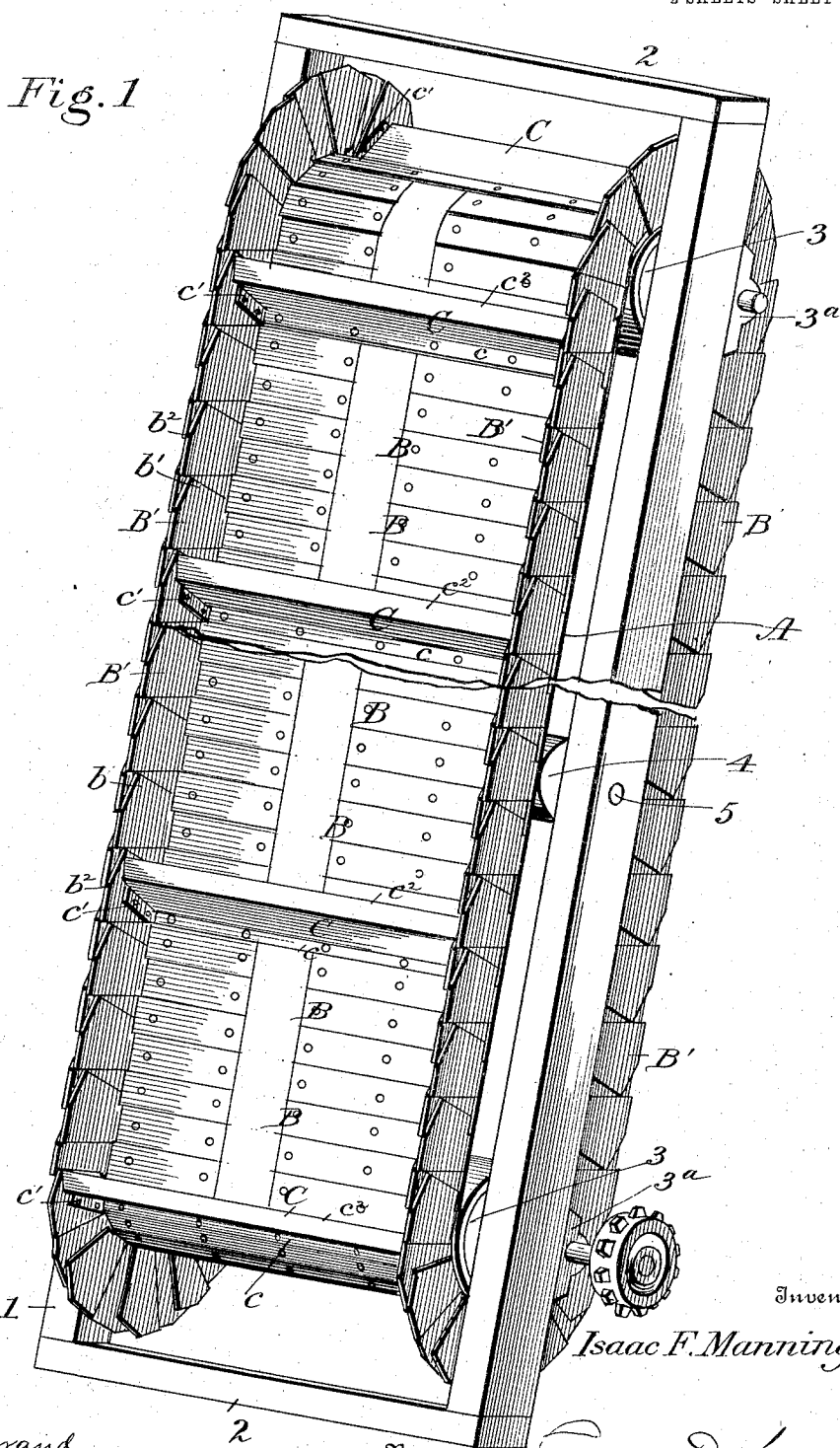


No. 878,650.

PATENTED FEB. 11, 1908.

I. F. MANNING.
ENDLESS CONVEYER BELT.
APPLICATION FILED MAY 27, 1907.

2 SHEETS—SHEET 1.



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2 SHEETS—SHEET 2.

Fig. 2.

