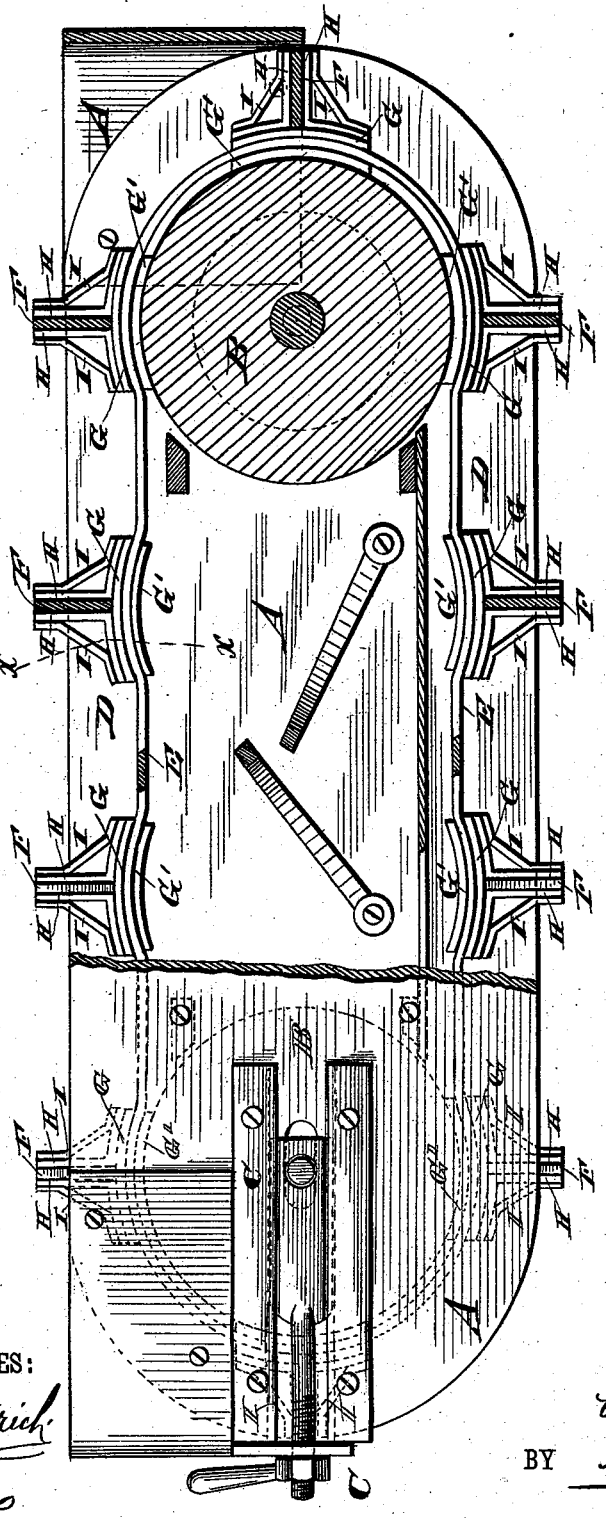
(No Model.) 2 Sheets—Sheet 1.

W. H. SILSBY.

PADDLE BELT FOR PROPELLERS.

No. 381,286. Patented Apr. 17, 1888.

Fig. 1.



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(No Model.) 2 Sheets—Sheet 2.

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Fig. 2.

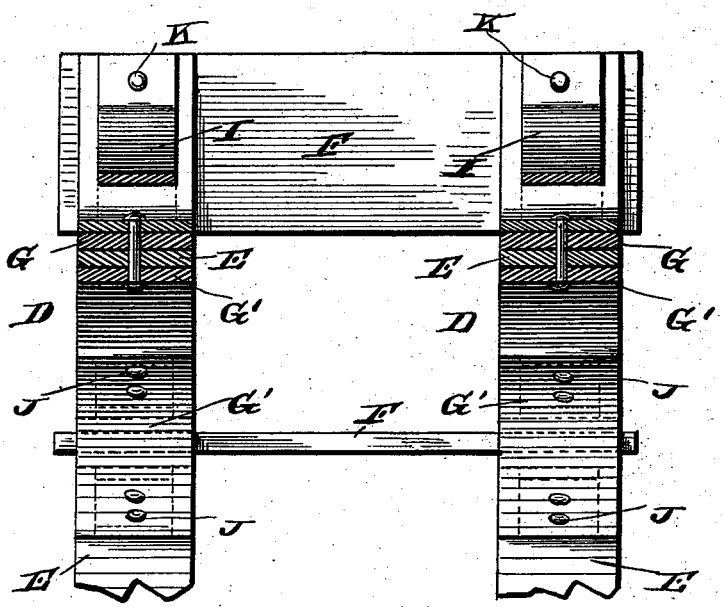
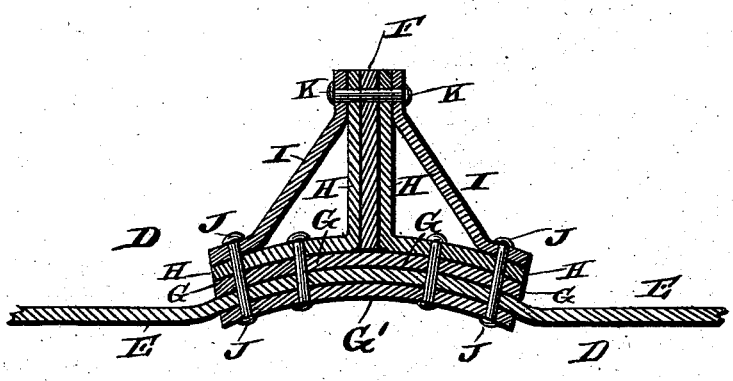


