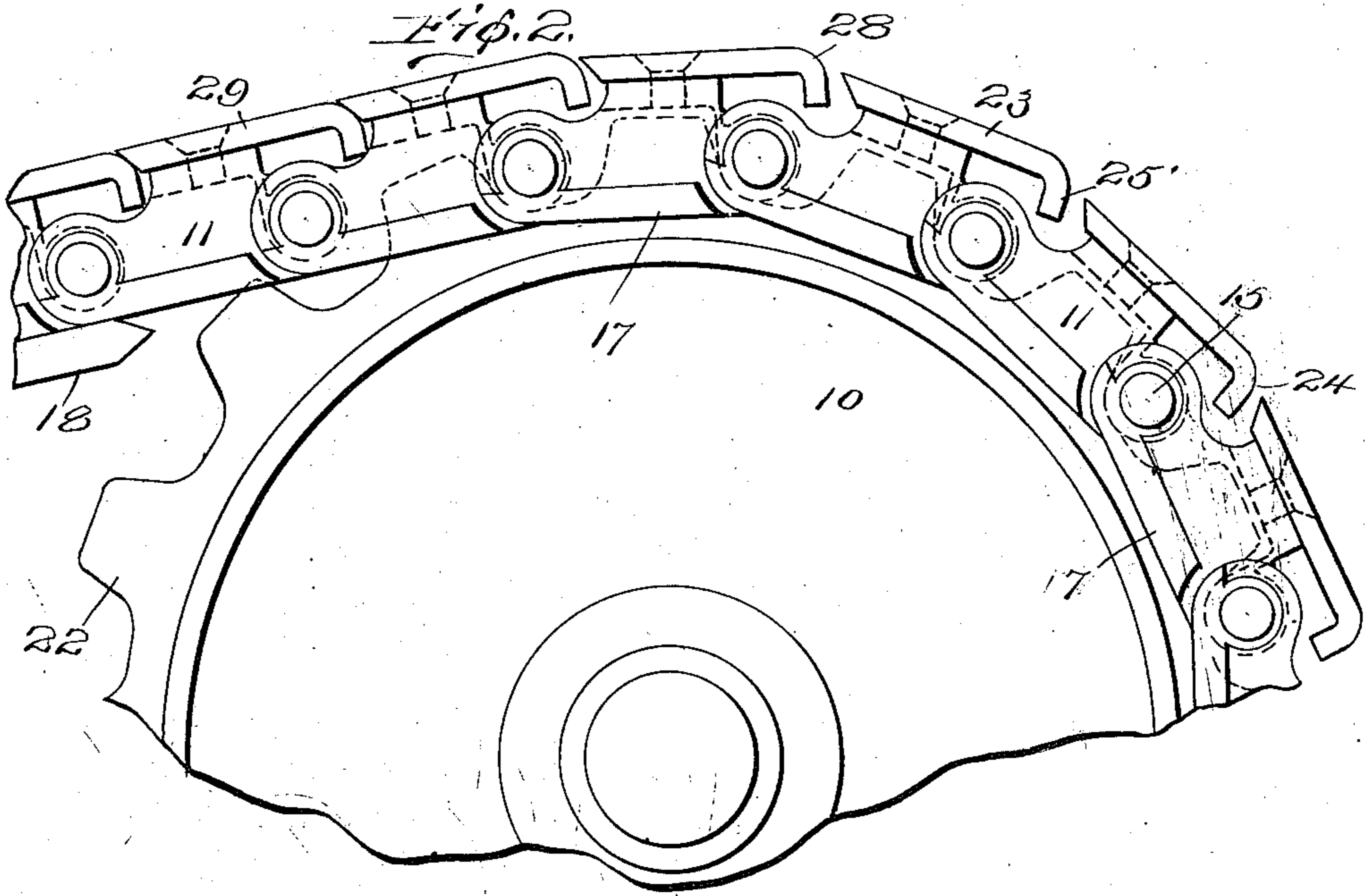
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