No. 801,722. PATENTED OCT. 10, 1905.

O. F. LANE.

FLEXIBLE COUPLING.

APPLICATION FILED OCT. 31, 1904.

Fig. 1.

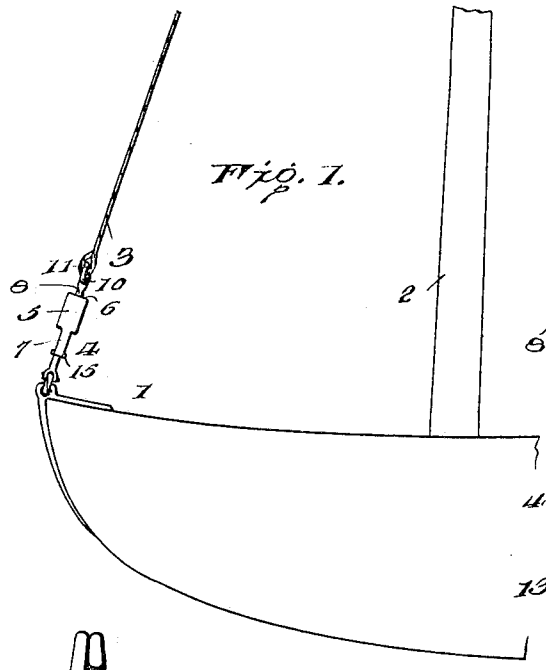


Fig. 2.

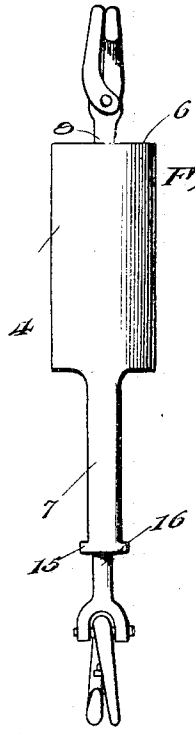
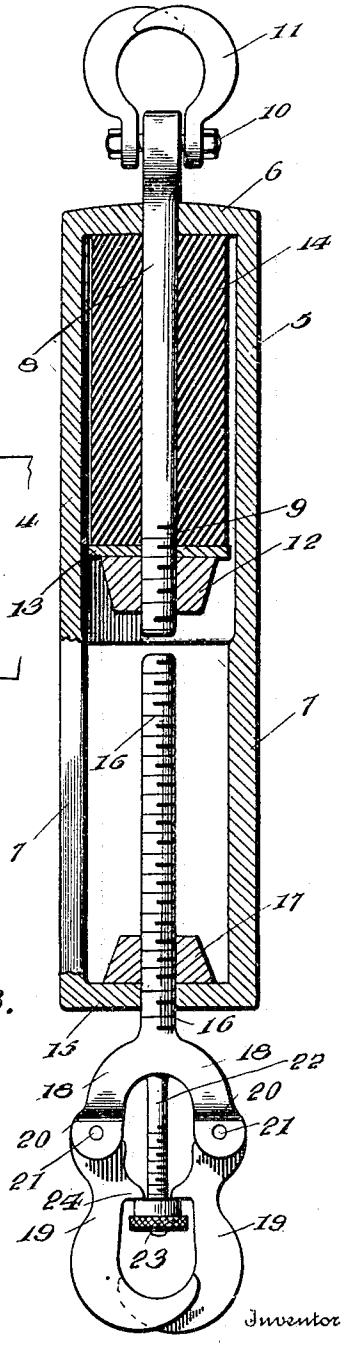


Fig. 3.



Witnesses

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UNITED STATES PATENT OFFICE.

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FLEXIBLE COUPLING.

No. 801,722. Specification of Letters Patent. Patented Oct. 10, 1905.

Application filed October 31, 1904. Serial No. 230,790.

To all whom it may concern:

Be it known that I, ORIAN F. LANE, a citizen of the United States, residing at Forked River, in the county of Ocean and State of New Jersey, have invented certain new and useful Improvements in Flexible Couplings, of which the following is a specification.

This invention relates to couplings, and in its preferred adaptation is especially designed for attaching wire ropes or the like to parts to which same may be secured. The coupling is constructed so as to have a certain amount of flexibility and may be advantageously used as means for connecting stays supporting the mast of a vessel to the hull, the device being adapted to afford a spring connection, permitting bending of the mast in heavy weather, relieving the hull of the strain incident to the use of rigid connections, such as the ordinary turnbuckle.

For a full description of the invention and the merits thereof, and also to acquire a knowledge of the details of construction of the means for effecting the result reference is to be had to the following description and accompanying drawings.

While the invention may be adapted to different forms and conditions by changes in the structure and minor details without departing from the spirit or essential features thereof, still the preferred embodiment thereof is shown in the accompanying drawings, in which—

Figure 1 is a view showing embodiment of the invention. Fig. 2 is a side elevation of a coupling. Fig. 3 is a longitudinal sectional view.

Corresponding and like parts are referred to in the following description and indicated in all the views of the drawings by the same reference characters.

