E. WASELL.

Pier.

No. 207,228. Patented Aug. 20, 1878.

Fig. 1

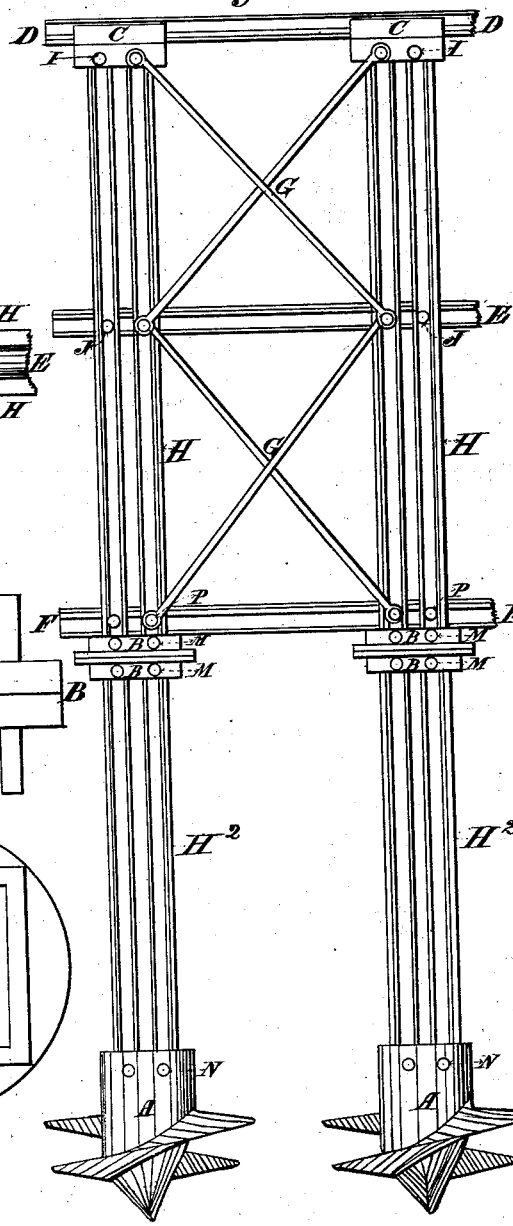


Fig. 2

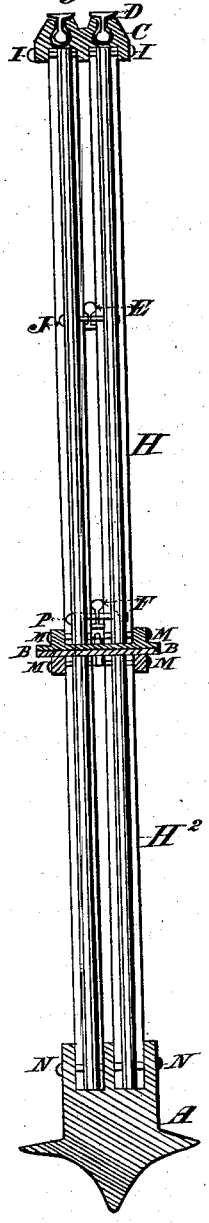


Fig. 3

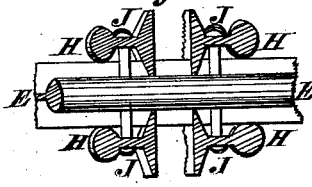


Fig. 4

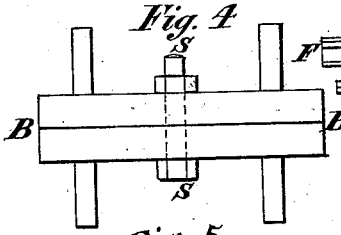
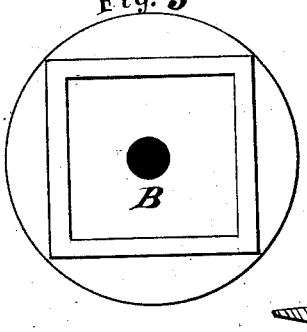


Fig. 5



Witnesses;

Edmund Biden

A. J. McCallum

Inventor;

Ed. Wasell

UNITED STATES PATENT OFFICE.

