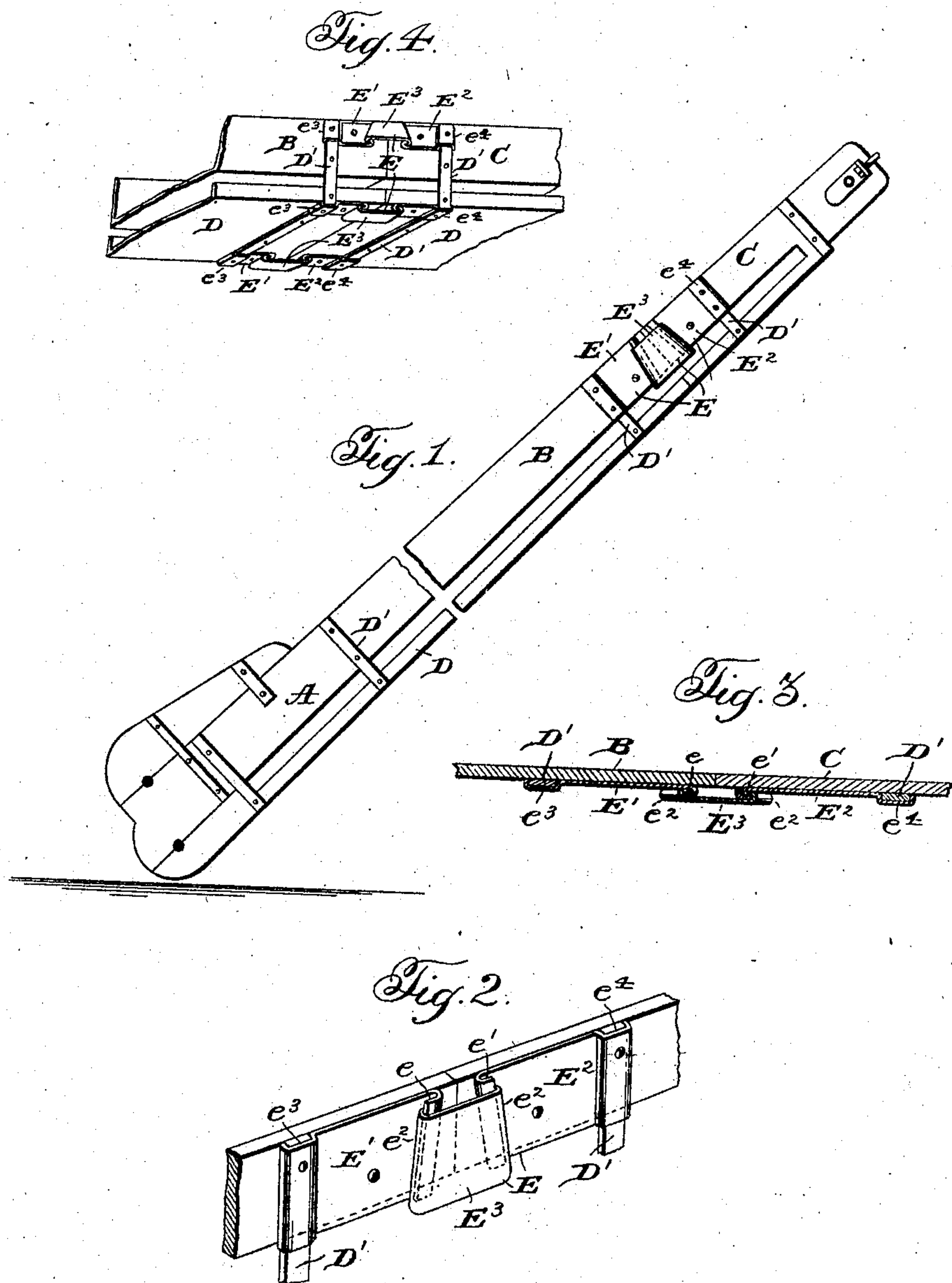


No. 815,470.

PATENTED MAR. 20, 1906.

G. B. READ.
ELEVATOR COUPLING.
APPLICATION FILED MAR. 27, 1905.



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ELEVATOR-COUPPLING.

No. 815,470.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, GEORGE BURT READ, a citizen of the United States of America, residing at Bloomington, in the county of McLean and State of Illinois, have invented certain new and useful Improvements in Elevator-Couplings, of which the following is a specification, reference being had therein to the accompanying drawings.

10 This invention relates to an improvement in couplings for portable sectional elevators and conveyers.

It has heretofore been proposed to form portable elevators in sections, so that the elevator can be made any desirable length and can be readily knocked down for the purpose of storage. The couplings heretofore employed have consisted either of straps bolted to the adjacent ends of the sections or of draw-bolts connecting metallic ears secured to the adjacent ends of the sections. Both of these forms are objectionable, as with the first no means are provided for drawing the sections together when they open at the joints, as they often do when subjected to heavy use, and in order to uncouple the several sections it is necessary to remove a large number of bolts, and with the second the operator in order to draw the sections together must be provided with a wrench, and, furthermore, as the elevator is exposed to various weather conditions the nuts and bolts often become so rusty that it is very difficult to uncouple or adjust the sections.

35 It is the object of the present invention to provide a coupling for elevators of this type by which the various sections of the elevator can be quickly coupled or uncoupled and the adjacent sections may at any time be quickly drawn together without the employment of bolts, nuts, and the like.

