No. 744,979. PATENTED NOV. 24, 1903.

A. RASMUSSEN.

CONVEYER BELT AND FASTENER THEREFOR.

APPLICATION FILED MAR. 21, 1903.

NO MODEL.

Fig 1

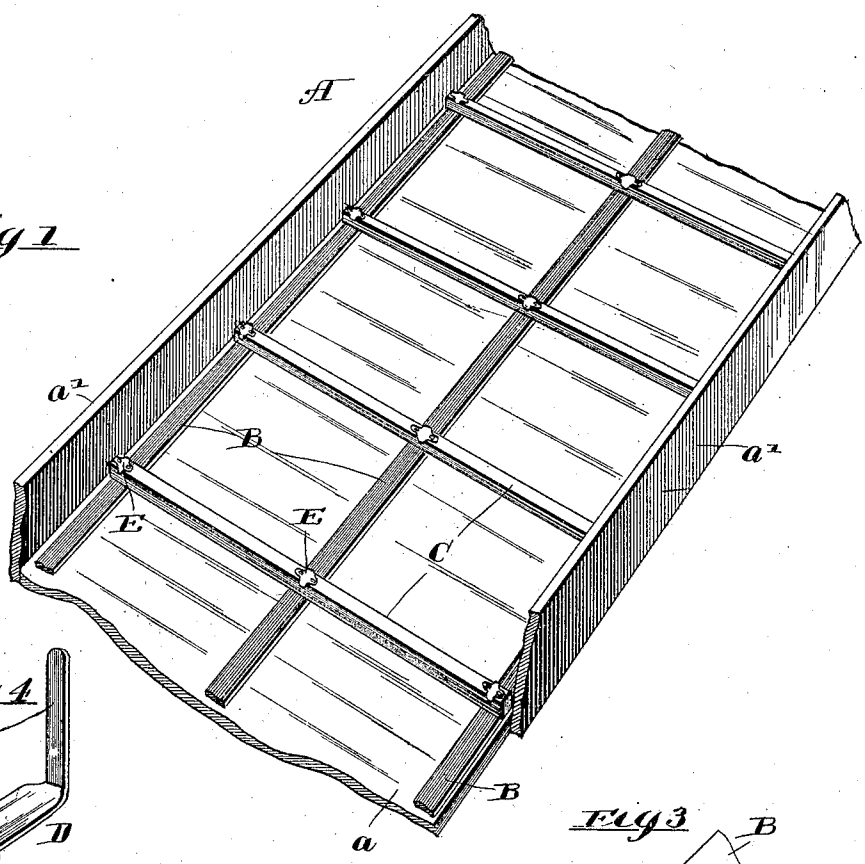


Fig 4

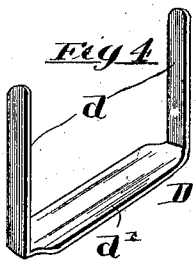


Fig 3

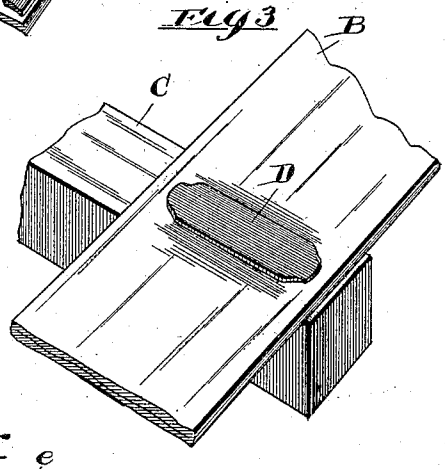


Fig 2

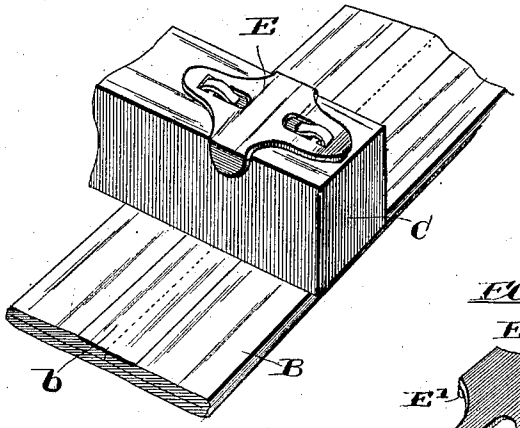
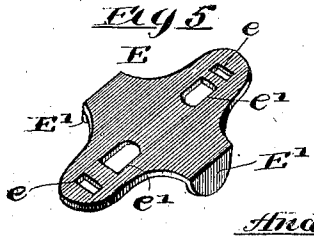


Fig 5



Witnesses:

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THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

No. 744,979. Patented November 24, 1903.

UNITED STATES PATENT OFFICE.

ANDREW RASMUSSEN, OF RACINE, WISCONSIN, ASSIGNOR OF ONE-HALF TO H. F. HERRICK, OF RACINE, WISCONSIN.

CONVEYER-BELT AND FASTENER THEREFOR.

SPECIFICATION forming part of Letters Patent No. 744,979, dated November 24, 1903.

Application filed March 21, 1903. Serial No. 148,887. (No model.)

To all whom it may concern:

Be it known that I, ANDREW RASMUSSEN, of Racine, in the county of Racine and State of Wisconsin, have invented certain new and useful Improvements in Conveyer-Belts and Fasteners Therefor; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form a part of this specification.

This invention relates to improvements in conveyer-belts adapted for use in a straw-carrier for threshing-machines and other analogous uses; and the invention consists in the matters hereinafter set forth, and more particularly pointed out in the appended claims.

