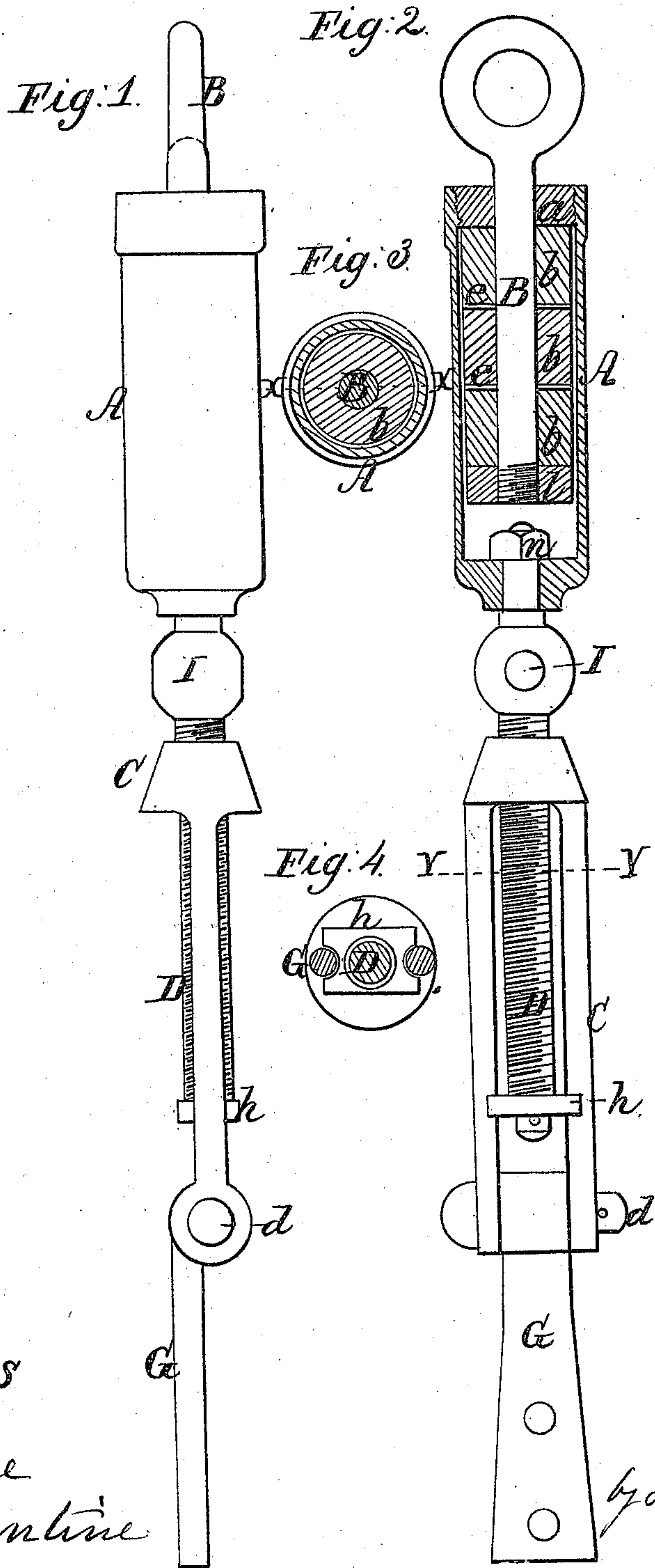


W. H. Shock.

Elastic Coupling.

N^o 97,238.

Patented Nov. 23, 1869.



Witnesses

P. T. Dodge

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WILLIAM H. SHOCK, OF BALTIMORE, MARYLAND.

Letters Patent No. 97,238, dated November 23, 1869.

IMPROVEMENT IN SPRING TURNBUCKLE FOR WIRE RIGGING

The Schedule referred to in these Letters Patent and making part of the same.

