

Smith & Fludder

Sails & Rigging

Fig. 1. N^o 38,919. Patented Jun 16, 1863.

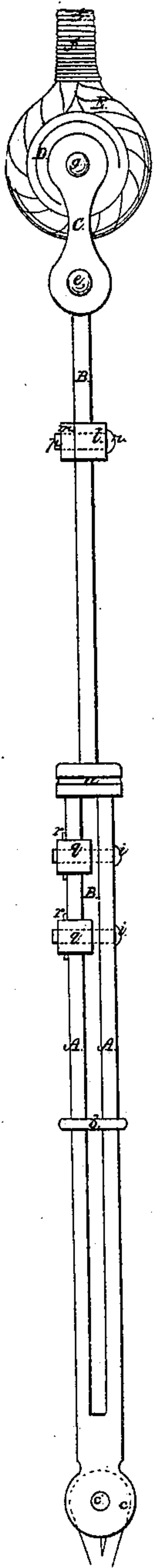


Fig. 3.

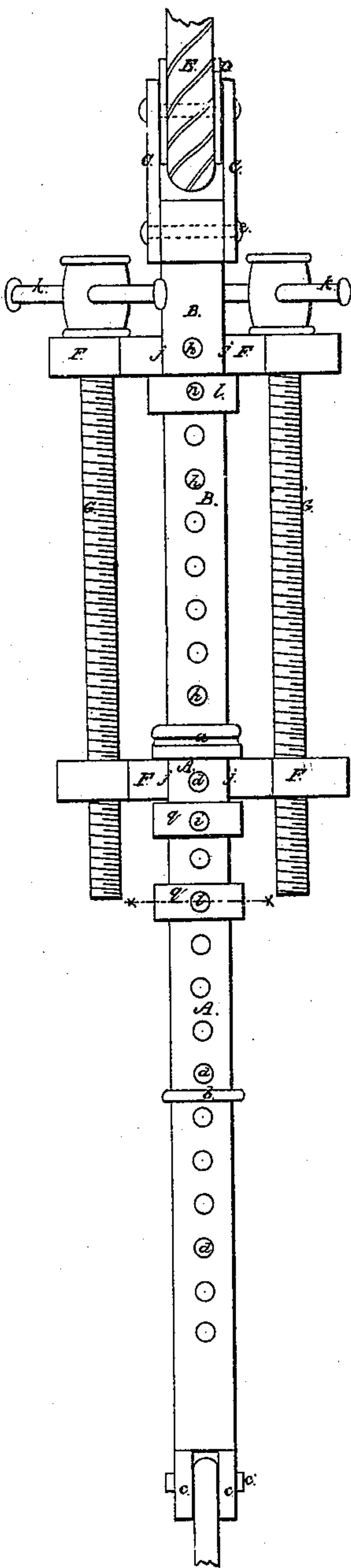


Fig. 2.

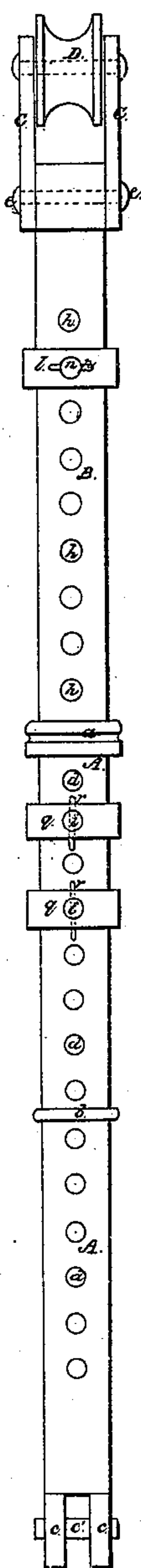


Fig. 5.