EDWARD WASELL, OF DIGBY, NOVA SCOTIA, CANADA.

IMPROVEMENT IN PIERS.

Specification forming part of Letters Patent No. **207,228**, dated August 20, 1878; application filed September 28, 1877; patented in Canada, July 16, 1877.

To all whom it may concern:

Be it known that I, EDWARD WASELL, of the town of Digby, in the county of Digby and Province of Nova Scotia, Dominion of Canada, a subject of the Queen of Great Britain, have invented or discovered new and useful Improvements in the Construction of Piers for Bridges, Landing-Piers, Wharves, and Breakwaters, for which I have received Canadian Patent No. 7,636, dated July 16, 1877; and I, the said EDWARD WASELL, do hereby declare the nature of the said invention or discovery, and in what manner the same is to be constructed and used, to be particularly described and ascertained in and by the following statement thereof, reference being had to the accompanying drawings—that is to say:

The object of my invention or discovery is to apply common iron or steel rails, such as are used upon and form part of the superstructure or track of railways, and also utilize the worn-out rails now lying rusting along the sides of railways, or to utilize any bars of iron or steel of a similar shape and section, in such a manner that strong, durable, and efficient piers or bents for carrying the loads and superstructure or flooring of all bridges, landing-piers, wharves, and breakwaters may be built therefrom.

The invention or discovery consists of railway rails or bars of a similar shape and section, in clusters or singly, and connected together by horizontal or diagonal brace rails and ties with castings of a suitable and particular shape to hold all the parts together and give them even and equal bearings.

In the accompanying drawing, Figure 1 represents a front elevation of a railway-rail pier built according to my invention or discovery, adapted for wet marshy ground, where the screws A have been screwed down to unyielding bearings below the surface of the ground. The rails H^2, which form pile-posts, are firmly secured and fitted into the shoes or sockets in the tops of the screws A at their lower ends and firmly secured and fitted to the lower half of the casting B at their upper ends. The rail-posts H are firmly secured and fitted to the upper half of the castings B and carried up to any height that may be required by a repetition of the said rail-posts H, the castings B, and the rail braces and ties F, E, and G, and the rail-posts H are finally surmounted by castings C of a shape to receive them, and the top rails D neatly fitted into said castings, to serve as caps, upon which the stringers or lower cords of the superstructure may rest.

Fig. 2 represents a section of the railway-rail pier, Fig. 1, through A, H^2, B, H, F, E, C, and D.

Fig. 3 represents a top view or plan of the connected rail-posts H, the rail-braces E or F, and the bolts or rivets J or P. The rails H, forming the posts, are left a distance apart sufficient to admit the heads of the brace-rails E and F between them, and the brace-rails E and F are notched in their lower flanges, so as to lock together with the rails H. The ties G are fastened to the pins or rivets J, P, or L.

Fig. 4 represents a side view of the casting B B, showing the bolt S S, which holds the two circular horizontal parts close together. The pile-posts H^2 must be screwed down until their tops are exactly level. The nature of the soil or other cause may necessitate the several pile-posts forming the pier foundation to be of unequal lengths, thereby calling for an unequal number of turns of the screws A and the pile-posts H^2 to reach the required depth. It is evident, therefore, that the several pile-posts H^2 would not all have the same sides and parts turned and facing in one and the same direction; hence the necessity for the casting B to be in halves, connected by a center or pivot pin or bolt, S S.

Fig. 5 represents a view of the top or bottom of the casting B. The horizontal flange, where the two halves come together, must be circular, for the purpose of evenly distributing the pressure from the top half to the bottom half. The vertical projections of said casting, receiving or holding the ends of the rails forming posts in place, may be either circular or square, to suit circumstances.

In the accompanying drawing similar letters of reference indicate corresponding parts.

Having thus described my invention or discovery, I claim as new and desire to secure by Letters Patent—

1. The combination of the casting B, made in halves, circular at points in contact, and joined together by a center or pivot pin or bolt, S S, and the clusters of rails or bars forming posts and piles H and H^2, substantially as set forth.

2. The combination of the casting C, the clusters of rails or bars forming a post, H, and the cap D, substantially as set forth.

E. WASELL.

Witnesses:
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