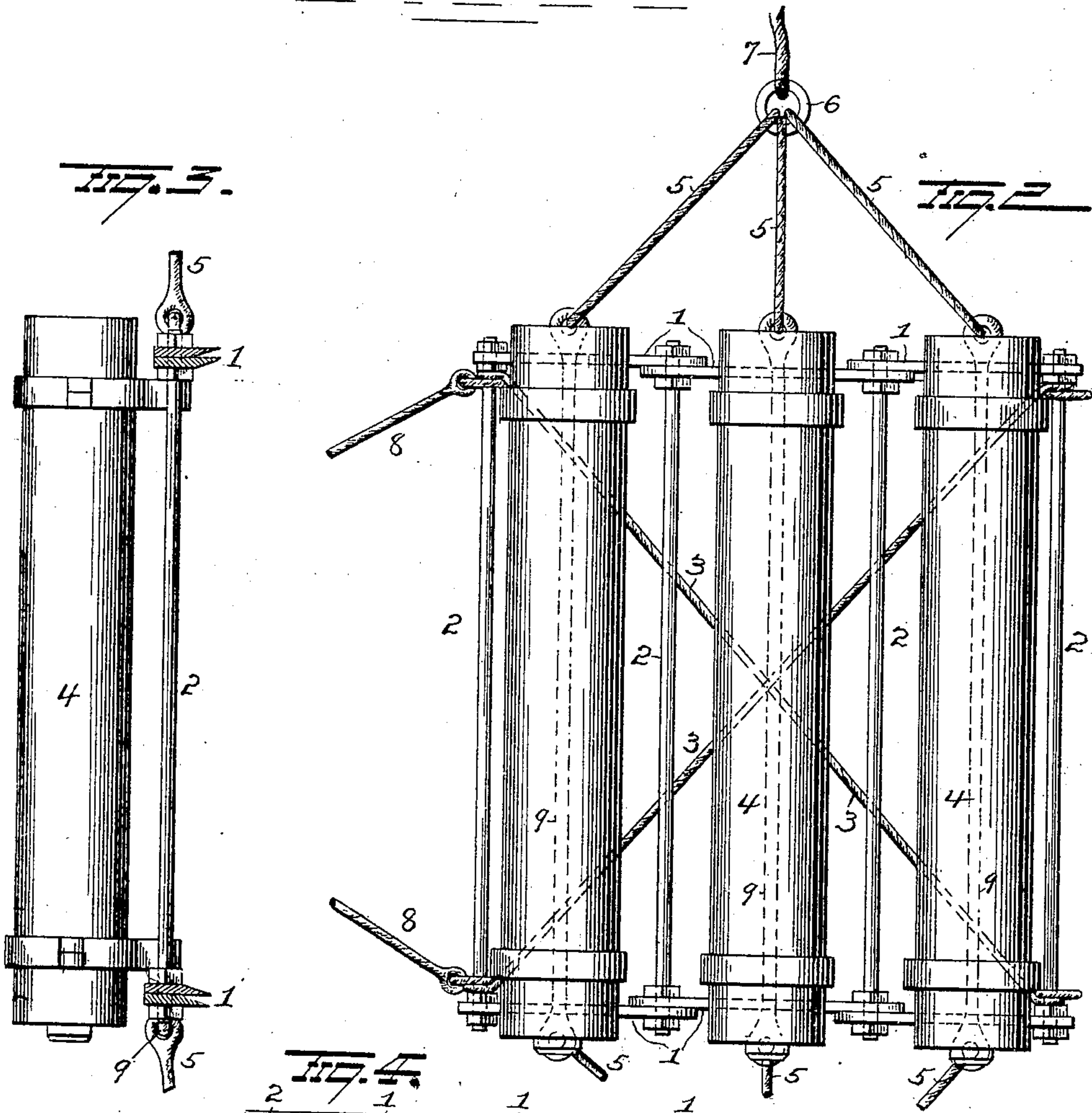
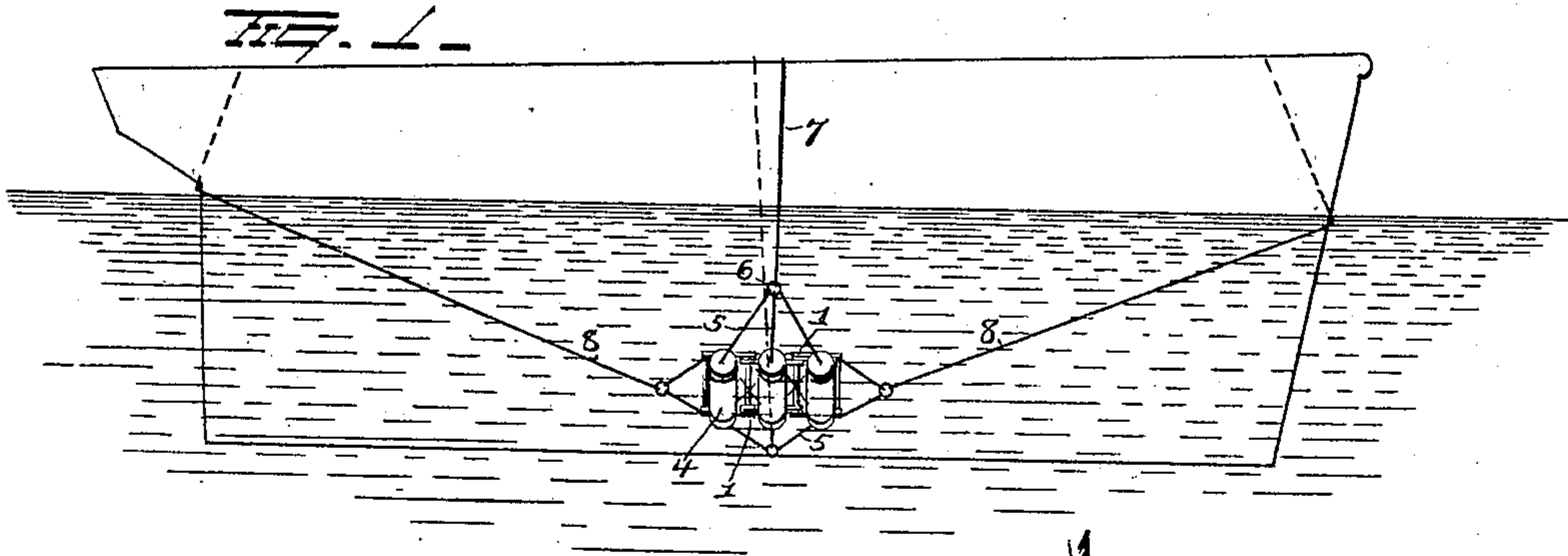