40 In the drawings, wherein a preferable embodiment of my invention is shown and wherein like letters of reference refer to similar parts in the several views, Figure 1 is a side elevation of a portable elevator formed of two sections coupled together by means of my improved coupling. Fig. 2 is a detail perspective view of one side of the elevator, showing the position of two of the sections coupled together. Fig. 3 is a transverse section of the same, and Fig. 4 is a detail perspective view showing the coupling members secured to the under side of the elevator.

55 Referring now more particularly to the drawings, A designates a portable elevator,

which in the form illustrated in the drawings is formed of two sections B and C, each of which is provided with the usual guide-box D, secured to the body portion of the sections by means of keeper-irons D'. The sections B and C are coupled together by means of couplings E. I have shown in the drawings only one of such couplings; but it is obvious that another one is used on the other side of the elevator. The couplings E each comprise metal plates E' and E², detachably secured to the sides of the sections B and C, respectively, the adjacent ends of said plates being provided with the downwardly-diverging grooved portions *e* and *e'*, which are preferably formed by bending the ends of the plate back upon themselves, and the coupling member E³, the ends of which are provided with corresponding downwardly-diverging tongues *e*², which are adapted to engage the grooves *e* and *e'* in the plates E' and E² and which are preferably formed by bending the ends of the coupling member back upon themselves. The inclination of the grooves *e* and *e'* and of the tongues *e*² is such that when the sections are in their coupled positions the upper edge of the coupling-plate E² is wider than the distance between the upper ends of the grooves *e* and *e'* and narrower than the distance between the lower ends of such grooves. The rear ends of the plates E' and E² are provided with pockets *e*³ and *e*⁴, which when the plates are secured to the sides of the elevator-sections are adapted to embrace straps secured to the sides of the sections, which in the form shown in the drawings are the keeper-irons D'. From this construction it will be apparent that a large portion of the lateral strain to which the plates are subjected when the coupling is in use will be transferred to said straps or keeper-irons. I also preferably connect the adjacent ends of the sections of the guide-box D by two couplings similar to those heretofore described for coupling the elevator-sections B and C, as shown in Fig. 4.

To assemble the elevator, the sections B and C are placed with their ends abutting and the coupling-plate E³ is slipped over the adjacent ends of the plates E' and E², the flanges on said plate engaging the grooves in the ends of the plates E' and E². The upper edge of the coupling-plate E³ is then struck with a hammer or other implement and forced downward, thereby drawing the sections B and C tightly together, owing to the inclination of

the grooves e and e' and the tongues e^2 . The frictional engagement between the grooved portions of the plates E' and E^2 and the tongues of the coupling member E^3 will prevent the coupling member from working loose. It will be understood, however, that, if desired, any locking means may be employed for holding the coupling member in position. To uncouple the sections, it is simply necessary to strike the lower edge of said coupling-plate E^3 with a hammer or other implement, when the same will be instantly loosened and can be readily removed from engagement with the grooves e and e' of the plates E' and E^2 .

While in the drawings accompanying this specification I have shown the elevator as constructed of two sections only, it is obvious that a larger number of sections might be employed.

I do not desire to limit myself to the precise form and construction shown in the drawings, as it is obvious that many minor changes might be made in the form shown therein without departing from the spirit of the invention.

What I claim as new is—

1. An elevator comprising a plurality of sections, engaging members at the adjacent ends of said sections, and a detachable coupling member bridging said sections and provided with engaging means interlocking with the engaging means on said sections, said coupling member serving when in its operative position to draw the sections together to form substantially a single rigid conveyer.

2. A portable elevator comprising a plurality of sections, each provided with a guide-box suspended therefrom to support the lower run of a conveyer, and coupling members having interlocking engagement with the adjacent ends of the sections and the guide-boxes and serving when in their operative position to draw said sections and guide-boxes tightly together to form substantially a single rigid conveyer.

3. An elevator comprising a plurality of sections, a pair of plates secured to the ends

of said sections, the adjacent ends of said plates being provided with diverging grooved portions, and a coupling member provided with flanges interlocking with the grooved portions of said plates, said coupling member serving when in its operative position to draw the sections tightly together to form substantially a single rigid conveyer.

4. An elevator comprising a plurality of sections, a pair of plates detachably secured to said sections and provided at their adjacent ends with diverging grooved portions, and a coupling member bridging said sections and provided with diverging tongues interlocking with the grooves of said plates, said coupling member serving when in its operative position to draw said sections tightly together until the adjacent ends thereof abut, to form substantially a single rigid conveyer.

5. An elevator comprising a plurality of sections, straps secured to the sides of said sections, plates secured to the sides of said sections and provided with pockets adapted to embrace said straps and means for coupling the adjacent ends of the plates on the adjacent sections.

6. An elevator comprising a plurality of sections, straps secured to the sides of said sections, plates secured to the sides of said sections and provided with pockets adapted to embrace said straps, and a wedge connection between the adjacent ends of the plates on the adjacent sections.

7. A sectional conveyer comprising a plurality of conveyer-sections, each having a guideway secured thereto for the support of the lower run of a conveyer, and coupling members coupling said sections and serving when in their operative position to draw the adjacent ends of the conveyer-sections and guide-boxes tightly together to form a substantially rigid conveyer.

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

GEORGE BURT READ.

Witnesses:

W. H. SEMONS,
EDWARD M. HOBLIT.