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W. H. MORENUS & F. R. JONES.
CONVEYER.

APPLICATION FILED NOV. 30, 1906.

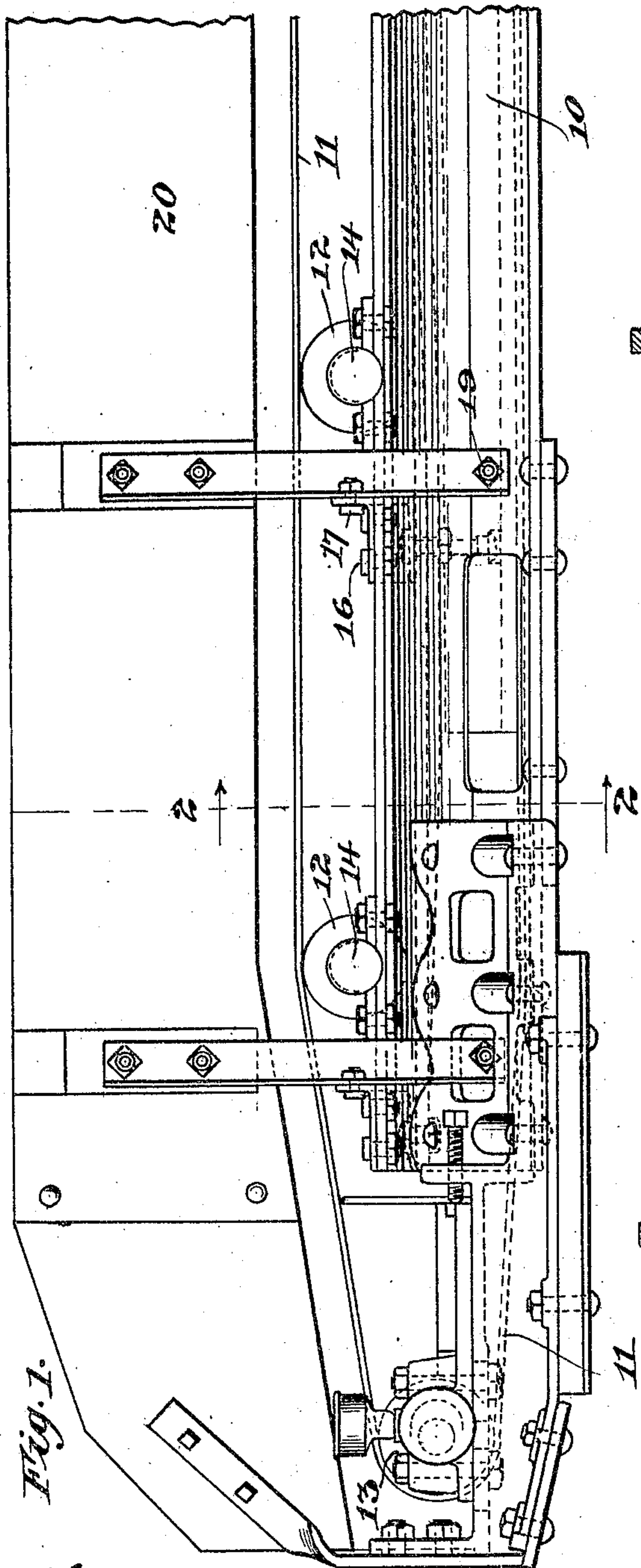


Fig. 1.