In carrying out the invention the coupling is shown as when used upon a vessel in a manner mentioned above. However, it will be understood that the device is susceptible of application in any capacity wherein a flexible or spring connector admitting of a certain amount of give to the parts connected thereby may be desired.

In the drawings, 1 designates the bow of a boat, 2 the mast, and 3 one of the stays of the mast. The stay 3 is connected to the stem-iron of the boat by means of a coupling 4, such as constitutes the invention. Describing the exact structure of the coupling 4, the same comprises a body 5, consisting of a casing or barrel closed at one end, as shown at 6, and open at its opposite end. Projecting from the open end of the casing 5 is a loop or frame 7 of somewhat rectangular form, and this loop is preferably integral with the casing 6. The parts 5 and 7 are designed to be made of metal and the integrality of the structure is preferred. The closed end 6 of the casing 5 is provided with an opening through which passes a bar 8, said bar extending into the casing 5 and having its inner end threaded, as shown at 9. The outer end of the bar 8 projects a short distance from the portion 6 of the casing 5, being provided with a transverse opening through which is passed a pin 10, the latter forming a pivot for a loop 11. The loop 11 is made in two pieces or sections, each of which is of hook form and pivoted to the member 10, the sections of the loop being disposed upon opposite sides of the outer end of the bar 8. The sections of the loop 11 may be separated in order to introduce a part into the body of the loop, when by closing the sections the part embraced therein will be effectively held from displacement. A nut 12 is screwed upon the threaded end portion 9 of the bar 8 and operates against a plate or washer 13, between which and the closed end 6 of the casing 5 is interposed a cushioning device. The cushioning device preferably consists of a block of rubber, (shown at 14,) said rubber lending the necessary resiliency and flex to the coupling. The loop 7 has the end bar 15 thereof also provided with an opening and a threaded rod 16, passing through this opening, being secured to the part 7 by means of a nut 17 of somewhat tapering form to enable ready manipulation thereof. The threaded portion of the rod 16 is received between the sides of the loop 7, and the outer end of the said rod is bifurcated, as shown at 18. The bifurcated portion 18 of the member 16 forms a support for a connecting device located at the end of the coupling opposite that provided with the sectional loop 11. For the above purpose hooks 19 are pivoted to the bifurcate portions 20 of the rod 16, the points of pivotal support being shown at 21. The hooks 19 are adapted to be drawn together so that the hook ends thereof will pass each other and form a closed member adapted to receive the attaching part. For drawing the members 19 together an adjustable device is utilized, which comprises a stem 22, projected from the rod 16 between the bifurcate portions 20 thereof, and the outer end of this

stem is threaded to receive an adjusting-nut 23. The nut 23 coöperates with the members 19, the latter being provided with inwardly-extending lugs or engaging members 24, against which the nut 23 is adapted to abut, and thereby hold the members 19 from separating.

The device hereinbefore described is comparatively simple in structure and operation, and an important feature of the invention resides in the fact that the coupling may be quickly secured to the parts which it is designed to connect, accomplishing a saving of time. Adjustment of the rod 16 will admit of taking up all necessary slack, and in addition to this the provision of the cushion 14 will permit a certain amount of give in the connection desirable under conditions which have been before premised upon.

Having thus described the invention, what is claimed as new is—

1. In a coupling, a supporting member, hooks pivoted to said supporting member, a stem carried by the supporting member longitudinally thereof and arranged between the hooks aforesaid, and a device coöperating with the stem for drawing the hooks together.

2. In a coupling, a supporting member, hooks pivoted to said supporting member, a stem extended between said hooks, engaging members projected from the hooks, and an element adjustable upon the stem and coöperating with said engaging members to force the hooks together.

3. In a coupling, the combination of a supporting member bifurcated at one end, hooks pivoted to the bifurcate portions of said member, lugs projected from the inner sides of said hooks, and an adjusting device coöperating with said lugs to draw the hooks together.

4. In a coupling, the combination of a supporting member bifurcated at one end, hooks pivoted to the bifurcated portions of said member, lugs projected from the inner sides of said hooks, an integral stem projected from the supporting member between said bifurcate portions and threaded at its outer end, and a nut adjustable upon the stem and engaging the lugs aforesaid for the purpose specified.

5. In a coupling, the combination of a casing closed at one end and open at the opposite end, an integral loop projected from the open end of the casing and having an opening in the extremity thereof, a threaded rod passing through the opening in the loop, an adjusting-nut upon said rod, the outer end of said rod being bifurcated, hooks pivoted to the bifurcate members, lugs projected from the inner sides of said hooks, a stem extending from the threaded rod between said bifurcate members, a nut mounted upon said stem and engaging the lugs aforesaid, the closed end of the casing being provided with an opening, a bar passing through the last-mentioned opening, and having its inner end threaded, a nut mounted upon the inner threaded end of the bar, a cushion between said nut and the closed end of the casing, and an attaching-loop carried by the outer end of said bar.

In testimony whereof I affix my signature in presence of two witnesses.

ORIAN F. LANE. [L. S.]

Witnesses:

JOSEPH PARKER,

DANIEL S. HOLMES.