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J. W. ARMITAGE.

BRACE FOR ROUNDABOUTS.

APPLICATION FILED MAY 24, 1906.

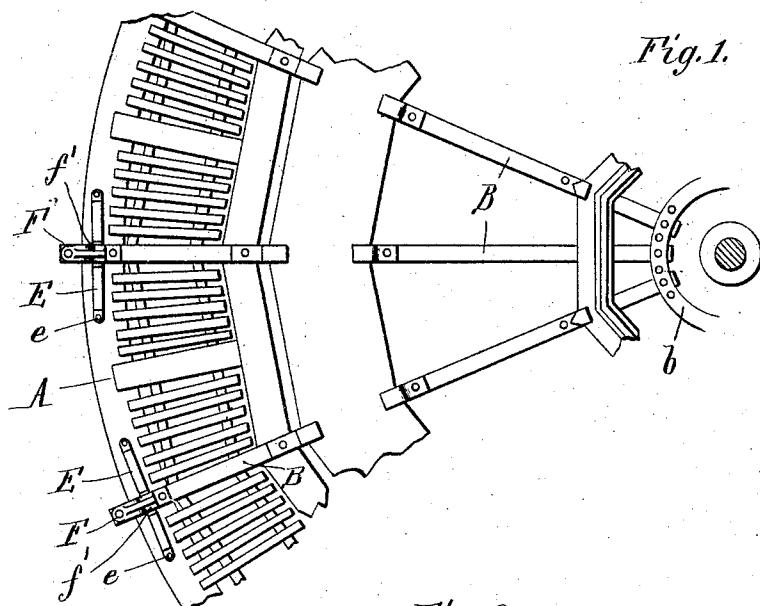


Fig. 1.

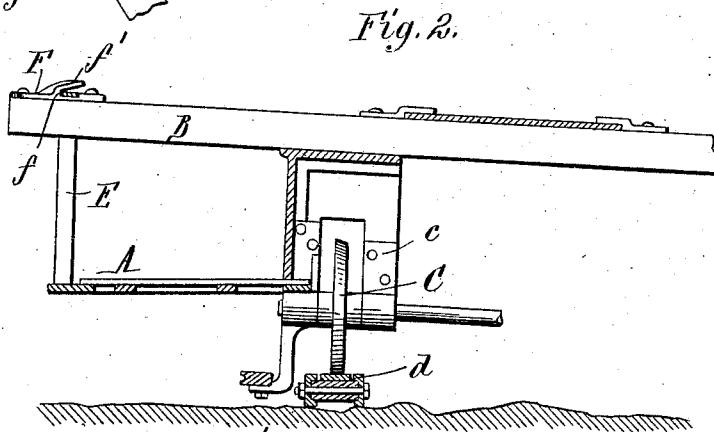


Fig. 2.

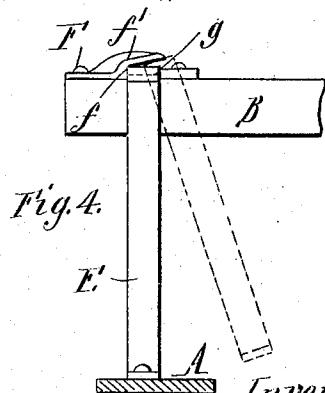
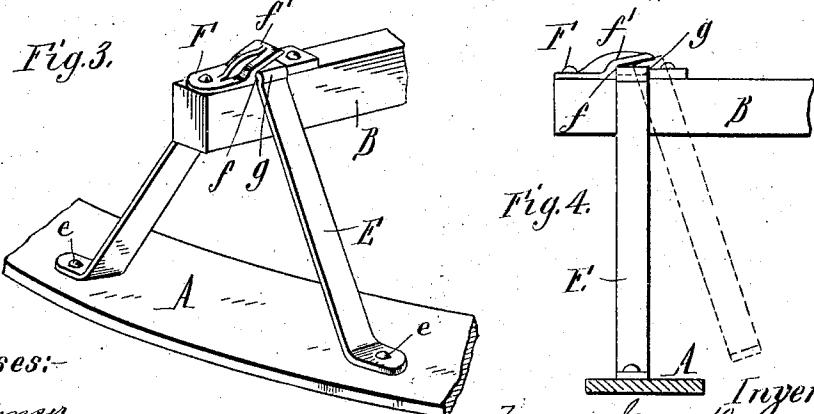


Fig. 4.