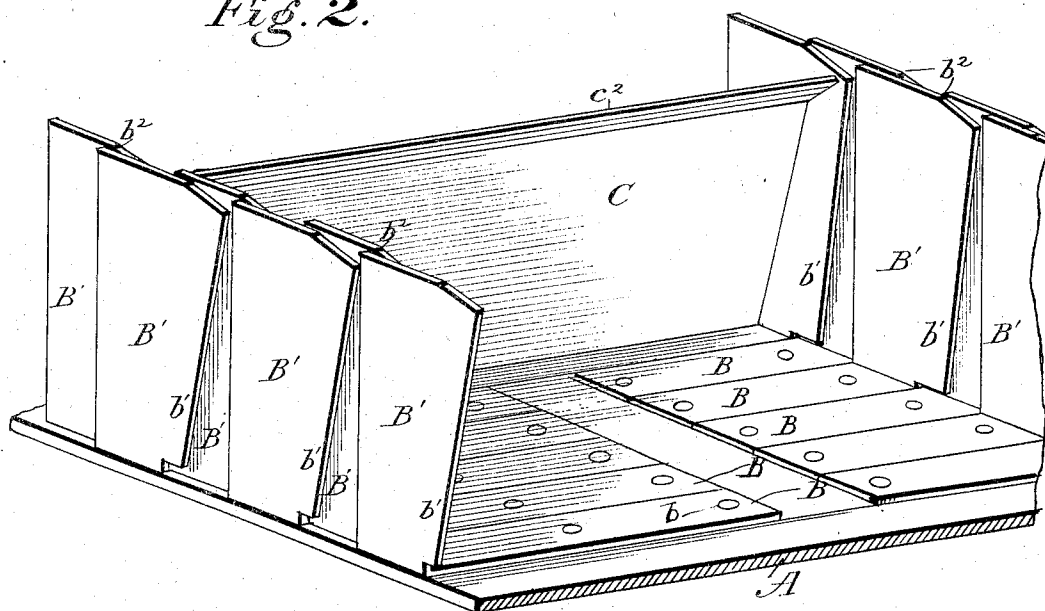
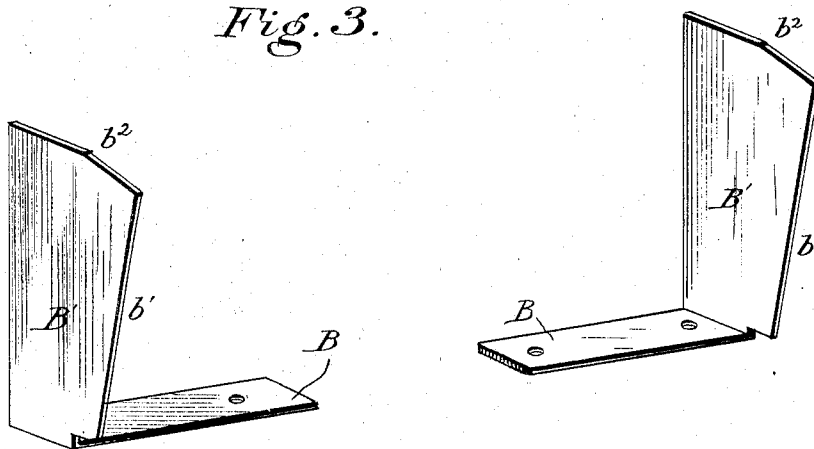


Fig. 3.



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ISAAC F. MANNING, OF OTTAWA, ILLINOIS.

ENDLESS CONVEYER-BELT.

No. 878,650.

Specification of Letters Patent.

Patented Feb. 11, 1908.

Application filed May 27, 1907. Serial No. 376,007.

To all whom it may concern:

Be it known that ISAAC F. MANNING, citizen of the United States, residing at Ottawa, in the county of Lasalle and State of Illinois, has invented certain new and useful Improvements in Endless Conveyer - Belts, of which the following is a specification.

This invention relates to improvements in that class of endless conveyer belts, having side flanges or guards which prevent material being handled escaping at the sides of the belt.

The object of this invention is to produce such a belt, available for use either to carry or elevate ear or shelled corn and other farm produce, or for conveying or elevating coal, sand, gravel, or other hard substances which would tend to rapidly cut and destroy a belt of fabric or leather.