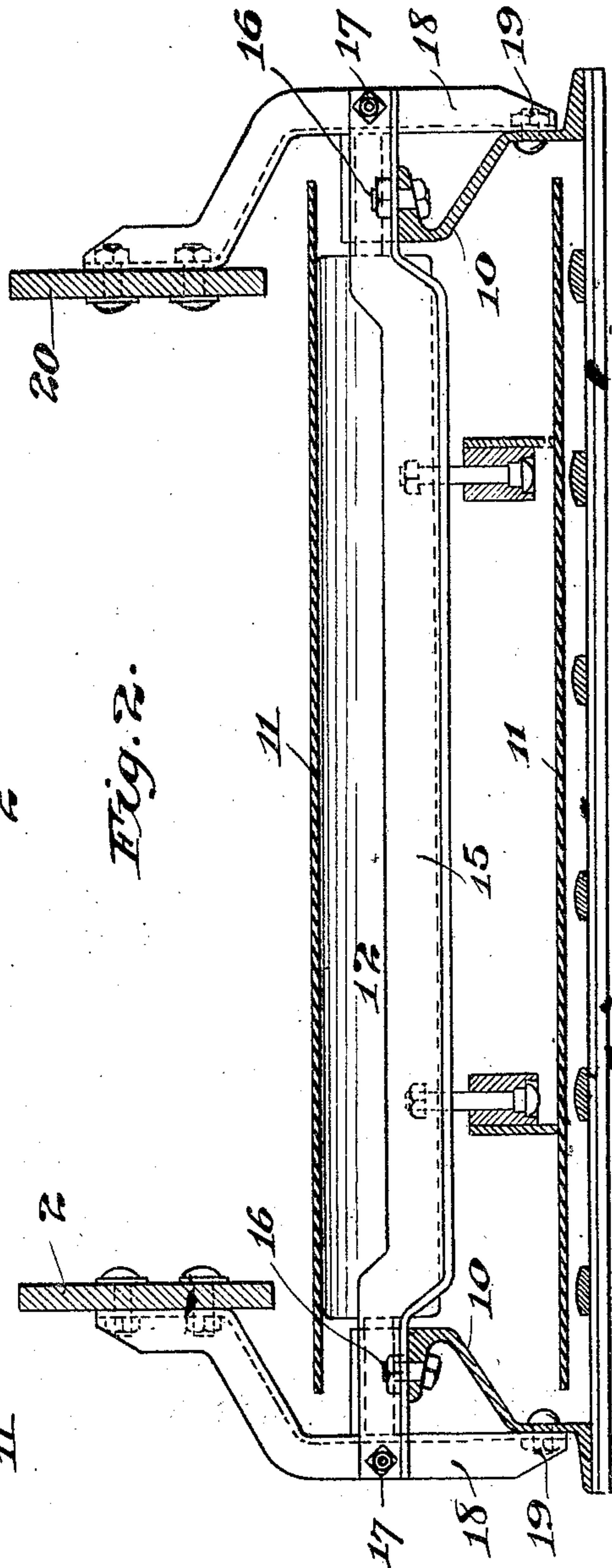


Fig. 2.

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UNITED STATES PATENT OFFICE.

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CONVEYER.

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Specification of Letters Patent.

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To all whom it may concern:

Be it known that we, WILLIAM H. MORENUS and FRANK R. JONES, citizens of the United States, residing, respectively, at Lake View, Sac county, Iowa, and Harvey, Cook county, Illinois, have invented certain new and useful Improvements in Conveyers, of which the following is a specification.

Our invention relates to improvements in conveyers, and more especially to belt conveyers such as are used for the transportation and conveying of dirt, gravel, coal, or the like.

The aim of our invention is to provide an improved method of making and a better construction of side beam or bar for the frame than has heretofore been used in this art, and particularly in the art of wagon-loading devices. For this purpose we take an ordinary channel beam or bar of suitable dimensions and press or bulldoze the same so as to offset substantially one longitudinal half of the same, the external faces or surfaces of the flanges, however, being maintained parallel, thereby affording convenient means for the attachment thereto of bearings or journal-boxes of shafts carrying rollers on which the conveying-belt rests. The object of this peculiar construction is to secure a very rigid and firm structure and to use the side members of the frame as shields or protectors to shed or prevent the dirt, coal, or other conveyed material which falls over the edges of the top part of the endless belt from tumbling onto the lower part thereof.

On the accompanying drawings, which form a part of this specification, and in the different views of which like characters refer to the same parts throughout, we have illustrated a desirable and preferred embodiment of our invention.