No. 832,161.

PATENTED OCT. 2, 1906.

A. R. ROGERS.
SHIP'S SCRAPER.

APPLICATION FILED JUNE 16, 1905.



WITNESSES

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ARTHUR R. ROGERS, OF JONESPORT, MAINE.

SHIP'S SCRAPER.

No. 832,161.

Specification of Letters Patent.

Patented Oct. 2, 1906.

Application filed June 16, 1905. Serial No. 265,524.

To all whom it may concern:

Be it known that I, ARTHUR R. ROGERS, a resident of Jonesport, in the county of Washington and State of Maine, have invented certain new and useful Improvements in Ships' Scrapers; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to an improved ship's scraper, and more particularly to an improved scraper for cleaning the hull of a ship while at sea, the object of the invention being to provide an improved scraper which will tightly and firmly engage the sides of the ship and which can be manipulated in any and all directions to perfectly clean the same while the ship is afloat; and the invention consists in certain novel features of construction and combinations and arrangements of parts, as will be more fully hereinafter described, and pointed out in the claims.

In the accompanying drawings, Figure 1 is a view in elevation, illustrating my improvements in operation. Fig. 2 is an enlarged view in plan of the scraper. Fig. 3 is an edge view, and Fig. 4 is a view in cross-section.

The scraper proper comprises a series of scraping bars or links 1 at each end overlapping each other and pivotally secured together by means of longitudinal rods 2, passed through openings therein and secured by nuts, as shown, and diagonal flexible brace-rods or cables 3 are provided to give necessary rigidity to the structure, yet permit sufficient flexibility to conform to the curvature of the ship's hull at any point. Secured to this scraper construction above described are a series of air-tubes 4, which may be of any shape and any number provided to suit conditions, although an air-tube is preferably provided for each flexible scraper-section, and the air-tubes may be located longitudinally or laterally of the scraper, as preferred. These air-tubes are to be filled with air in any approved manner and serve to hold the scraper up to the hull by reason of the buoyancy of the air-tubes and firmly engage the hull to scrape all matter therefrom.

A series of short ropes 5 connect the ends of rods or cables 9 with rings 6, and the latter are connected to ropes 7 to be passed around the ship, and other ropes or cables

8 are connected to the corners of the scraper and pass fore and aft around the hull, and by manipulating these ropes or cables the scraper can be moved in any direction back and forth to thoroughly scrape the hull while in the water.

By reason of the improved construction above described, in which a scraper comprising a series of sections flexibly connected together and having air-tanks on each section to hold the scrapers up to their work, a hull can be perfectly cleaned without the necessity of placing the ship in dry-dock, and a great saving of time and money is the result.

Slight changes might be made in the general form and arrangement of the parts described without departing from my invention, and hence I do not restrict myself to the precise details set forth, but consider myself at liberty to make such slight changes and alterations as fairly fall within the spirit and scope of my invention.

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

1. In a ship-cleaning apparatus, the combination of two series of horizontally-disposed scrapers, rods or bars pivotally connecting the scrapers together and connecting one series with the other, buoying-bodies attached to said series of scrapers, means for moving the apparatus vertically to scrape the hull of a ship, and means for moving the apparatus sidewise from end to end of the ship's hull.

2. In a ship-scraper, the combination of two series of pivoted scrapers, a series of buoyant devices, each buoyant device secured at its respective ends to scrapers of the respective series of scrapers, and means for moving said apparatus against the hull of a ship.

3. A scraper, comprising a series of scraping-bars at each end, longitudinal rods pivotally securing the bars together, flexible diagonal braces connecting the bars, and air-tubes secured on the bars.

In testimony whereof I have signed this specification in the presence of two subscribing witnesses.

ARTHUR R. ROGERS.

Witnesses:

DANFORD O. FRENCH,
GEORGE A. LEIGHTON.