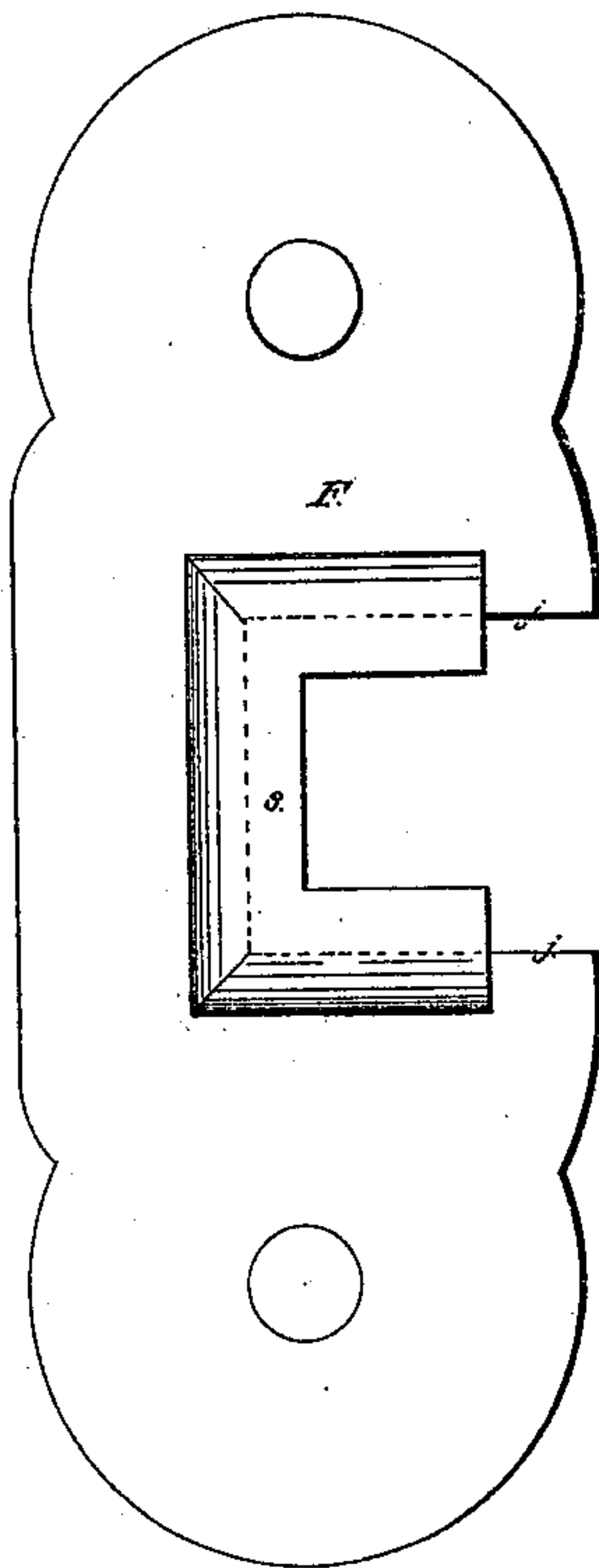
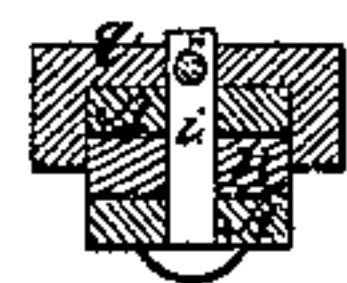


Fig. 4.



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UNITED STATES PATENT OFFICE.

SAMUEL SMITH AND WILLIAM H. FLUDDER, OF NEWPORT, RHODE ISLAND.

IMPROVED MEANS OF SETTING UP SHIPS' RIGGING.

Specification forming part of Letters Patent No. 38,919, dated June 16, 1863.

To all whom it may concern:

Be it known that we, SAMUEL SMITH and WM. H. FLUDDER, of Newport, in the county of Newport and State of Rhode Island, have invented a new and useful Improvement in Setting Up the Standing-Rigging of Ships and other Vessels; and we do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawings, forming part of this specification, in which—

Figure 1 is a side view of the devices which we substitute for the dead-eyes and rope lanyards commonly employed. Fig. 2 is a front view of the same. Fig. 3 is a view the reverse of Fig. 2, showing the application of the screw-blocks and screws which we employ to shorten the iron lanyards and set up the rigging. Fig. 4 is a transverse section of the iron lanyard in the line *xx* of the Fig. 3. Fig. 5 is a top view on a larger scale of one of the screw-blocks.

Similar letters of reference indicate corresponding parts in the several figures.

This invention consists in an improved construction of an iron or other metal lanyard and mode of combining the same with the shroud or stay; also, in a mode of combining screw-blocks and screws with such lanyard for the purpose of shortening it to set up the shroud or stay.

To enable others skilled in the art to make and use our invention, we will proceed to describe its construction and operation.

