

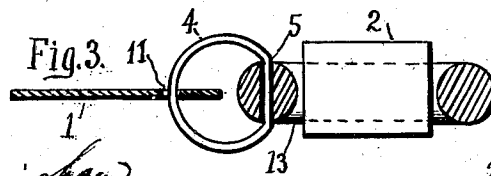
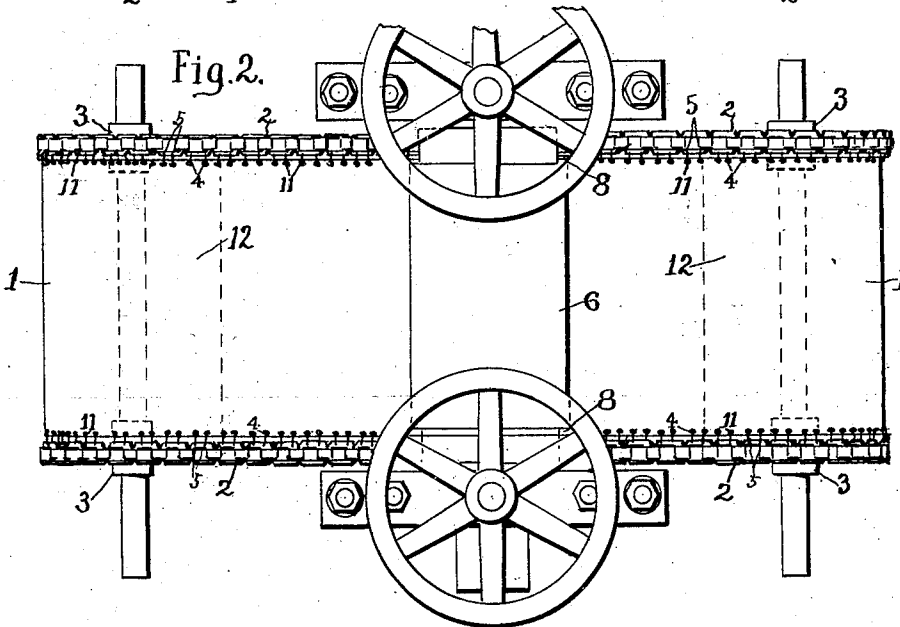
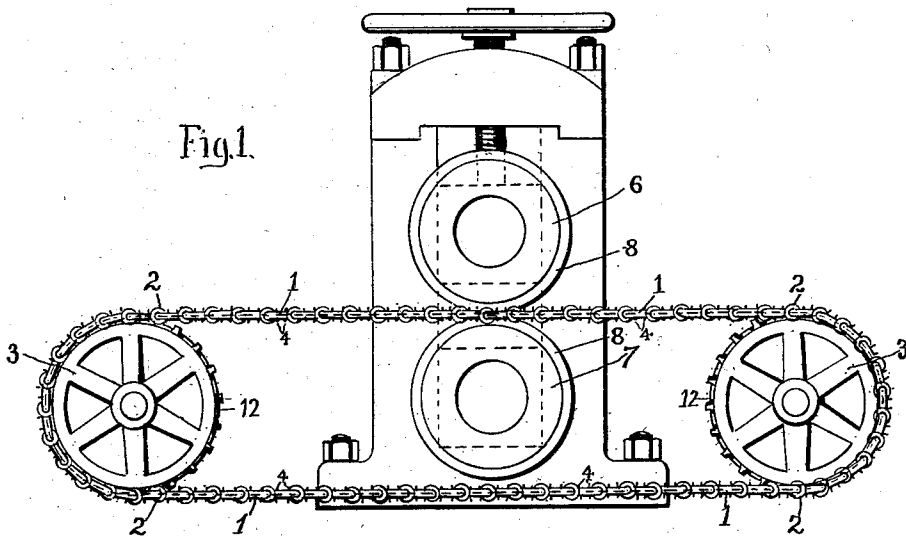
No. 840,446.

PATENTED JAN. 1, 1907.

P. H. ERTHEILER.
PROPELLING ENDLESS APRONS FOR CONVEYERS AND FOR FEEDING
MACHINERY.

APPLICATION FILED JULY 26, 1902.

2 SHEETS—SHEET 1.



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2 SHEETS—SHEET 2.

Fig.6.

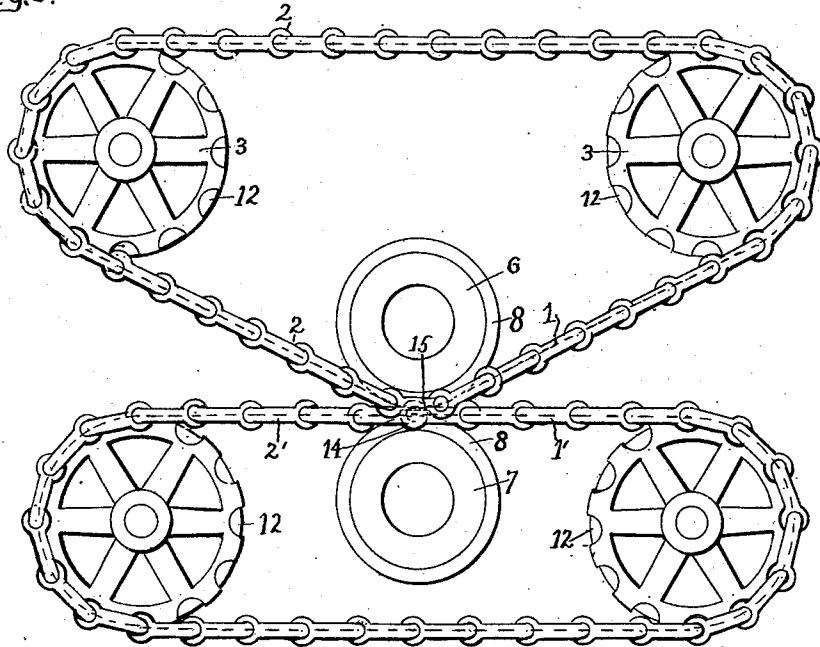


Fig.4.



