UNITED STATES PATENT OFFICE.

THOMAS D. HUSBAND AND GEORGE E. HUSBAND, OF GREEN POINT, N. Y.

IMPROVEMENT IN AUTOMATIC FERRY-BOAT COUPLINGS.

Specification forming part of Letters Patent No. **180,883**, dated August 8, 1876; application filed July 15, 1876.

To all whom it may concern:

Be it known that we, THOMAS D. HUSBAND and GEORGE E. HUSBAND, of Green Point, county of Kings and State of New York, have invented a new and Improved Automatic Ferry-Boat Coupling, of which the following is a specification:

Figure 1 is a top view of a part of a ferry-boat and bridge to which our improved coupling has been applied, and part being broken away to show the construction. Fig. 2 is a detail vertical section of the same, taken through the line *x x*, Fig. 1.

The object of this invention is to furnish an improved device for connecting a ferry-boat to its bridge, which shall be so constructed that it will couple itself as the boat comes into its place, which will hold the boat securely, and may be easily uncoupled to release the boat when desired.

The invention consists in the combination of the sockets, the hooks, the springs, and the levers, with each other, and with a ferry-boat and bridge, and in the combination of the wheels, the recesses, and the guide-bars, with the ferry-boat and bridge for guiding the hooks into the sockets to interlock with the other hooks, as hereinafter fully described.

Similar letters of reference indicate corresponding parts.

A represents the ferry-boat, and B the bridge. To the deck-frame of the boat A are secured two sockets, C, in each of which is placed a bar, D, having its forward end beveled off, and a hook or shoulder formed in it. The hooks D are held forward by spiral springs E interposed between their inner ends and the inner ends of the sockets C, and which are made of such a length that the hooks D may be pushed entirely into the sockets C, should the said hooks strike the bridge as the boat comes into place. The forward movement of the hooks D is limited by pins F attached to them, and which strike against pins G attached to the sockets C, or by other suitable stops. To the deck-frame of the bridge B are secured sockets H, in the inner ends of which are pivoted the inner ends of bars I. The forward ends of the bars I are beveled off, and have shoulders or hooks formed upon them to interlock with the hooks D and fasten the boat. The forward ends of the hooks I are held up to catch upon and hold the hooks D by springs K placed beneath said forward ends, and secured to the bottoms of the sockets H. To the hooks I are attached levers J, which pass up through slots in the floor of the bridge to enable the said hooks to be pressed down to release the boat. To the side parts of the curved forward edge of the boat-deck are pivoted small wheels a' to strike against and roll along the concaved edge of the bridge, to guide the boat into position and to center it by entering recesses b^1 in the edge of the bridge. The boat and bridge are leveled by guide-bars b^2 attached to the bridge B, and the forward ends of which project and are beveled off upon their inner sides, as shown in Fig. 2.

Having thus fully described our invention, we claim as new and desire to secure by Letters Patent—

1. In an automatic ferry-boat coupling, the combination of the sockets C H, the hooks D I, the springs E K, and the levers J, all constructed and arranged substantially as herein shown and described.

2. In an automatic ferry-boat coupling, the combination of the wheels a', the recesses b^1, and the guide-bars b^2, for guiding the hooks D into the sockets H to interlock with the hooks I, substantially as herein shown and described.

THOS. D. HUSBAND.
GEO. E. HUSBAND.

Witnesses:
HENRY W. CLUM,
D. L. GRONENGER.

N. P. INGALLS.

PROPELLING BOATS, &c.

No. 180,884. Patented Aug. 8, 1876.

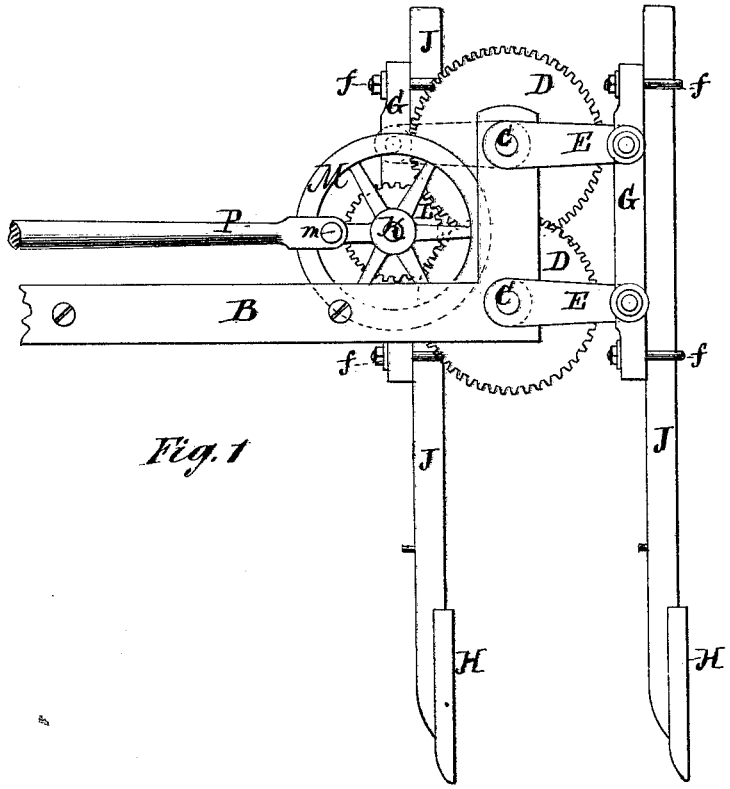

Fig. 1

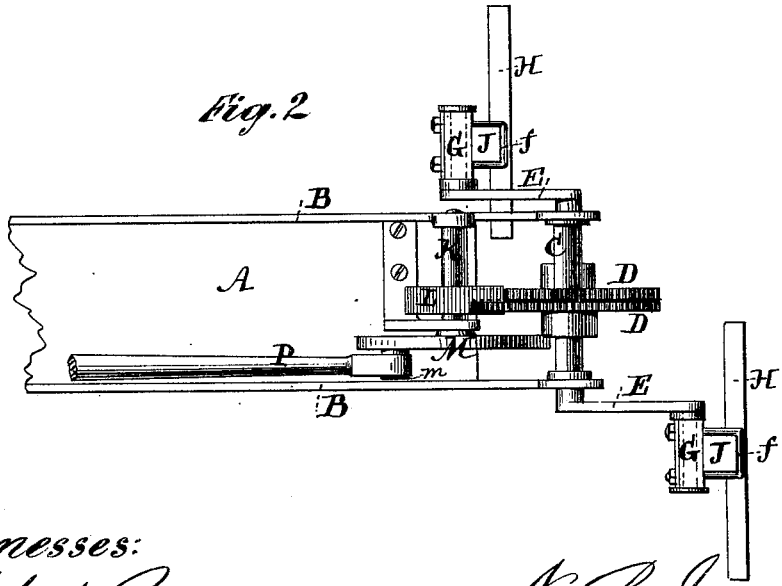

Fig. 2

Witnesses:
Michael Ryan
Fred. Haynes

N. P. Ingalls
by his Attorneys
Brown & Allen