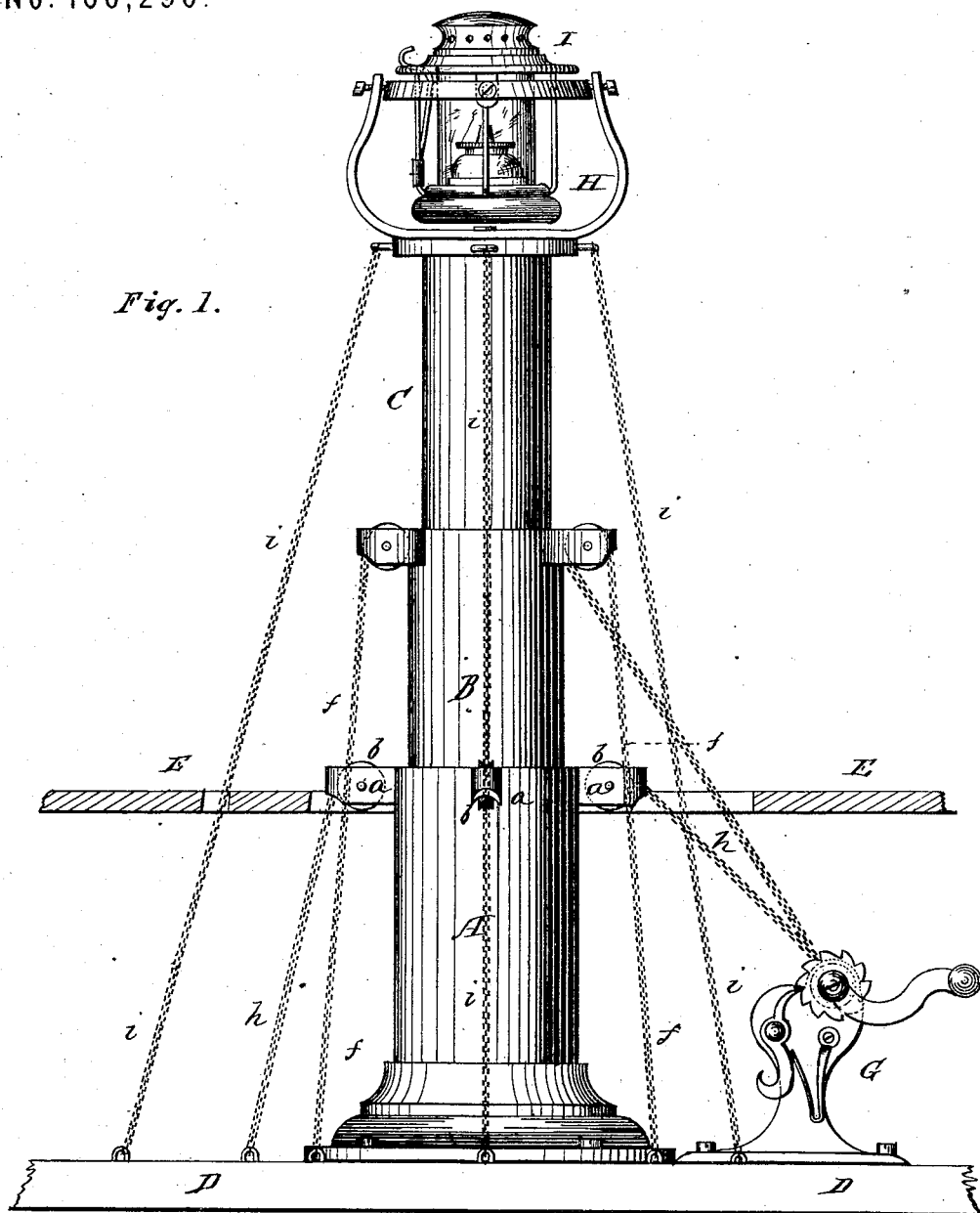


S. D. TRENCHARD.

Telescopic-Tower for Light-Ships.

No. 160,290.

Patented March 2, 1875.



