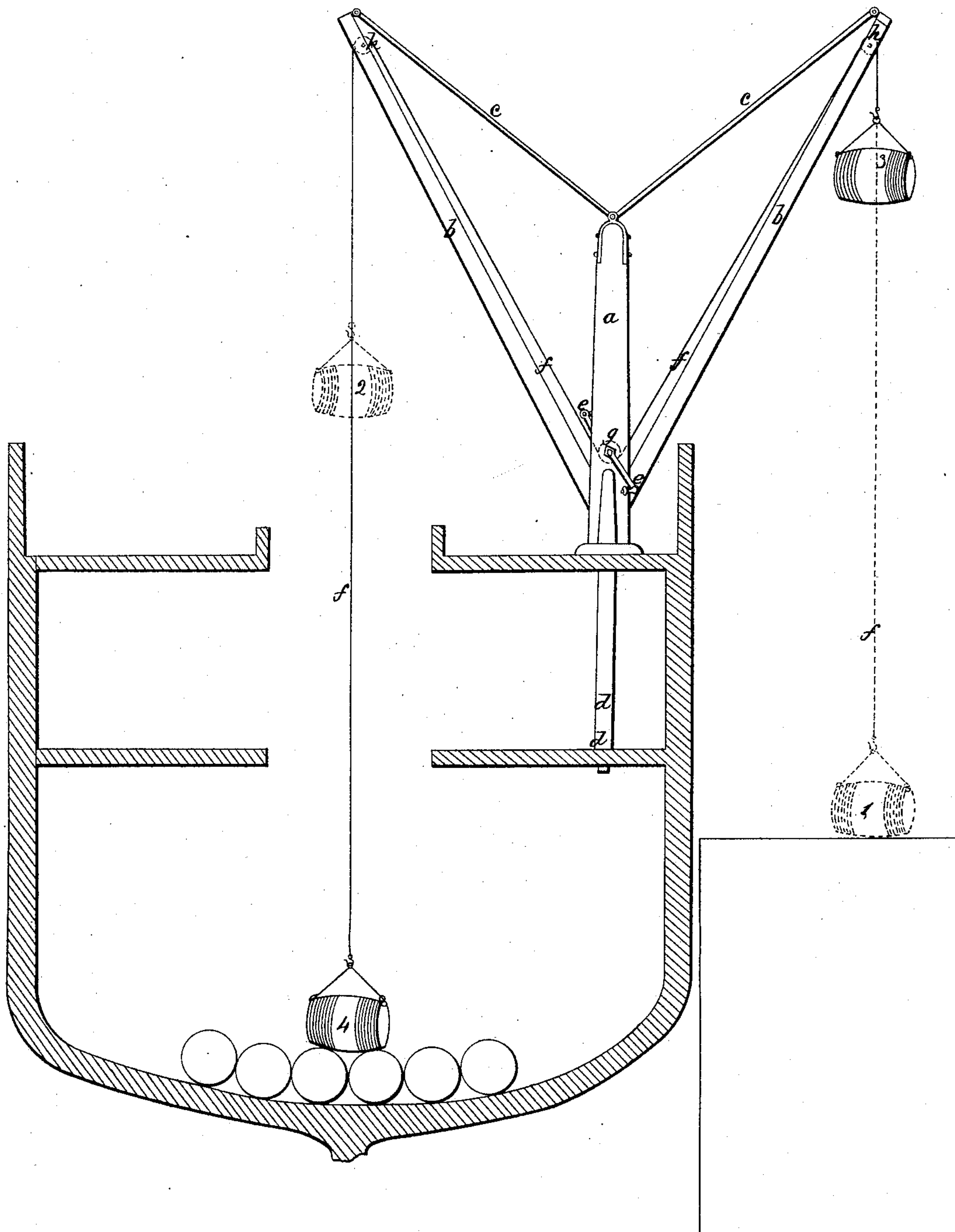


T. Godwin,

Derrick.

N^o 953.

Patented Oct. 2, 1838.



UNITED STATES PATENT OFFICE.

THOMAS GODWIN, OF NEW YORK, N. Y.

IMPROVEMENT IN THE LABOR-SAVING CRANE FOR LOADING OR DISCHARGING GOODS ON BOARD OF VESSELS, AND APPLICABLE TO OTHER PURPOSES.

Specification forming part of Letters Patent No. 953, dated October 2, 1838.

To all whom it may concern:

Be it known that I, THOMAS GODWIN, of the city of New York, in the State of New York, have invented an Improved Crane for the Purpose of Loading or Discharging Goods on Board of Vessels and for Hoisting and Lowering Heavy Articles in Various other Situations, which improved apparatus I denominate the "Labor-Saving Crane;" and I do hereby declare that the following is a full and exact description thereof.

My improved crane may be affixed on board of a vessel and made to ship and unship with perfect facility; or it may be placed on a wharf, or in a warehouse, or otherwise, as may be required. In the accompanying drawing it is shown as placed on board of a vessel lying against a wharf.

a a is a vertical standard or main shaft of the crane, of which *b b* are the jibs, of which there are two, which are inserted into the lower end of the shaft, and at their upper ends they are stayed by bars, chains, or guys *c c* to the upper end of the shaft *a a*. If the jibs are to be stationary, bars of iron will be preferred as stays; but if they are jointed at bottom, so as to alter their inclination, guys will of course be used. A round shaft *d d* passes through the upper deck and has its step in the lower deck or in any other suitable fixture, thus allowing it to slue round readily.

At the lower end of the standard *a* there is a mortise or opening which contains a short barrel, which may be turned by the winches *e e*. This barrel is to be of sufficient length to admit of the hoisting rope or chain *f f* to take two or three turns round it in order to prevent its slipping. The place of this barrel is shown by the dotted line *g*. In each of the jib-heads there is a sheave *h h*, over which the hoisting rope or tackle is to pass. When the apparatus has been thus

constructed and rigged, it is ready for use, and its operation is as follows: The can-hooks are to be hooked onto the barrel 1 upon the wharf, which is then to be hoisted, and the crane slued round, so that the tackle may at the opposite end be hooked onto another barrel. It will be evident that at whatever point you leave off heaving the barrels will be counterpoised, and that the only power required to raise and lower them will be that which is necessary to overcome friction, the barrel which is being lowered into the hold being by this arrangement made to counterpoise the barrel which is being raised off the wharf. The work will be effected in this way: Turn the winch until the barrels 1 and 2 are in the situation of the barrels as seen at 3 and 4. Then pawl the winch, unhook the barrel 4, haul up the can-hooks by hand, and slue the crane round until the barrel 3 is over the hatchway, hook on again to a barrel with the empty can-hooks as at 1, unpawl the winch, and proceed as before.

The principle upon which I proceed can be applied in different ways, varying from that designated, as the power may be conveyed by means of the derrick, span, gaft, yard, burton, &c., the principle of making a descending weight act in raising a corresponding weight still being the result of the application.

What I claim as my invention, and desire to secure by Letters Patent, is—

The general construction and arrangement of the respective parts of a crane or apparatus for hoisting and lowering weights, so that two weights, one to be raised and the other to be lowered, shall in whole or in part be made to counterpoise each other, substantially in the manner above set forth.

THOS. GODWIN.

Witnesses:

CHAS. P. DALY,

JOHN M. KNOWLTON.