A and B are the two pieces of wrought-iron or other suitable metal of which the lanyard is mainly composed. The piece A may be termed the tube, for, though it is open at the sides for the greater portion of its length, it is made to partake of the character of a tube by having bands *a* and *b* forged or otherwise made upon it. It is made with jaws *c c* at its lower end to enable it to be attached by a pin, *c'*, to the chain-plate or to an eye-bolt, and it has provided in it a series of holes, *d d*, at equal distances apart, the said holes being made right through it. The piece B, which may be termed the "rod," is made of a piece of straight, flat bar-iron of a size to fit and slide easily within the hole A, and with an eye at the top for the reception of a pin, *e*, by which to connect the lower ends of two short metal links, C C, the upper ends of

which are connected by a pin, *g*, with a metal thimble, D, around which the shroud or stay E is bent and secured by a seizing, *f*. The said rod B has holes *h h* provided in it, corresponding in size and arrangement with the holes *d d* in the tube for the reception of bolts *i i*, which are inserted through the tube and rod to secure them together after the shroud or stay has been set up. The thimble D may be made of cast-iron of circular or heart shape, and should be solid, with the exception of having a hole for the reception of the pin *g*.

F F' are two screw-blocks, and G G two screws fitted thereto for drawing down the rod B into the tube A, and thereby setting up the shroud or stay. The blocks F F' have each a recess, *j j*, made in one side, of a width to receive within it the tube A or rod B. The screws are arranged on opposite sides of the said recesses, both passing freely through holes provided in the block F and screwing into tapped holes in the block F'. The heads of the said screws are made large enough to have a good bearing against the block F, and are fitted with sliding levers K K, by which to turn them. To enable these blocks to be properly applied, a metal strap, *l m*, is put on the rod B at a suitable distance above the collar *a* on the tube A, and a bolt, *n*, is inserted through a hole in the said strap and through one of the holes *h* in the rod B to secure the said strap, the said bolt being secured in place by a head at one end and a pin, *p*, inserted transversely through it near its other end. To enable the strap *l m* to be put on and taken off the rod B while the latter is partly received within the tube A, the said strap is made in two pieces of such forms that the two together surround the rod. To set up the shroud or stay the strap *l m* is put on the rod B, and blocks are applied to the lanyard—one above the said strap, and the other below the collar *a* of the tube—and the screws G G, one of which is now on each side of the lanyard, are turned equally in a direction to draw the blocks toward each other, and so draw them tight against the said strap and collar. The bolts *i i* are then withdrawn from the lanyard, and the screws are again turned in the same direction as before, to draw down the rod into the tube and so shorten the lanyard and extend the shroud or stay,

and when the latter has been sufficiently extended the rod B should be brought to such a position that some of the holes *h h* in that part of it which is within the tube A range with the holes *d d* in the tube, and the bolts *i i* are inserted to secure the rod, and the screw-blocks and screws are removed. We prefer to use at least two bolts, *i i*, as by that means the rod is better prevented from working in the tube, and in order to prevent the said bolts from turning in the holes we apply to each a plate, *q*, the ends of which are turned to fit over the sides of the tube, as shown in Fig. 1, and insert a transverse pin, *n*, through holes in both the bolt and plate. As the size of this lanyard should be proportioned to the size of the shroud or stay to which it is applied, and will thus vary considerably, it is desirable to make one set of screw-blocks and screws serve for all sizes. We propose to make the blocks with recesses *j j* large enough for the largest-sized lanyards, and to fit the said recesses with lining-pieces *s*, as shown in Fig. 5, to adapt them to the smaller sizes, and always keep the two screws at equal distances from the lanyard, and thereby equalize the strain on the screws. One screw should preferably have a right and the other a left hand thread, as then the two can be worked alike by one man—one with each hand—and the strain is kept alike on each screw, and the

pull on the lanyard is directly in line with its centers. A single screw might be applied with or without a back guide, but we prefer to use the two, as described.

Our improved lanyard and its attachments can be made for about the same expense as the two dead-eyes, the rope lanyard and the rope required to encircle the upper dead-eye, while it is much more durable, can be set up more easily and with fewer hands, and as the setting up can be done from inboard it can be done in any weather.

A ratchet and pawls might be substituted for the bolts *i i* and holes *h h* and *d d* to secure the rod B in the plate A.

What we claim as our invention, and desire to secure by Letters Patent, is—

1. The lanyard composed of a metal tube, A and rod B, combined with each other, and the shroud, stay, or other portion of the standing rigging, substantially as herein specified.

2. The employment, in combination with such lanyard, of a strap, *l*, or its equivalent, screw-blocks F F', and a screw or screws, G, substantially as and for the purpose herein specified.

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