WITNESSES:

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W. C. McArthur

INVENTOR:

Stephen D. Trenchard

per. *C. H. Watson & Co*
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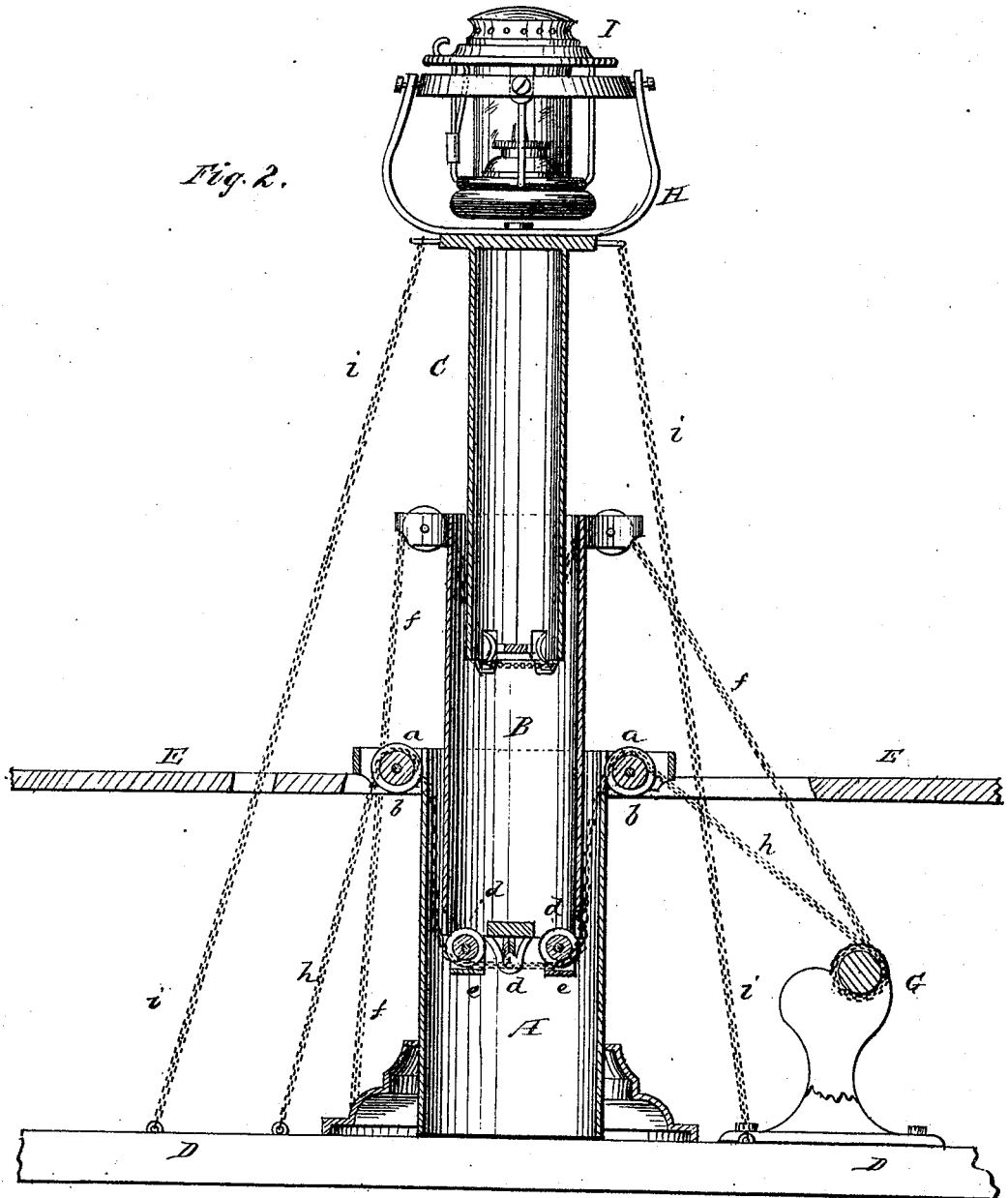
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Fig. 2.



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UNITED STATES PATENT OFFICE.

