(No Model.)

E. H. PARKER & C. ROBINSON.

ENDLESS BELT CONVEYER.

No. 284,324. Patented Sept. 4, 1883.

Fig. 1.

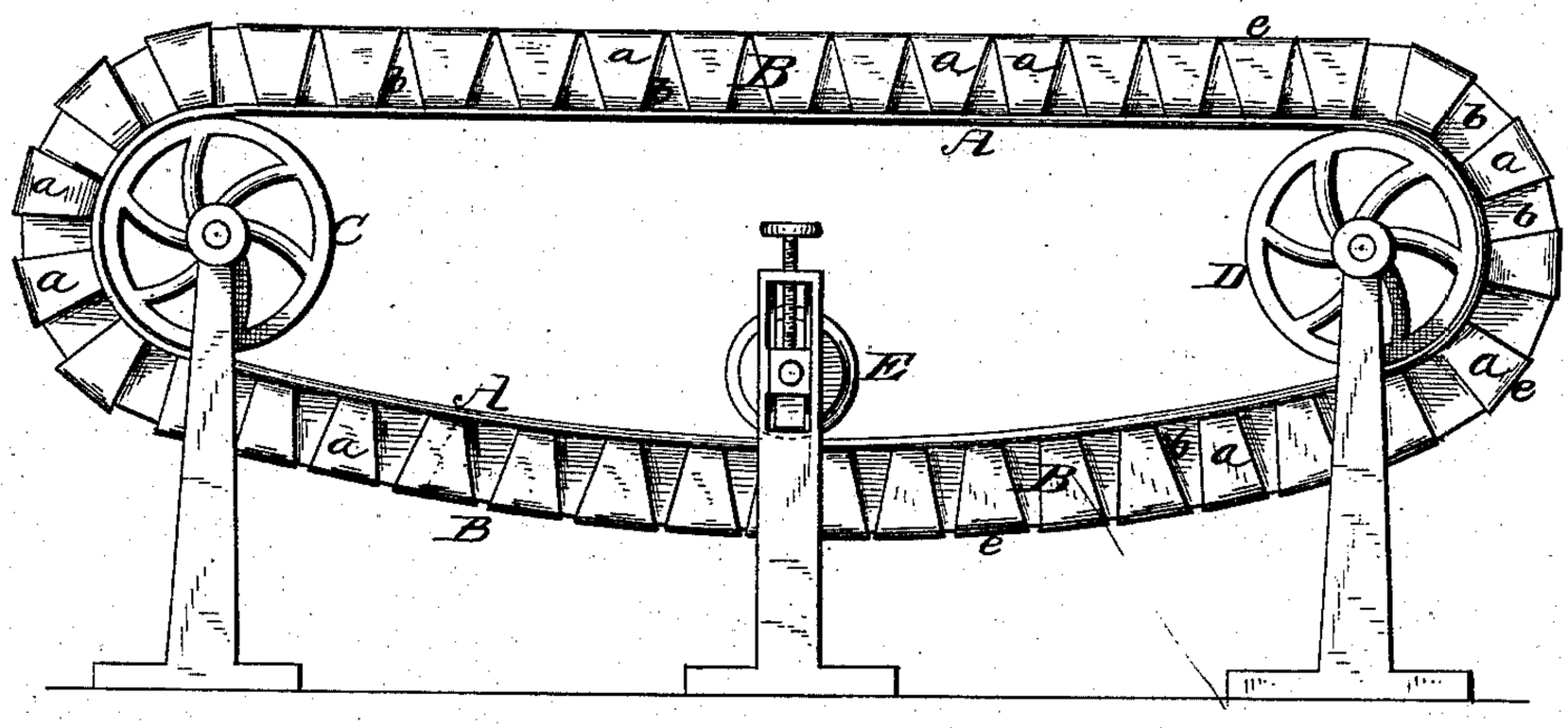
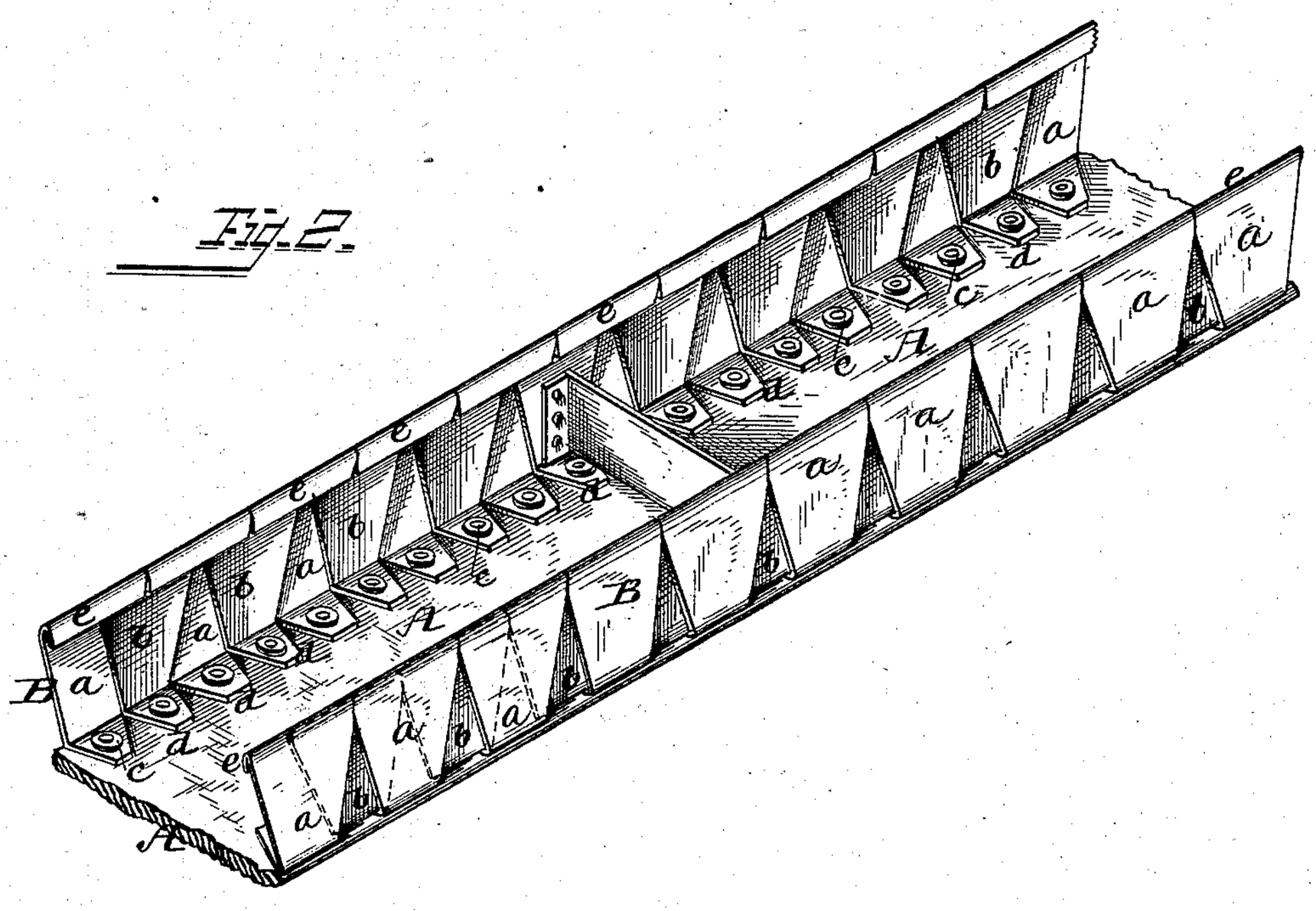