Witnesses:-

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UNITED STATES PATENT OFFICE.

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BRACE FOR ROUNDABOUTS.

No. 850,411.

Specification of Letters Patent.

Patented April 16, 1907.

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To all whom it may concern:

Be it known that I, JAMES W. ARMITAGE, a citizen of the United States, residing at North Tonawanda, in the county of Niagara and State of New York, have invented a new and useful Improvement in Braces for Roundabouts, of which the following is a specification.

This invention relates to brace constructions for roundabouts and analogous knock-down structures, which are intended to be frequently moved from place to place and are therefore built of separable parts.

Roundabouts as most commonly built have a rotating horizontal platform or walk for the persons entering and leaving the machine, which is supported by or secured to horizontally-rotating sweeps or arms radiating from a central connecting hub or bearing. The brace construction forming the subject-matter of this application is more particularly intended for connecting the platform and supporting-sweeps of such machines.

The object of the invention is to provide a simple, strong, and perfectly secure connection between the platform and the sweeps, which will lessen the labor and simplify the work of securing and disconnecting the platform and sweeps in setting up and dismantling the roundabout or structure.

In the accompanying drawings, Figure 1 is a plan view of a portion of the rotary frame of a roundabout or analogous structure embodying the invention. Fig. 2 is a fragmentary sectional elevation thereof on an enlarged scale. Fig. 3 is a fragmentary perspective view, on an enlarged scale, showing one of the braces and its retaining socket. Fig. 4 is a fragmentary elevation, on an enlarged scale, of the parts shown in Fig. 4, showing by full and broken lines the secured and disengaging positions of the brace.

Like letters of reference refer to like parts in the several figures.

A represents a portion of the circular rotary platform or walk of a roundabout, and B the horizontal supporting sweeps or arms for the platform. In the construction illustrated the sweeps radiate from a central hub or supporting-bearing *v* and are supported at their outer portions by wheels C, which are journaled in suitable bearing-brackets *c*, secured to the sweeps, and roll on a circular ground track or rail *d*. One of the wheels,

with its bearing-bracket, is shown in Fig. 2. The circular platform A is located below the outer ends of the sweeps, its inner edge being secured to and supported by the wheel-brackets *c* and its outer edge being suspended from the sweeps by braces E.

Each of the braces E consists, preferably, of a metal bar or strap bent into V shape, which straddles one of the sweeps, and has at the lower ends of its diverging legs horizontal feet, which are secured by bolts *e* or otherwise to the platform. The upper angular portion or end of the brace is not bolted or permanently secured to the sweep, but is detachably held in a socket-piece F, which is bolted or otherwise secured to the sweep and is of a construction such as to permit the ready engagement and disengagement of the brace when detached from the platform and yet hold the brace securely against detachment from the socket so long as it is secured to the platform or held from angular movement in the socket-piece. The socket-piece comprises a flat plate or body portion provided with a depression or seat *f*, in which the bent end of the brace rests and is held from sidewise movement on the socket-piece and a guard projection *f'*, which overhangs the brace-seat and prevents the brace from being lifted out of the seat except when swung to a particular position. The guard projection preferably inclines upwardly from the outer edge of the brace-seat, and its free inner end is spaced far enough from the body of the socket-piece to allow the brace to be slipped into and removed from the seat *f*. The brace is preferably provided with shoulders *g*, which engage the opposite sides of the socket-piece to prevent movement of the brace in the seat transversely of the sweep.

