

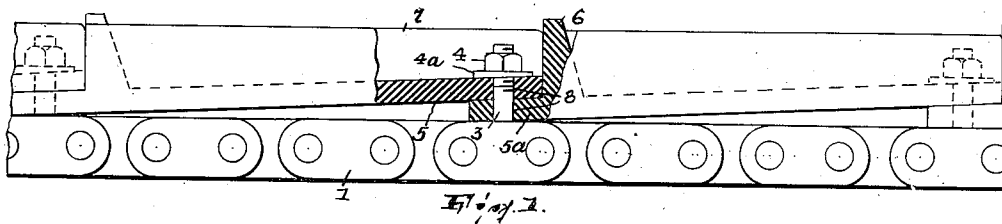
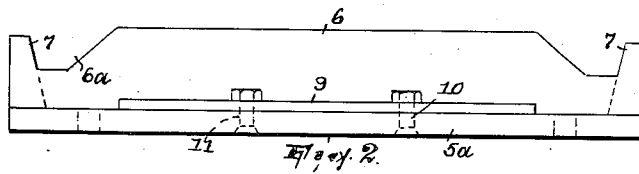
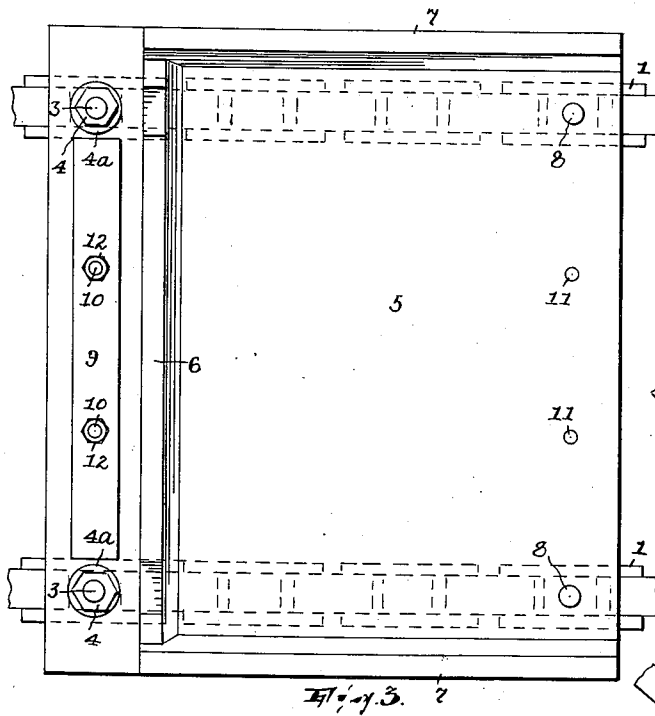
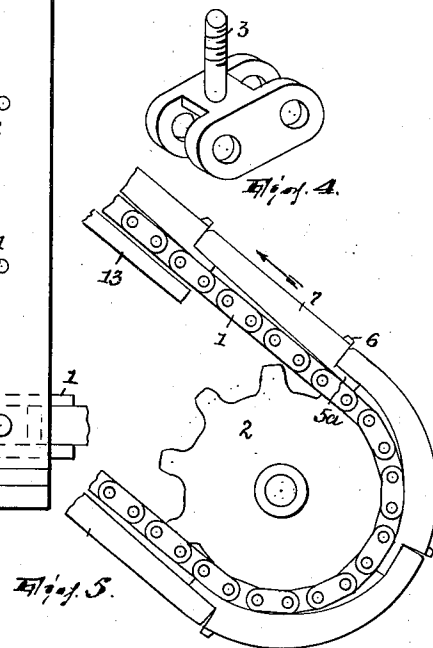
May 18, 1937.

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2,080,828

CONVEYER

Filed May 1, 1935



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2,080,828

CONVEYER

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Application May 1, 1935, Serial No. 19,181

4 Claims. (Cl. 198—196)

In conveying material in the form of hard irregular objects such as railway ballast it has heretofore been proposed to provide a so-called pan-support and a pair of endless parallel chains which travel over the pan-support and have metal flights which act to scrape or shove the material over the surface of the pan-support—see McWilliams Patent No. 1,747,154. Since the chains travel around sprocket wheels the flights were necessarily spaced bars having upstanding overlapping side flanges and formed narrow to permit the flexing of the conveyer around sprocket wheels, and to support the material against falling between the flights the pan-support was an essential element in the conveying operation. When used for the purpose indicated a conveyer of this type is found frequently to be in need of repairs because the hard stones of the ballast are constantly and directly active destructively on the apparatus, for instance by interfering with the articulation of the flights and jamming between them and the pan-support.