Fig. 3.



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UNITED STATES PATENT OFFICE.

WILLIAM HENRY SILSBY, OF MARTIN'S FERRY, CALIFORNIA.

PADDLE-BELT FOR PROPELLERS.

SPECIFICATION forming part of Letters Patent No. 381,286, dated April 17, 1888.

Application filed November 10, 1887. Serial No. 254,769. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM HENRY SILSBY, of Martin's Ferry, in the county of Humboldt and State of California, have invented a certain new and useful Improvement in Paddle-Belts for Propellers, of which the following is a specification.

My invention has reference in general to propellers in which endless belts armed with paddles run over cylindrical end pulleys, so as to give a long straight stroke in the water, and in particular to the means employed for attaching the paddles to the endless bands forming the body of the paddle-belt.

The object of the improvement is to provide for the rigid attachment of the paddles to the bands, while allowing the bands to conform to the shape of the cylindrical pulleys over which they run, so as to take a proper hold thereon.

The invention consists in a novel construction and arrangement of paddle-attaching devices, substantially as hereinafter described, and pointed out in the claims.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar letters of reference indicate corresponding parts in all the figures.

Figure 1 is a side partly-sectional view of a propeller provided with a paddle-belt embodying my improvement. Fig. 2 is a cross-sectional view of the paddle-belt on the line *x x*, Fig. 1. Fig. 3 is a sectional side view of a part of the same.

A designates the housing; B, the cylindrical belt-pulleys, of which one is the driving-pulley; and C, the pulley-adjusting or belt-tightening devices of a propeller, which is provided with an endless paddle-belt, D, constructed in accordance with my improvement.

The paddle-belt D is composed in this case of two parallel endless flat flexible bands, E, by preference of metal, which are connected at intervals by the transverse paddles F in a well-known way. Beneath the ends of each paddle F each band E is bent to the curve of the pulleys B, or at least the driving-pulley over which it runs, and to this curved portion is riveted or otherwise secured a rigid plate, G, or, preferably, as here shown, are secured to opposite sides thereof two rigid plates, G G′, in the shape of cylindrical segments conforming to the pulleys B.

The plates G G′ serve as a base for the rigid attachment of paddles F, while causing the bands in passing over the pulleys B to embrace the same as they would if wholly flexible, so that slipping of the paddle-belt is prevented.

In fixing the ends of the paddles to the rigid plates G, two uprights, H, have their feet riveted or otherwise secured to the middle part of each outer plate, G, the band E, and the inner plate, G′, and receive closely between them the end of the corresponding paddle F.

Inclined braces I have their lower ends secured to the outer ends of the outer plate, G, preferably by bolts or rivets J passing through said plate G, the band C, and the inner plate, G′, and their upper ends attached to the opposite uprights H, and hence to the paddle F, preferably by a rivet or bolt, K, passing through said braces, posts, and paddle, as shown in Fig. 3. The paddles are in this way held at all times unyieldingly in a position perpendicular to the bands, so as to be most effective in their action on the resisting medium.

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

1. A paddle-belt consisting of a flat pliant band and rigid warped plates of a width equal to the band, and carrying paddles attached at intervals to the face of the band, the outer and inner faces of each plate being constructed to form concentric cylindrical segments, and the band being applied to one of said faces so as to permanently assume the curve of the same, substantially as described.

2. A paddle-belt consisting of a flat pliant band, warped cylindrical plates, carrying paddles, applied at intervals to the face of the band, and fastening-rivets passed through the plates and apertures in the flat band, substantially as described.

3. A paddle-belt consisting of a flexible band having a series of rigid curved plates fastened thereto, each plate having a pair of uprights fixed thereto, between which a paddle is interposed, inclined side braces, bolts or rivets uniting the upper ends of the braces and posts and the paddle, and other bolts or rivets uniting the lower ends of the braces, the rigid curved plates, and the band, substantially as described.

WILLIAM HENRY SILSBY.

Witnesses:
J. W. GRAHAM,
E. M. CALLAHAN.