To all whom it may concern:

Be it known that I, WILLIAM H. SHOCK, of Baltimore, in the county of Baltimore, and State of Maryland, have invented certain new and useful Improvements in Ship's Rigging; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, making part of this specification, and to the letters of reference marked thereon, like letters indicating like parts wherever they occur.

To enable others skilled in the art to construct and use my invention, I will proceed to describe it.

My invention consists of an improved spring-fastening for the standing rigging of ships or vessels, and intended more especially for use in connection with wire-rope rigging.

Figure 1 is a side elevation of my improved device, ready for use;

Figure 2 is a similar view with the upper portion shown in section, on the line *z z* of fig. 3;

Figure 3 is a transverse section on the line *z z* of fig. 1; and

Figure 4 is a similar view, taken on the line *y y* of fig. 2.

Since the introduction of wire-rope rigging for vessels, it has become necessary to provide some means for rendering the same more yielding, in order to protect the rigging and its fastenings from the injury that would otherwise occur from the sudden jerks and strains to which they are subjected by the rolling and pitching of the vessel.

It is also necessary that the device used for this purpose should be so constructed as to be available in the various regions and climes that vessels are necessarily compelled to visit.

It is further desirable that the apparatus should be strong and compact, occupying as little room as possible, and capable of adjustment, in order to tighten up or loosen the rigging, as may be desired.

I construct a tube, A, of metal, with a hole in its bottom to receive the upper end of a screw-rod, D, which turns loosely therein, and is secured thereto by a nut, *n*, or in any other suitable manner. This screw-rod D has an enlargement, I, just below the bottom of the tube A, with a hole through it for the insertion of lever or rod for turning it.

A stirrup, C, is provided, having a head with a screw cut in it, for the rod D to work in, the lower end of this stirrup C being pivoted by a pin or bolt, *d*, to a metal strap, G, which is to be bolted securely to the side of the vessel.

To the lower end of the rod D is secured loosely a guide, *h*, the ends of which are recessed so as to slide upon and be guided by the side-bars of the stirrup C,

and thus prevent the screw-rod D from becoming bent or jammed in the head of the stirrup.

I provide a bolt, B, with an eye at its upper end, to which the rigging is to be securely fastened; and on this bolt B is slipped a series of rubber disks, *b*, of somewhat less diameter than the interior of the tube A, there being a thin metal disk or washer, *e*, placed between each of the adjoining rubber cushions, as represented in fig. 2.

There is also a metal disk, *a*, of proper size to fit into the end of the case A, slipped on to the bolt B before the rubber is placed thereon, with a screw-thread cut on its periphery to fit into a corresponding screw cut on the interior of the case at its upper end.

Another disk, *l*, is screwed on to the end of the bolt B after the rubber disks are applied, this disk *l* being of such a size as to permit it to move freely within the tube A.

For greater security, the disk *l* and the nut *n*, or either of them, may be prevented from unscrewing by having the end of the rods slightly headed down, or they may be secured by a pin or a jam-nut.

In preparing the apparatus for use, the rubber cushions *b* should be made of such a diameter that they may be compressed vertically when strain is brought upon them, and thus permit the rigging to yield to the required extent, by the time their lateral expansion shall cause their peripheries to come in contact with the inner walls of the case, beyond which point their vertical compression cannot extend.

Were it not for this tubular case surrounding the rubber, and thus confining it within certain fixed limits, it would be forced sidewise out of position, and thus rendered useless for the purpose intended, but, by being thus inserted within the case, it is permitted to yield sufficiently for the purpose desired, and at the same time is kept in position and preserved from injury.

By these means, I am enabled to produce a device that is strong, durable, compact, and neat, and that admirably answers the desired end.

Having thus described my invention,

What I claim, is—

The apparatus, consisting of the tubular case A, having the screw-rod D and stirrup C secured thereto, and provided with the bolt B, having the rubber springs or disks *b* fastened thereon, all constructed and arranged to operate substantially as and for the purpose set forth

WM. H. SHOCK.

Witnesses:

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