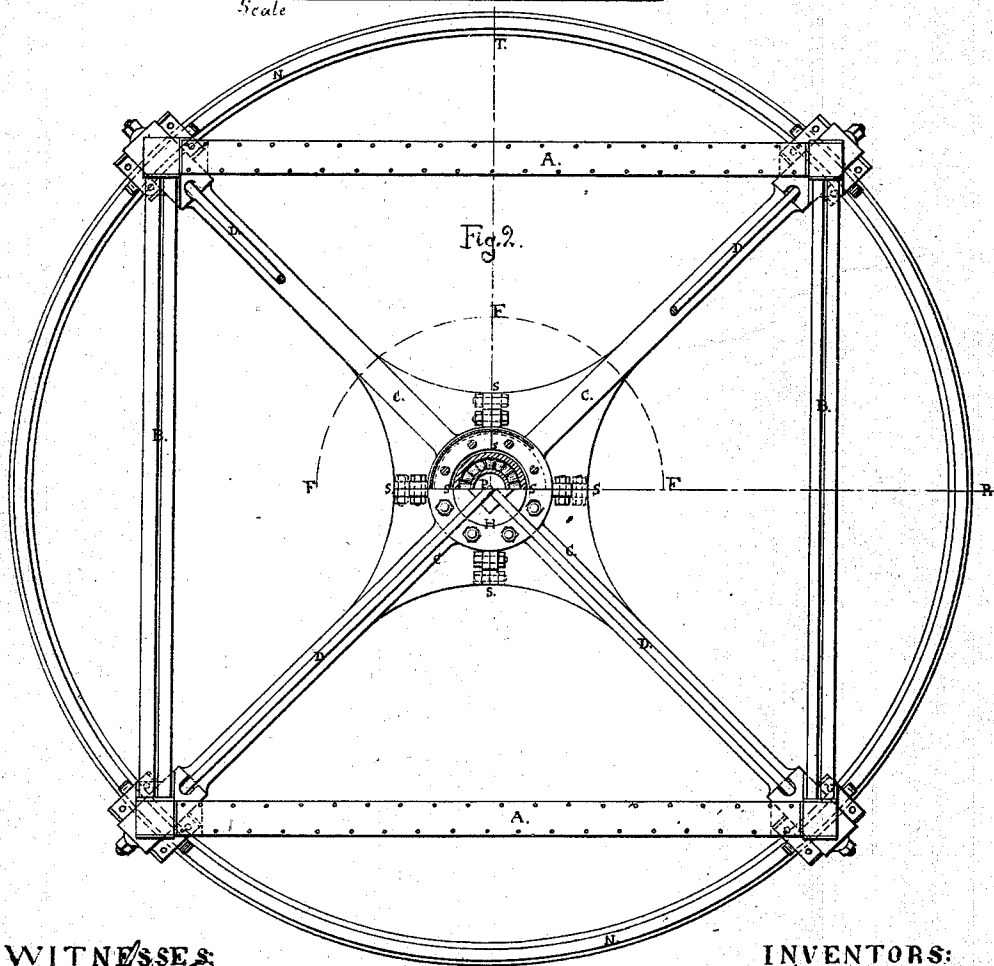
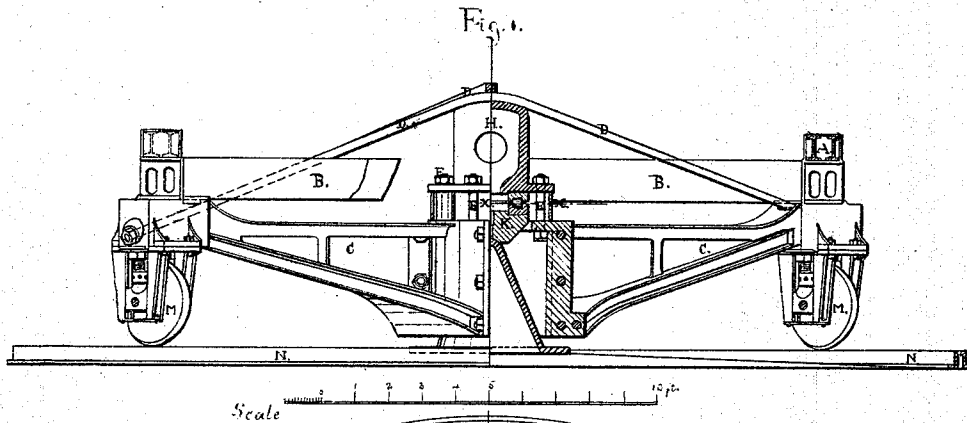


MACDONALD & FRITZSCHE.
Turn-Tables.