Figure 1 is a fragmentary side elevation of a portion of a conveyer embodying our invention which is used in a wagon-loading machine, and Fig. 2 is a cross-section of the structure shown in Fig. 1 on the line 2 2 as viewed in the direction indicated by the arrows.

The longitudinal side beams or bars 10 of this conveyer-frame are made from ordinary channel-beams by pressing or bulldozing the same so as to offset inwardly the upper portion or half of the beam, the external faces,

however, of the top and bottom flanges being maintained parallel. In Fig. 1 we have shown only a part of a conveyer; but it will be readily understood that the transporting or conveying belt 11 is of the endless type, passing over a suitable number of rollers 12 and around an end roller 13 at each end of the conveyer. The shafts of rollers 12 are rotatably mounted in suitable bearings 14, bolted or otherwise conveniently secured to the top flanges of the side beams 10. It should be noted that the width of belt 11 is such that it overlies these bearings or journal-boxes 14 and the top flanges of beams 10, while the under portion of the belt or that part which travels beneath the rollers extends below the bent webs of the side beams, all as is clearly shown in Fig. 2. It will thus be apparent that any dirt or other conveyed material on the top face of the upper part of the endless belt 11 which drops off of the sides of the belt will neither fall upon the bearings nor upon the lower portion of the belt, since the bent webs of beams 10 act as shields or aprons to deflect the falling dirt. It is perfectly obvious that if the dirt were allowed to fall upon the lower part of belt 11 it would cease annoyance and trouble by attempting to pass between the belt and the end roller 13. The side bars or beams of the frame are tied together crosswise by a suitable number of angle-bars 15, depressed at their central portion, as illustrated in Fig. 2. The horizontal flanges of these cross-tie bars are bolted to the top flanges of the channel side beam, as indicated at 16, the bars, however, projecting beyond these flanges to some extent, as indicated, the ends being riveted or bolted at 17 to properly-bent angle-bars 18, which at their lower ends are riveted to the vertical portions of the webs of beams 10 at 19 and at their upper inwardly-offset ends to longitudinal side boards 20.

A conveyer of the type illustrated is used by us in a wagon-loading device which is drawn forwardly either by draft-animals or a traction-engine and is equipped with a plow which throws the dirt onto the traveling inclined belt 11. This belt carries the dirt up the incline above the wagon to be loaded, and as it turns around the upper pulley or roller 13 (not shown) it delivers the dirt or drops the same into the wagon-body; the

belt returning between the side frame-beams
 10. Inasmuch as there is a possibility of the
 upper end of this conveyer being struck
 either by the wagons which carry away the
 5 dirt or coming in violent contact with a tree
 or other stationary object as the wagon-
 loader advances, it is necessary to make the
 frame of this conveyer unusually strong, and
 for that reason it is desirable to make the
 10 side beams of the frame in one piece. We
 have discovered that the peculiar shape of
 beam desired can be produced from an ordi-
 nary channel-beam by pressing or bull-
 dozing, and since these channel-beams in
 15 their new form are unitary structures they
 possess the adequate strength necessary to
 withstand the rough usage to which ma-
 chines of this character are subjected.

We have not gone into the details of our
 20 wagon-loader, since our invention is limited
 to the conveying parts of the same, and more
 particularly to the method of producing the
 side members of the frame to form beams or
 bars of the shape shown and described.

25 We claim—

1. A conveyer-frame having a channel
 side member approximately one-half of
 whose web is offset, the exterior surfaces of

the channel's flanges being parallel, sub-
 stantially as described. 30

2. A conveyer-frame having a channel
 side member, the upper longitudinal part of
 which is inwardly offset, the exterior sur-
 faces of the channel's flanges being parallel,
 substantially as described. 35

3. In a conveyer, the combination of a
 frame, the side members of which are chan-
 nels, the upper parts of which are inwardly
 offset and the flanges of which project out-
 wardly with their exterior surfaces parallel, 40
 suitably-mounted rollers, and an endless
 conveyer-belt, said belt being of sufficient
 width whereby its longitudinal edges lie
 above and below the offset webs of said side
 channels, substantially as described.

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