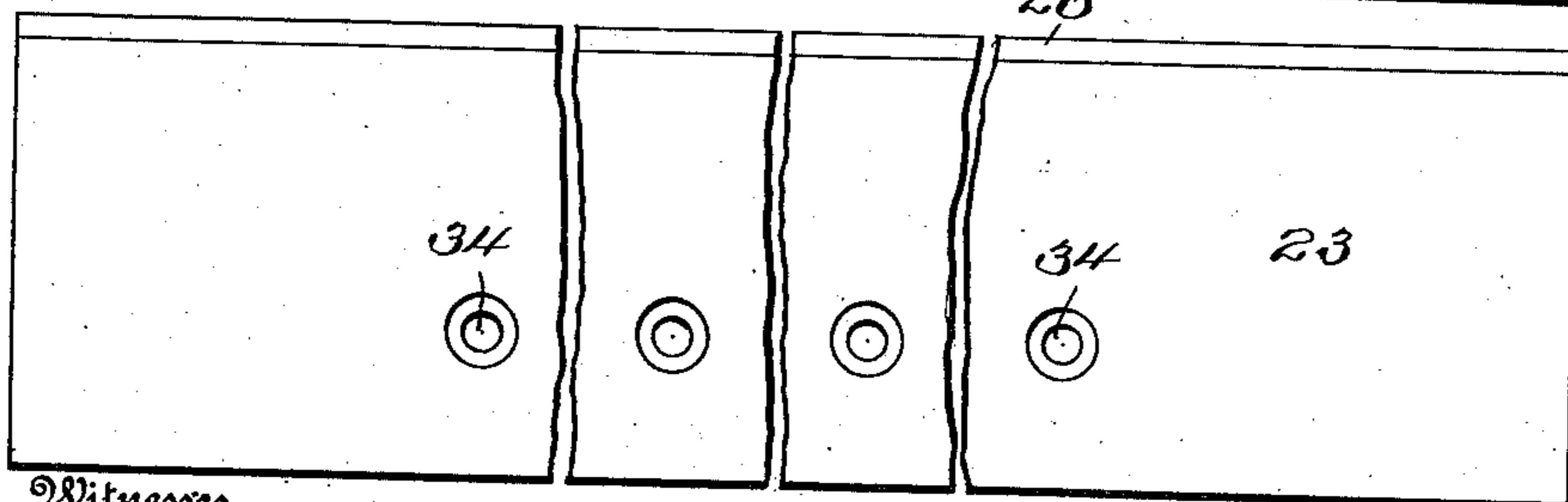