Fig.7.



Fig.5.

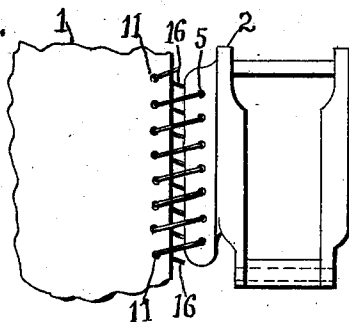


Fig.8.

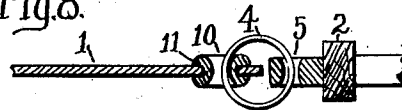
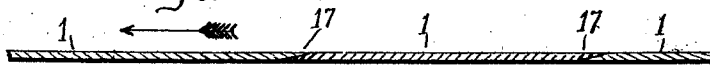


Fig.9.



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PROPELLING ENDLESS APRONS FOR CONVEYERS AND FOR FEEDING MACHINERY.

No. 840,446.

Specification of Letters Patent.

Patented Jan. 1, 1907.

Application filed July 26, 1902. Serial No. 117,088.

To all whom it may concern:

Be it known that I, PHILIP H. ERTHEILER, a citizen of the United States, residing at Philadelphia, Pennsylvania, have invented new and useful Improvements in Propelling Endless Aprons for Conveyers and for Feeding Machinery, of which the following is a specification.

The object of my invention is to provide an improved means of accurately moving and guiding endless aprons with an avoidance of tensile strain upon the material and is specially applicable to metallic aprons for conveying material to and delivering them from rolls.

The construction and operation of this invention are hereinafter fully described, and shown in the accompanying drawings, in which—

Figure 1 shows a side elevation of an apron and a driving-gearing as applied to feeding a pair of rolls. Fig. 2 shows a plan or top view thereof; Fig. 3, an enlarged transverse section of a chain and a detached portion of an endless apron. Fig. 4 shows in like section a modified form thereof. Fig. 5 is a top view of the form shown in Fig. 4. Fig. 6 shows the invention in side view as applied with two aprons to a pair of rolls for passing material between the aprons through the rolls. Fig. 7 shows a modified form of chain-link for use with such apron. Fig. 8 shows a mode of reinforcing the aprons at the point of attachment to the chains. Fig. 9 shows a modified form of apron.

Referring to Figs. 1, 2, and 3 of the drawings, 1 represents an endless apron. (Shown in dotted lines in Fig. 1.) 2 represents endless chains of the variety commercially known as a "link belt." 3 represents sprocket-wheels of the same pitch as the chains 2, arranged to propel the chains 2. In the edges of the apron 1 are apertures 11, through which wire links 4 are passed, connecting the apron to the links 13 of the chain 2, which are made with perforations 5, through which the links 4 are passed. 6 and 7 are a pair of rolls between which the apron 1 passes. The rolls have grooves or passes 8 turned in them, through which the links of the chain 2 and the links 4 pass. The adjustment of length and tensions of the apron and chains is made such that the chains 2 sustain all tensile strain in the direction of the motion of the

apron 1 and support and carry the apron throughout its entire length by the links 4. The aprons 1 pass around rollers 12 (shown in dotted lines in Fig. 2) without strain.

In the form shown in the Figs. 4 and 5 the links of the chains 2 are made broad and thin, and the links 4 are in the form of a helical wire lacing 16, passing through the perforations 11 in the apron and the perforations 5 in the chain-links 13.

In Fig. 6 two aprons 1 and 1' are shown (in dotted lines) passing between a pair of rolls 6 and 5, so as to press articles between the aprons without contact with the roll, in which arrangement the sprocket-wheels 3 and chains 2 are so adjusted that the hinges 14 of one chain 2 pass into the openings 15 of the link of the other chain 2'.

Fig. 7 shows a modified form of links 13, in which hooks 9 are formed on the link 13, which engage in the apertures 11 in the edge of the apron 1.

Fig. 8 shows an apron 1 having apertures 11 reinforced by eyelets 10.

By reason of relieving the apron of tensile stress I am enabled to construct and operate endless aprons of metal without the necessity of brazing them, and thereby impairing their temper or elasticity, and, in fact, can use sectional aprons with overlapping joints, as shown at 17 in Fig. 9.

Having described my invention, what I claim is—

1. In an endless carrier two aprons and endless chains flexibly attached to the edges of said aprons, said chains being arranged to have the hinges of each chain enter the opening of the links in the opposite chain as and for the purpose set forth.

2. In an endless carrier a pair of rollers, two aprons and endless chains flexibly attached to the edges of said aprons in combination with sprocket-wheels of equal pitch-diameters with the said rollers to which the aprons are applied and so arranged and adjusted that the pivotal connections between the links of said chains clear each other in passing around said sprocket-wheels as and for the purpose set forth.

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