In the accompanying drawings Figure 1 is a perspective view of a known form of elevator frame for corn shellers, my improved belt being shown in position thereon. Fig. 2 is a perspective view of a section of my improved belt on a large scale. Fig. 3 is a detail perspective of one of the belt shoes.

Heretofore it has been usual to employ in the construction of elevators and conveyers for corn-shellers and the like, sprocket chains provided at intervals with flights, said conveyers being mounted to travel over the trough-like platform of the conveyer or elevator frame, and being actuated by sprockets on rollers or drums journaled in the elevator frame at opposite ends of the platform. One objection to this type of elevator has been that the friction of the chains and load on the platform has required excessive power for operating the elevator, and also it has been found that the material constituting the load to be elevated was liable to clog the sprocket chains or become lodged between them and the sprockets, thus occasioning delay if not damage.

In carrying out my invention I prefer to employ a belt of flexible webbing or belting, obtainable in desired sizes in the market, because of the ease with which it travels about its supporting rolls or drums and its great strength as compared to its weight, but I do not confine myself to the use of said material.

Referring to the drawings the belt proper A comprising an endless band of belting is provided upon one side with a plating consisting of narrow shoes B of sheet metal

secured transversely to the belting by belt bolts or rivets *b* the ends of the shoes being bent outward at right angles to form guard sections B' at either end of each shoe, and the shoes being arranged with their edges closely adjacent or practically abutting so that the entire surface of the belt is protected by a sectional metal plating, the bent ends of the shoes constituting a continuous sectional guard or flange at each edge of the belt. The several guard sections are extended at one edge *b'* to overlap the next adjacent section, and are of sufficiently greater width at the outer end than adjacent to the belt to insure the continuity of the guard or flange at its outer edge when passing around the rolls on which it may be mounted. The outer edges of the guard sections are beveled or sloped from a point *b''* to insure an absence of projecting points as the belt traverses a roll, as shown in Fig. 3, and at the upper and lower ends of Fig. 1 the degree of slope or bevel being of course determined by the diameter of the rolls on which the belt is to be mounted, as will be readily understood.

The belt is provided at suitable intervals with flights C consisting of metal plates bent at one longitudinal and both end edges to form flanges *c c' c'* which are riveted respectively to the body of the shoe B and to the guard sections B' at the ends thereof, as shown. The main body of these flights is preferably not at right angles to the belt and its supporting shoe, but inclined slightly in the direction of the travel of the belt, and the outer edge C² of each flight is bent or stamped to incline still farther forward in the direction of travel of the belt, preferably terminating at the forward edges *b'* of the extensions of the guard sections, as shown, thus affording at intervals throughout the length of the belt recesses or pockets which will carry fine material even though the opposite laps of the belt be traveling in vertical planes.

Conveyer or elevator frames or machines designed for use with a conveyer composed of chains and flights may be adapted for use with my improved belt by substituting elongated pulleys or rolls for the sprocket wheels and shafts, and substituting supporting or bearing rolls for the platform over which the chain conveyer travels. In constructing a frame for my improved belt, however, the broad side pieces of the carrier frame are unnecessary as the side guards

or the flanges of the belt fulfil their function of preventing material from dropping from the sides of the belt.

As shown in Fig. 1, a frame well adapted to my belt may consist of stout side pieces 1 and end pieces 2, the journals of the rolls 3 on which the belt travels being mounted in bearings 3^a secured to the under sides of the side pieces. The small supporting or bearing rolls 4 are journaled at suitable distances apart in bearings 5, carried by said side pieces, the rectangular frame thus described having any transverse or diagonal braces found necessary to give it the strength and rigidity required for the work to be performed.

The belt may be actuated by extending the journal of one of the pulleys 3 and mounting thereon a band-pulley crank or sprocket wheel that it may be driven from

any suitable source of power and I contemplate also mounting a fly-wheel upon one of said shafts or journals to steady the travel of the belt.

What I claim as new is:—

A conveyer belt consisting of an endless flexible base, a carrier surface or plating comprising narrow metal shoes secured transversely on the base, and sectional guards or flanges carried by the shoes, each extended at one edge to overlap the next adjacent guard, said guard sections being beveled at the outer end.

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

ISAAC F. MANNING.

Witnesses:

JOHN J. DWYER,
GEORGE BALDWIN.