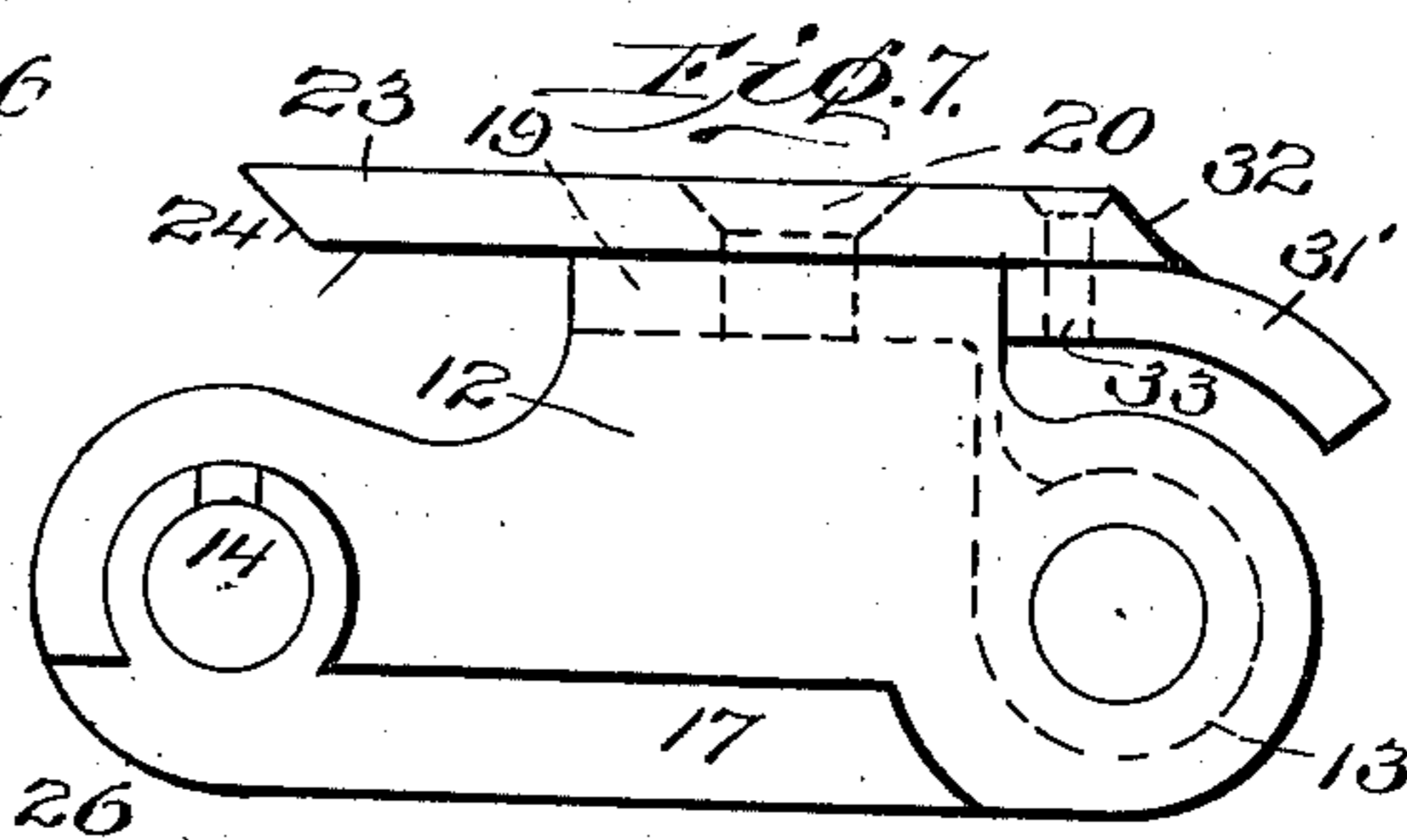
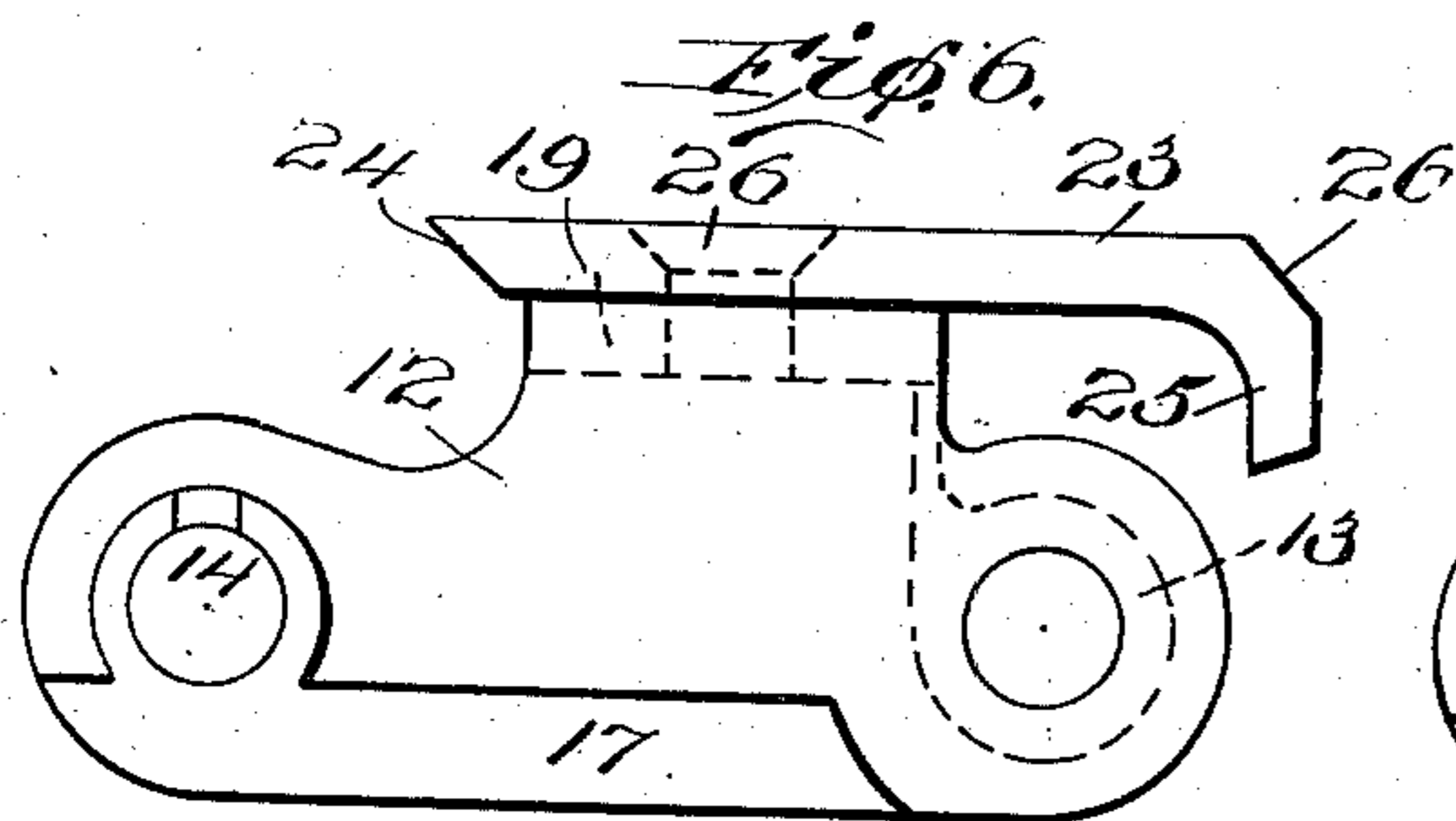