In setting up the machine the brace E is placed over the sweep and slipped beneath the guard projection *f'* of the socket-piece into its seat *f* while held in the inclined position shown by broken lines in Fig. 4 and is then swung into the upright position shown by full lines in said figure, and its lower ends or feet are bolted to the platform. So long as the base is held in this position by its attachment to the platform the guard projection prevents it from lifting vertically far enough to leave its seat *f*, and the brace can only be disengaged from the socket-piece by first detaching it from the platform and

swinging it to the position shown by broken lines in Fig. 4. As the strain on the brace caused by centrifugal action in the rotation of the roundabout is outward or toward the 5 end of the sweep, the guard projection, which rises from the outer edge of the brace-seat *f*, prevents any possibility of the brace working out of the seat. The brace is thus held very securely in the socket-piece against 10 accidental displacement, and as the brace is not bolted or otherwise secured to the sweep it can be much more readily attached and detached than a brace which is bolted to the sweep. The brace ordinarily employed for 15 suspending the platform from the sweep consists of two separate inclined bars bolted to the platform and to the opposite sides of the sweep. Such a construction is much more troublesome to secure and detach from the 20 sweep and requires two or more workmen to perform the work, which can be done in less time by a single workman with the brace construction herein described, and there are no bolts and nuts to break and lose.

25 While the brace construction is particularly intended for connecting the platforms to the sweeps in roundabouts, it would also be useful in other structures where the relative arrangement of the parts to be connected is analogous.

I claim as my invention—

1. The combination of two members of a structure, a connecting-brace for holding the same in fixed relation, said brace being fastened to one of said members and having a part at an angle to its main portion for engagement with the said other member, a seat on said other member in which the brace detachably engages, and a guard arranged to 35 hold the brace in one position thereof from disengagement from said seat and to release the brace in another position thereof, the brace being held from movement to such releasing position by its attachment to said 40 first member of the structure, substantially as set forth.

2. The combination of a supporting member, a brace having a substantially horizontal portion supported by said supporting member and a depending portion, a member which is secured to the depending portion of said brace and is supported thereby, a seat on said supporting member in which the horizontal portion of the brace is held from lateral movement, and a guard which overhangs said brace and holds it from lifting out of said seat in one position of the brace and releases the brace in another position there-

of, the brace being held from movement to such releasing position by its attachment to said supported member, substantially as set forth.

3. The combination of two members of a structure, a connecting-brace for holding the same in fixed relation, said brace being fastened to one of said members and having a part at an angle to its main portion for engagement with said other member, a socket-piece secured to said other member and having a seat in which the brace rests, and a guard overhanging said seat which prevents said brace from moving endwise out of said seat, said brace being removable from said seat by detaching it from said first member and moving it to a position at an angle to its 75 normal position, substantially as set forth.

4. The combination of a substantially horizontal supporting-arm, a platform below the same, a brace connecting said arm and platform and having a substantially horizontal portion, a socket-piece secured to said arm and having a seat in which the horizontal portion of said brace rests, and a guard overhanging said seat which prevents said brace from lifting vertically out of said seat, 80 the brace being removable from said seat by detaching it from said platform and moving it to a position at an angle to its attached position, substantially as set forth.

5. The combination of a substantially V- 90 shaped brace, a retaining-socket piece for the same having a body part provided with a seat in which the angle portion of said brace engages, and a guard which projects over said seat at an inclination and prevents the 95 disengagement of the brace from said seat in one position of the brace, said brace being removable from said seat by the movement thereof to a position at an inclination to said body part but being normally held from movement to such inclined position, substantially as set forth.

6. The combination with a frame member and a platform, of a connecting-brace for the same secured to one of said members, and a 105 plate secured to the other member, said brace and plate having interlocking parts which are shaped to be disengaged by sliding the one relative to the other, substantially as set forth.

Witness my hand this 20th day of May, 1905.

JAMES W. ARMITAGE.

Witnesses:

LEONARD SMITH,
J. M. PATTEN.