Fig. 2.



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UNITED STATES PATENT OFFICE.

EDWARD H. PARKER, OF EAU CLAIRE, WISCONSIN, AND CLARK ROBINSON, OF HORNELLSVILLE, NEW YORK; SAID PARKER ASSIGNOR OF ONE-THIRD HIS RIGHT TO SAID ROBINSON.

ENDLESS-BELT CONVEYER.

SPECIFICATION forming part of Letters Patent No. 284,324, dated September 4, 1883.

Application filed July 31, 1883. (No model.)

To all whom it may concern:

Be it known that we, EDWARD H. PARKER, of Eau Claire, in the county of Eau Claire and State of Wisconsin, and CLARK ROBINSON, of Hornellsville, Steuben county, New York, have invented certain Improvements in Endless-Belt Conveyers, of which the following is a specification.

Our invention relates to endless-belt conveyers for moving grain, coal, and other substances; and it consists in an endless web or belt provided with side flanges made in sections, and having the sections arranged to overlap at their ends, so that as the belt passes about pulleys or wheels, as it is designed to do, no open spaces are afforded through which the material might escape.

In the accompanying drawings, Figure 1 represents a side elevation of a conveyer constructed in accordance with our invention; Fig. 2, a perspective view of a section of the conveyer on a larger scale.

Hitherto endless belts or webs have been used as carriers, and it has also been proposed to form a conveyer of a series of pans hinged or linked together and having their ends arranged to overlap. The flexible web or belt is found to possess many advantages over the jointed carrier, not only in point of original cost, but also on account of the readiness with which the belting may be obtained of any desired size, the facility with which it can be carried about wheels or pulleys, the absence of joints or openings, and the comparatively light weight and great strength. All these qualities commend the use of flexible webbing or belting; but without some means for preventing the material from falling off at the side of the carrier, the capacity of such a web or belt is necessarily quite limited.

To provide such side guards is therefore the object of this invention, and this we do by providing the web or belt with a series of upright wings or plates having a comparatively narrow footing on the belt, and arranged to overlap each other in such manner that their edges cannot be made to entirely separate or draw away from each other under any circumstances. The form in which we prefer to construct these guards is represented in the drawings, in which A represents a flat web or belt forming the body of the carrier, and B the side guards, composed of a series of upright blades or wings, *a* and *b*, attached to the belt A, at their lower ends, by means of rivets *c*, passing through a laterally-projecting ear, *d*, as shown, or in any other convenient manner. The wings or blades are of V form, wider at their upper than at their lower ends, and are arranged to overlap each other, as shown, being placed alternately inside and outside of a given line near the edge of the belt and in contact with each other, as indicated. By preference each wing or blade *a* is formed with a folded edge or downwardly-turned flange, *e*, which fits over the upper edge of the overlapping portion of the adjoining wings *b*, which latter are not formed with such folded edge. It will be seen that this construction and arrangement prevents the possibility of lateral separation of the wings, though permitting them to slide one upon the other to compensate for or permit any flexure of the belt.

The conveyer is carried about pulleys C and D, and, being continuous, it is arranged to travel constantly in one direction, motion being imparted to one of the pulleys in any usual manner.

A belt-tightener, E, may be used to keep the belt taut, if it be found expedient to do so.

In passing about the pulleys C D the wings *a b* slide upon each other; but, owing to their greater width at their outer or free edges, they never draw entirely apart at their upright sides or edges, while, as stated, the flanges *e* prevent lateral displacement.

The exact form of the wings is not important, nor is it essential that they stand in a vertical position. They may be curved at the top, rectangular or wedge-shaped, or of any other suitable form, and may stand upright or at an angle, as preferred. Owing to the fact that the wings cannot separate or entirely draw away from each other, there is no opening left through which the grain or other small matters might escape at the sides of the conveyer, though, owing to the movement of the wings one upon another, the belt is permitted to pass readily about the pulleys without impairing the continuity or integrity of the guards. The

same construction may be applied to elevators, it being only necessary to provide the web or belt with cross-slats to adapt it to such use. It is obvious that the wings may be connected by bolts or rivets sliding in slots, suitable covering-slides being provided for the slots.

Having thus described our invention, what we claim is—

1. A conveyer consisting of a flexible unbroken web or belt, A, provided with side guards made in short overlapping sections, substantially as and for the purpose set forth.

2. The herein-described conveyer, consisting of an endless web or belt, A, and a side guard, B, composed of overlapping wings *a b*, substantially as shown and described.

3. In a conveyer substantially such as described and shown, a web or belt provided with a side guard composed of short overlapping wings, alternately provided with a plain and a folded or overturned edge, the plain edge fitting within said folded edge, substantially as and for the purpose explained.

4. The herein-described side guard for a belt-conveyer, consisting of wings *a b*, the wings *a* provided with flanges *e*, and the wings *b* having their edges fitted under said flanges, substantially as shown.

5. A conveyer-belt provided with side guards composed of short overlapping wings, held against lateral separation, substantially in the manner shown and described.

EDWARD H. PARKER.
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