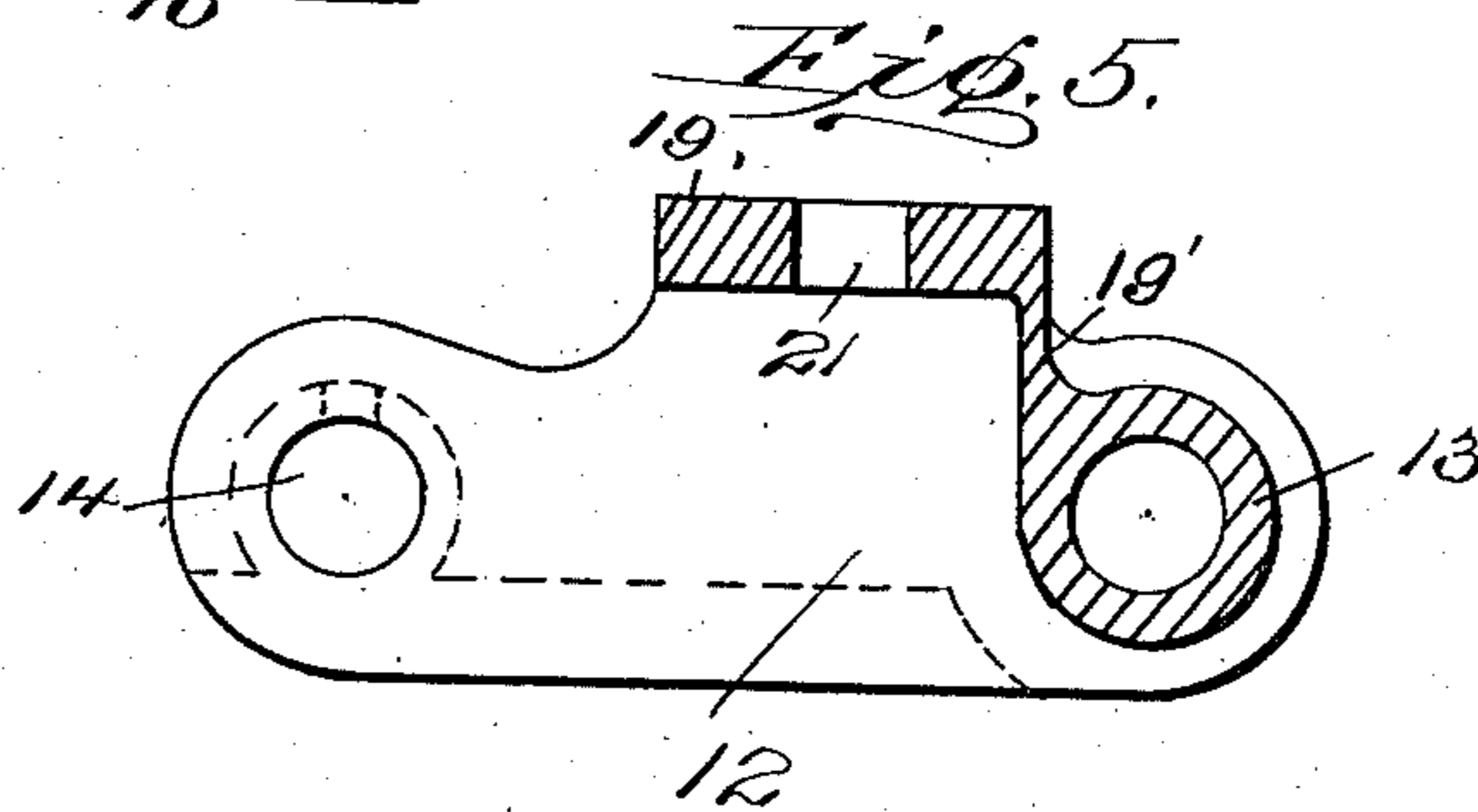
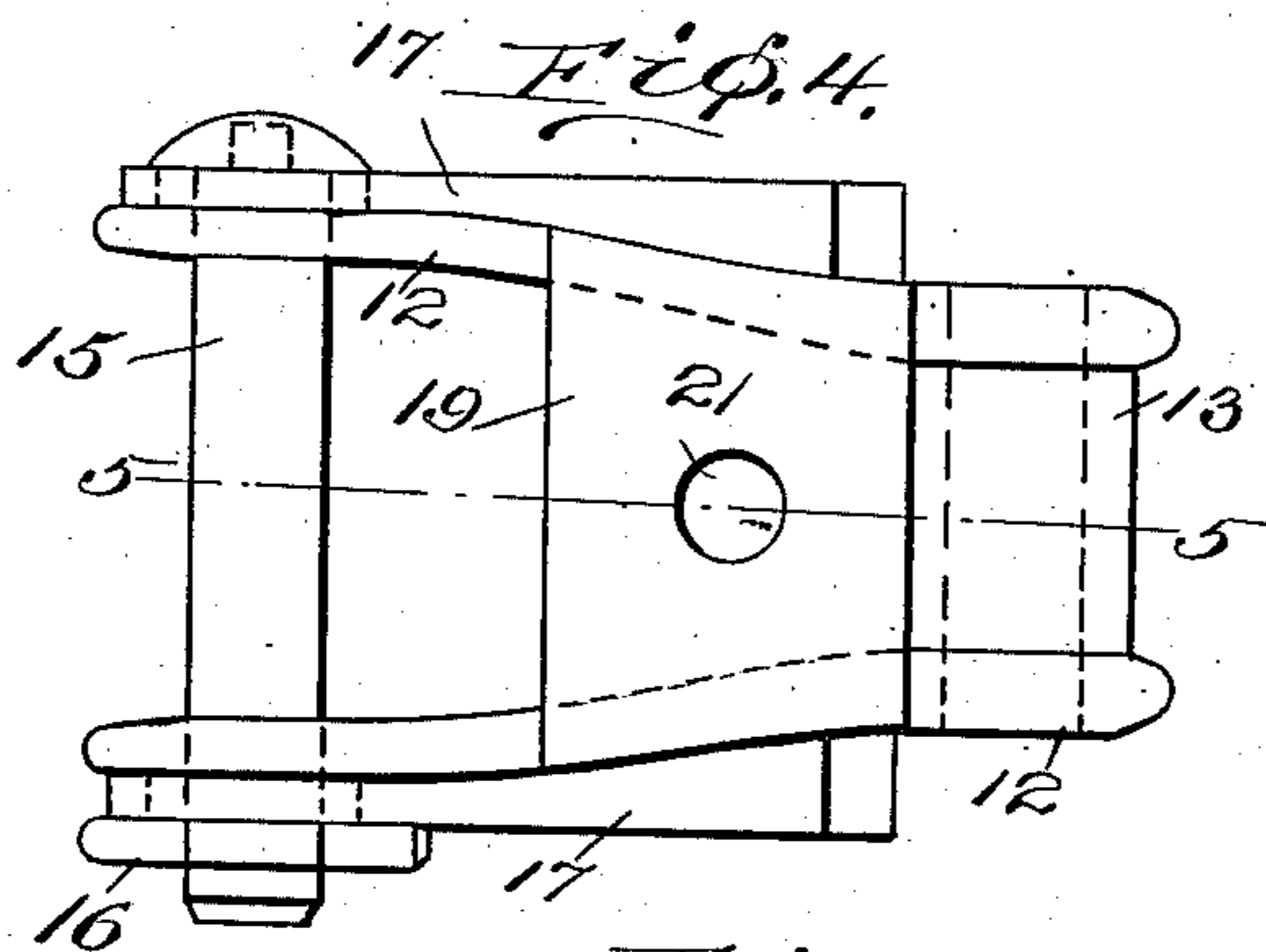
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3 SHEETS—SHEET 3.