As shown in the drawings, Figure 1 is a perspective view of a fragment of a conveyer provided with a conveyer-belt made in accordance with my invention. Fig. 2 is an enlarged perspective view of the joint or connection between one of the conveyer bands and slats. Fig. 3 is a bottom perspective view of said parts. Fig. 4 is a perspective view of a staple which constitutes part of the means for fastening the slats to the bands. Fig. 5 is a top perspective view of a plate over which the ends of the fastening-staples are clenched.

As shown in the drawings, A designates as a whole a fragment of an upwardly-inclined trough or bed on which the conveyer-belt travels and is provided with a flat bottom wall *a* and narrow side walls *a'*.

The conveyer-belt herein shown comprises a plurality of parallel bands B B and a plurality of parallel transverse slats C, which are attached to said bands. Said bands in the complete structure are made endless and are trained about suitable driving-pulleys (not shown) at the upper and lower ends of the way or trough A. As herein shown, three bands B are employed, one located adjacent to each side of the trough or bed and the other near the longitudinal center thereof. The parallel transverse slats C extend across the bands B and are secured at their ends to the side bands and at their centers to the intermediate band, the slats constituting the means for carrying upwardly in the trough or bed A the straw or other material to be conveyed therethrough. Said slats are attached to the bands by the following device:

D D designate staples which are made of flat strips of sheet metal, as herein shown, each provided with parallel arms *d d*, connected by a transverse part *d'*, made somewhat wider than the arms. The arms of said staples extend through the bands and through the slats for uniting the bands to the slats, the free ends of said staple-arms extending a distance beyond the slats. Said staples are arranged with their transverse parts parallel with the slats, and therefore transversely with respect to the belt.

E E designate clench-plates, which overlie the slats and are provided near their ends with openings *e*, through which extend the extremities of the staple-arms. Said extremities of the staple-arms of each staple are folded inwardly toward each other or clenched over the associated plate, to thereby securely fasten the slats to the bands. Preferably the plate of each fastening device is provided inside the openings *e* with another opening or openings, *e'*, into which the extreme ends of the staples are turned or folded when clenched upon the plate, thereby bringing said extremities below the level of the plate and preventing straws or other material being conveyed being caught between said arms and the plate. As herein shown, two openings *e'* are provided; but it is obvious that the same results will be secured if a continuous slot be formed in said plate to accommodate the ends of said staples. Each of said plates E is provided on its side margins with downwardly-turned ears or lugs E' E', which fit closely upon the side margins of the slats and act to hold said plates parallel with the slats. Moreover, in the form of belt herein shown, which is made up of a plurality of parallel endless bands and a plurality of parallel transverse attached slats, the provision of said ears E' acts to give additional strength to the connection between the slats and bands to prevent torsional strain brought on the belt from loosening the connection between the slats and bands.

An advantage arising from the construction

herein shown, wherein the staples are arranged with their connecting transverse parts *d'* transversely of the bands B, is that said staples serve to prevent longitudinal splitting of the bands between the margins thereof, or, in the event a band should split, prevents the parts of the band at the sides of the split from spreading outwardly in a manner to detach the band from the fastening-staple. In the particular construction of the bands shown each band is made up of a single wide strip of material, which is folded longitudinally thereof to bring the side margins together at the longitudinal center of the band, and said margins are fastened together by means of an overlying strip *b*, which is secured to the band by an adhesive material or in any other suitable manner. In the practical use of belts made up of bands, as illustrated, the arrangement of the staples acts to prevent separation of the margins of the folded band in case the fastening strip *d* should become partially or wholly detached. In practice the transverse connecting parts of the staples are made thin and when attached to the bands are depressed or sunken into the lower surface of the bands, so as to present little or no projection of the staple below the bands B.

I claim as my invention—

1. A device for fastening a slat to a conveyer band or belt, comprising a staple adapted to extend through said band and slat, and having a wide central or connecting part which engages the belt, a plate adapted to fit upon the outer face of the slat over which the free ends of the staple are designed to be folded, and lugs bent downwardly from the opposing margins of the plate and adapted to fit upon the side faces of said slat.

2. A device for fastening a slat to a conveyer band or belt, comprising a staple adapted to extend through said band and slat, and a plate adapted to fit upon the outer face of the slat, and provided with openings through which the ends of the staple-arms are adapted to extend in a manner to fold toward each other, and ears or lugs bent downwardly from the opposing side margins of said plate and adapted to fit upon the side faces of said slat.

3. A device for fastening a slat to a conveyer belt or band, comprising a staple adapted to extend through the band and slat, and a plate adapted to fit upon the outer face of said slat and provided with openings through which the ends of the staple-arms extend, said plate being provided with notches or openings adapted to receive the extremities of said arms when the latter are clenched or folded over the plate, and lugs or ears bent downwardly from the opposing margins of said plate and adapted to fit upon the side faces of said slat to hold the plate parallel with said slat.

4. A device for fastening a slat to a conveyer band or belt, comprising a staple made of flat metal, the ends of which are turned upwardly to form staple-arms, and the connecting or central part being made wider than said ends, said staple extending through the band and slat with the wide connecting part thereof disposed transversely to and in contact with said band and a plate fitting over the outer face of the slat over which the free ends of the staple-arms are adapted to be folded, said plate being provided with openings which receive the extremities of the staple-arms when they are clenched or folded on said plate.

In testimony that I claim the foregoing as my invention I affix my signature, in presence of two witnesses, this 16th day of August, A. D. 1902.

ANDREW RASMUSSEN.

Witnesses:

CHRIST P. MOCKEN,

PETER NELSON.