STEPHEN D. TRENCHARD, OF NEW YORK, N. Y.

IMPROVEMENT IN TELESCOPIC TOWERS FOR LIGHT-SHIPS.

Specification forming part of Letters Patent No. **160,290**, dated March 2, 1875; application filed February 6, 1875.

To all whom it may concern:

Be it known that I, STEPHEN D. TRENCHARD, of New York, in the county of New York and State of New York, have invented certain new and useful Improvements in Light-Ships; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to which it pertains to make and use the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form a part of this specification.

In light ships, as now generally constructed, a mast is required of suitable height, near the top of which is a round platform, supported upon spars attached to the mast, and on this platform are arranged a series of lamps, (generally eight,) so as to throw light in every direction, and prevent the mast from intercepting the light from any point. This arrangement makes the top very heavy and clumsy, and at times dangerous, making the light-ship liable to careen over.

To obviate these difficulties is the object of my invention; and it consists in a sectional tower, carrying a single lamp or lantern at its upper end, and raised and lowered, as required, either from below the deck, or on top of the deck, and in the combination of parts, as will be hereinafter more fully set forth.

In the annexed drawing, Figure 1 is a side elevation of my invention, showing it extended, and its position in the light-ship. Fig. 2 is a vertical section of the same.

The mast for supporting the lamp or lantern is made in three or more sections, A B C, fitting one within the other, each section being a hollow tube or cylinder of any suitable dimensions. The lower section A is secured, by any suitable means, to the keelson-rider D of the light-ship, and extends up to, or a short distance above, the deck E thereof. At the upper end of this section are four projecting ears, *a a*, at equal distances apart, said ears being slotted, and each having a pulley, *b*, pivoted therein. The second section B is, at its lower end, provided with four corresponding pulleys, *d d*, placed and pivoted in slots therein, and under each pulley is a guard, *e*, as shown. *h h* represent two chains or shrouds,

each passing under two opposite pulleys, *d*, of the second section B, above the caps *e*, then over and around two opposite pulleys, *b*, of the first section, and their ends fastened to the keelson-rider or other suitable place in the bottom of the ship. The upper end of the second section, and the lower end of the third section, are provided with pulleys in precisely the same manner, and chains or shrouds *f f* are passed around said pulleys also in the same manner, and their ends made fast.

As many sections as may be required may be used, and arranged with pulleys and chains, said chains or shrouds being of suitable length to allow of the various sections above the lower section A being raised and lowered as required.

One end of one chain or shroud in each set, instead of being fastened to the keelson-rider, is fastened to a windlass, G, by means of which the movable sections are raised and lowered.

It will be seen that while the second section B is being extended out of the bottom section A, and, of course, carries the third section C with it, said third section is at the same time extended out of the second section. The third section carries with it the fourth or subsequent section, and this one is at the same time also extended. The windlass G is provided with an ordinary pawl and ratchet, to hold the sectional tower extended; and it may be provided with a suitable brake, to regulate its movement while lowering the mast. The upper section is provided with chains or shrouds *i i*, which become tightened when the sectional tower is extended, bracing and holding the same in its place. The upper section carries on its upper end an ordinary binnacle, H, with lamp or lantern I, on which no claim is laid.

The advantages of this invention are readily seen. The sectional tower can be raised and lowered, as required, in a few moments, the lamp attended to from the deck, and when the tower is extended there is no excessive weight at the top. Furthermore, one light will answer the same purpose where heretofore generally eight have been required.

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

1 A tower for light-ships made in adjusta-

ble sections, as described, and adapted to carry a signal-light at its top, whereby the whole is adapted to be lowered to the deck of the vessel, substantially for the purpose specified.

2. The combination, with a series of tower-sections, of the pulleys *b d*, chains or shrouds *h f i*, and windlass *g*, substantially as and for the purposes herein set forth.

In testimony that I claim the foregoing as my own I affix my signature in presence of two witnesses.

STEPHEN D. TRENCHARD.

Witnesses:

EDWARD TRENCHARD,
JOSEPH J. WALTON.