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# UNITED STATES PATENT OFFICE.

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CONVEYER.

1,136,578.

Specification of Letters Patent.

Patented Apr. 20, 1915.

Application filed February 24, 1909. Serial No. 479,700.

*To all whom it may concern:*

Be it known that I, WALLACE S. AYRES, a citizen of the United States, residing at Hazleton, in the county of Luzerne and State of Pennsylvania, have invented certain new and useful Improvements in Conveyers; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to conveyers, and especially to conveyers adapted to serve as separating floors for separating coal from slate and other extraneous matter, although not limited to such use and has for an object to provide a sprocket chain of new and improved form.

A further object of the invention is to provide a conveyer with a sprocket chain of improved form and a slat or strip of improved form which when associated with other similar slats form a substantially plane floor.

With these and other objects in view, the invention comprises certain novel constructions, combinations and arrangements of parts, as will be hereinafter fully described and claimed.

In the drawings: Figure 1, is a view in side elevation of a conventional sprocket wheel with the improved sprocket chain shown associated therewith, and one embodiment of the strip employed as a traveling floor, Fig. 2, is a view similar to Fig. 1, showing a slightly different embodiment of the strip. Fig. 3, is a view similar to Figs. 1 and 2 showing still another slightly different embodiment of the strip. Fig. 4 is a view of one of the links of the sprocket chain in top plan. Fig. 5 is a longitudinal sectional view of one of the links as taken on line 5—5 Fig. 4. Fig. 6, is a view of one of the links showing in end elevation the strip as employed in Fig. 1. Fig. 7, is a view in end elevation of a link and strip, showing the strip built up. Fig. 8, is a broken top plan view of one of the strips.

Like characters of reference indicate similar parts throughout the several views.

The conveyer forming the subject matter of the present application is adapted, particularly for use as a traveling floor in the mechanism for separating coal and slate, such for instance, as the floor shown in Patent #798,385, granted to this applicant Au-

gust 29, 1905, although not limited to the use mentioned in such patent, but applicable to other uses requiring a substantially plane floor surface moving upon rollers or sprockets.