No. 139,512.

Patented June 3, 1873.



WITNESSES:

John Telford
Charles D. Montague

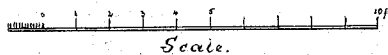
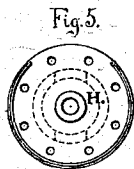
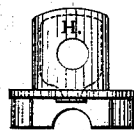
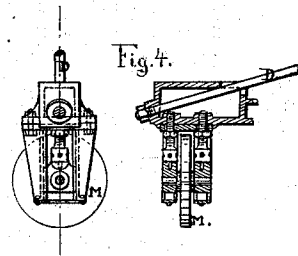
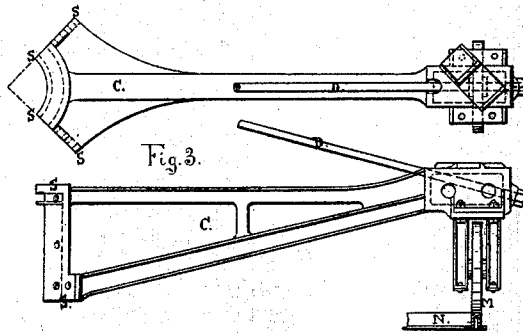
INVENTORS:

Charles MacDonald
W. H. Fritzsche.

MACDONALD & FRITZSCHE.
Turn-Tables.

No. 139,512.

Patented June 3, 1873.



WITNESSES:

John D. McIlford
Charles D. Montague

INVENTORS:

Charles MacDonald
C. F. Fritzsch

UNITED STATES PATENT OFFICE.

CHARLES MACDONALD, OF HOBOKEN, AND CARL O. H. FRITZSCHE, OF
PATERSON, NEW JERSEY.

IMPROVEMENT IN TURN-TABLES.

Specification forming part of Letters Patent No. **139,512**, dated June 3, 1873; application filed
March 29, 1873.

To all whom it may concern:

Be it known that we, CHARLES MACDONALD, of Hoboken, in the county of Hudson and State of New Jersey, and C. O. H. FRITZSCHE, of Paterson, in the county of Passaic and State of New Jersey, have invented certain new and useful Improvements in Turn-Tables for Swing-Bridges, of which the following is a specification:

Our invention consists in a combination of radial arms and tension rods sustained upon a central friction surface in such a manner as to completely transfer the weight of the structure resting upon the turn-table to the said surface of friction, thereby rendering it possible to materially reduce the resistance to turning, while at the same time a perfect balance is effected by means of wheels and track under the extremities of the arms.

Figure 1 is an elevation taken facing the right-hand side of Fig. 2; that portion to the right of a vertical line through the center of Fig. 1 represents a section formed by the removal of the portion in Fig. 2 included by the lines R P T. C C are radial arms sustained at their outer extremities by the rods D D, and at the center by the vertical rods E E upon the casting H, which in turn rests directly upon a friction-surface at the line x x. The upper bearing-surface moves with the casting H, and the lower corresponding surface remains fast upon the seat K. A A represent the position of the chords of a bridge resting upon the extremities of the arms, and B B are floor-beams connected therewith. M

M are balancing-wheels, and N N the circular track.

Fig. 2 is a plan in which that portion inclosed by the semicircle F F F is a horizontal section taken upon the line x x, Fig. 1. Fig. 3 is a plan and elevation of arm C with tension-rod D and wheel M. Fig. 4 is an end view and section of extremity of arm C. Fig. 5 is plan and elevation of casting H.

The arms C C are bolted together at the faces S S, forming by their junction a cylinder, which is suspended from the casting H by the vertical rods E E, while the outer extremities are sustained by the main rods D D. The entire weight resting upon the extremities of the arms is thus transferred to the central surface of friction, and only sufficient play is left under the wheels M M to insure a proper balance in revolving the table.

The arm C C may be of iron or wood resting upon an iron cylinder, or other suitable material.

The surface of friction may be a nest of conical rollers, or any other suitable device for reducing the friction.

Having described our invention, we claim—

The combination of radial arms C C and rods D D and E E, sustaining said arms upon a central friction-surface, substantially and for the purpose herein set forth.

CHARLES MACDONALD.

CARL OTTO HERMANN FRITZSCHE.

Witnesses:

SAMUEL WELLS GEAR,
ROBERT ESCOBAR.