I have provided a conveyer useful for the purpose indicated which does not depend on the presence of a pan-support for the actual conveyance of the material and whose construction is such, as indicated by considerable practice, as to be far less susceptible to the destructive influence of the material than conveyers of the kind first indicated, and this is the subject of the invention herein set forth.

In the drawing,

Fig. 1 is a fragmentary side elevation of the improved conveyer, partly in section;

Fig. 2 is a rear elevation of a bucket thereof;

Fig. 3 is a plan of one of the buckets;

Fig. 4 is a perspective view of a link of one of the chains; and

Fig. 5 is a fragmentary side elevation of the conveyer and one of the means around which it travels.

Let 1 designate the links of two endless parallel chains to be supported by any suitable means, as sprocket wheels indicated by the character 2. These chains are provided at suitable intervals with securing means, as threaded studs 3 upstanding from links of each chain and equipped with nuts 4 and washers 4a and serving to clamp to the supporting means formed by the chains the buckets of my conveyer.

Each bucket is made of flexible elastic plastic material, preferably rubber. It includes a bottom 5, substantially rectangular in plan, a back wall or load-advancing abutment 6 and two paced longitudinal side walls 7, said walls upstanding

from the bottom and being formed integral therewith or in any event associated therewith so as to afford no appreciable spaces between said walls and bottom. The abutment or back wall is set forward of the rear margin of the bottom so as to leave the latter projecting as a basal flange 5a. Preferably the inner surfaces of the abutment and side walls are sloped inwardly and downwardly to reinforce them. The side walls have straight upper edges but since the plane of the bottom wall is inclined and it and said edges converge, the latter are graduated in height, being lower at their forward than at their rear ends to an extent equal to the thickness of the flange 5a. The mid-portion of the abutment is somewhat higher than the rear ends of the side walls, and it has its ends depressed: Fig. 1. All the buckets are counterparts, as to dimensions, of each other.

The buckets are assembled as shown so that the forward portion of the bottom of each rests on the flange 5a of the next forward bucket. Their flanges and forward portions have holes 8 and these receive the studs 3, whereupon the nuts 4 and washers 4a may be applied to clamp the buckets together. Of course my invention is not particularly concerned with how the buckets are secured to the flexible supporting means therefor here formed by the chains. Preferably a metal strip 9 is seated on each flange, extending lengthwise thereof, and this and the lapping portions are clamped together by bolts 10 passed through holes 11 and having nuts 12.

Since the buckets are lapped the number of securing points in the series is reduced and the double thickness of material of the buckets at such points gives greater durability. When a bucket passes around the sprocket wheels it undergoes extension or stretching as well as flexion, but the stretching will be less pronounced by virtue of this lapping and the incidental spacing which, as shown in Fig. 1, exists between the buckets and the chains in the straight condition of the conveyer. In the example the flange 5a and the abutment 6 are at the rear of each bucket, rather than at the front portion thereof, but without limiting myself to either of these arrangements I note that the former is preferable because, if the tops of the side walls are to be parallel with the chains, the deepest part of each bucket will be desirably at the rear.

The ends of each abutment are depressed adjacent the side walls so that the bucket will undergo bending around the sprocket wheels without undue distortion thereof, said depressions also

affording clearance to parts of the machine with respect to which the conveyer moves.

Having thus fully described my invention what I claim is:

5 1. The hereindescribed conveyer comprising endless flexible supporting means and unitary buckets of flexible material arranged in a series extending around the outer perimeter of said means and each having an outwardload-advancing abutment and each two adjoining buckets 10 having their adjoining portions in lapped relation to each other and secured together and to said means.

2. The hereindescribed conveyer comprising 15 endless flexible supporting means and unitary buckets of flexible material arranged in a series extending around the outer perimeter of said means and each having an outward load-advancing abutment and the adjoining portions of each 20 two adjoining buckets being secured together and to said means, the said portion of the relatively forward one being a flange overlapped by said portion of the relatively rear one of each such two adjoining buckets.

3. The hereindescribed conveyer comprising endless flexible supporting means and unitary buckets of flexible material arranged in a series extending around the outer perimeter of said means and each including a bottom wall and an outward load-advancing abutment projecting therefrom, the forward end of each such wall overlapping the rear end of the next forward wall and each two such ends in lapped relation being secured together and to said means. 5 10

4. The hereindescribed conveyer comprising endless flexible supporting means and buckets of flexible material arranged in a series extending around and secured together and to said means and each including a bottom wall inclined rearwardly and underlapping at its rearward portion the forward portion of the next rearward wall and each bucket also including a load-advancing abutment and side walls all upstanding from the bottom wall and the relatively outer edges 20 of the side walls of each bucket being substantially parallel with said supporting means.

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