Shown conventionally in the drawings, are sprockets 10, adapted to carry the improved conveyer and with links shown as a whole at 11, adapted for coaction with such sprocket. The links 11, comprise side pieces 12, joined at one end by a sleeve 13, and provided at the opposite end with openings 14, proportioned to receive a rivet or pin 15 which also extends through the sleeve 13, and connects the several links in series.

The pin 15 is held in position by any approved means as cotter pin 16 shown at Fig. 4 and the side pieces 12 which converge toward the sleeve 13, are provided with ribs or extensions 17 forming bearing members adapted to slide upon surfacing bars as 18, and to resist consequent wear.

The link is provided at its upper side with a plate-like portion 19, upon which the strips forming the surface of the floor are secured in any approved manner as by rivets 20 through openings 21, in said plate-like portion 19. Sleeve 13 and plate portion 19 are connected by a web portion 19' which serves to stiffen the link and provide direct pull or draft between the pins and the strip, independent of the side members.

The relative position of the sleeves 13 the sides 12 and the plate-like portion 19, form in the underside of each link a recess, proportioned to receive one of the teeth as 22 of the sprocket 10, and to entirely cover such teeth to prevent dirt lodging thereon, and thereby insuring the proper operation of the device.

The strip secured to the link 11, comprises a substantially plane portion 23, having one longitudinal edge beveled as at 24, and the opposite edge formed to coact with such bevel to provide a substantially plane floor surface.

At Figs. 1 and 6, such coacting edge is shown as provided with a down turned flange 25. At the line of curvature between the strip proper and the flange 25, a beveled corner 26 is provided, adapted to interengage with the bevel 24 as shown in Fig. 1, to produce a plane floor surface as shown at 27. Instead of forming the bevel 26 exactly angular as shown at Figs. 1 and 6 the natural curvature as 28 shown at Fig. 2, may be



employed and such curvature will co-act with the bevel 24 with a considerable degree of accuracy to produce a floor surface as shown at 29, being substantially plane.

5 In some instances, it is found desirable to provide a strip of such structure that when the conveyer is passing about the sprocket no interval will be formed between the strips. To accomplish this purpose, the edge  
10 of the strip may be bent as at 30, producing an angular portion adapted to engage and co-act with the bevel edge 24 and a lip 31, struck upon such curvature that as the links pass about the sprocket 10, the lower sur-  
15 face of the strip will at all times be in engagement with the upper surface with such curved lip. Instead of forming such lip integral with the strip, the strip may be provided with a beveled edge 32, and the lip  
20 31' secured to the edge of such strip as by the rivet 33 producing substantially the same surface conformation as shown at Fig. 3, the latter embodiment being shown at Fig. 7.

25 A special function of the down-turned flange 25, Figs. 1 and 2, or of its modified form 31, shown in Fig. 3, is to stiffen the portion 23, so that no transverse bending of the latter can take place when the material  
30 to be transported is applied to its surface. By making the portion 23 comparatively thin and reinforcing it by forming the flange 25 or 31, greater efficiency is attained and the cost is reduced.

Whatever the formation of the strip, it is 35 provided with openings as 34, adapted to receive the rivets 20 and may be of any length and adapted to be secured to any approved number of sprocket chains here shown in Fig. 8, as adapted to be secured to 40 four sprocket chains, but it is understood that the number of sprocket chains may be increased or decreased any desired number at pleasure.

From the foregoing description of the 45 construction of the device it is believed that its operation will be apparent without a description of such operation.

I claim:

50 In a conveyer, a chain comprising a plurality of links, each composed of side members converging toward one end, means for connecting the side members comprising a tubular end member, a plate for supporting  
55 a conveyer strip, and a web portion connecting the tubular member and the plate, and bearing devices connected with the side members having one edge substantially co-incident with the lower edge of the side  
60 members, said devices being wider at the end adjacent to the converging portions.

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

WALLACE S. AYRES.

Witnesses:

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