(No Model.)

F. A. L. DE GRUYTER.

APPARATUS FOR RAISING AND LOWERING BOATS.

No. 407,892. Patented July 30, 1889.

Fig. 3.

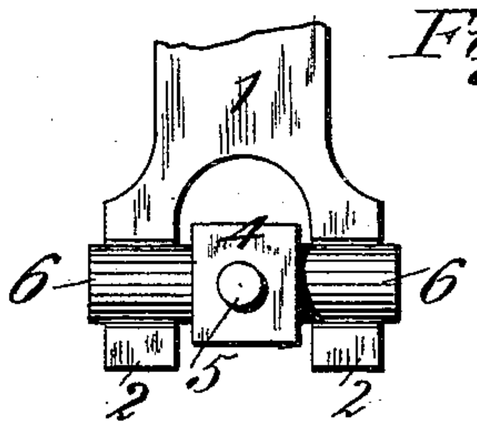


Fig. 1.

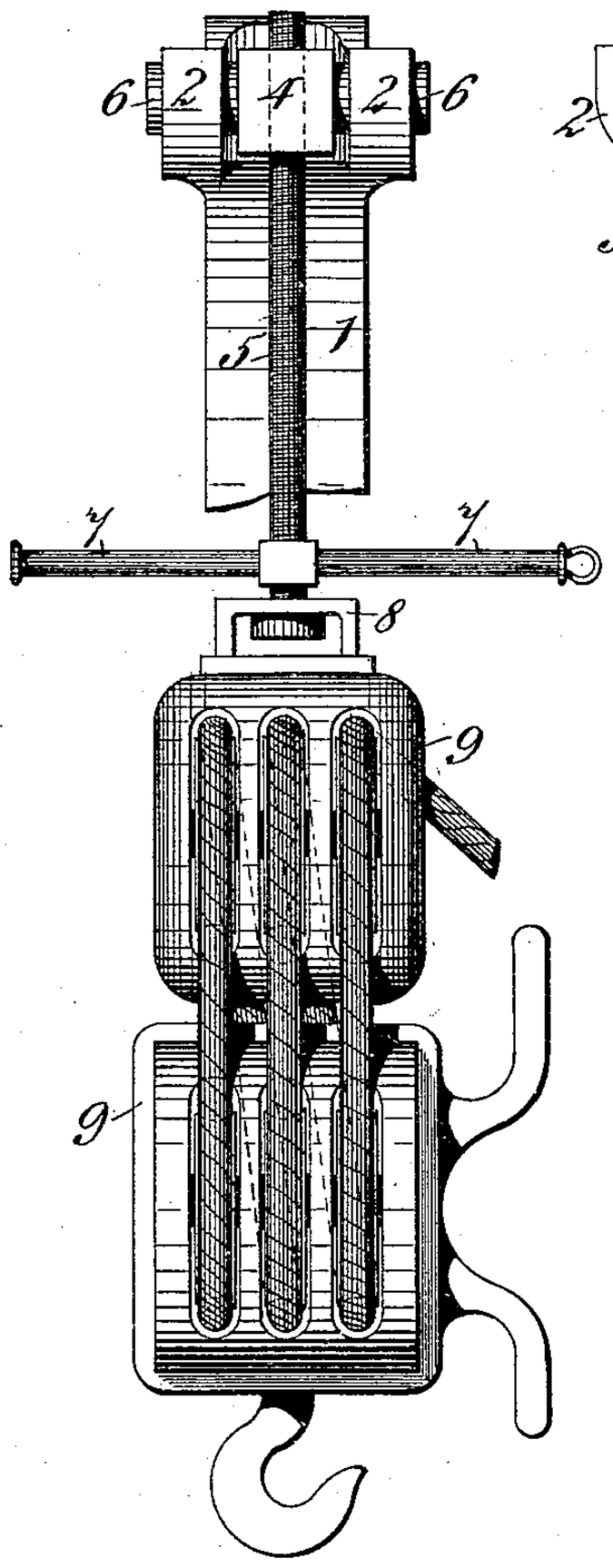
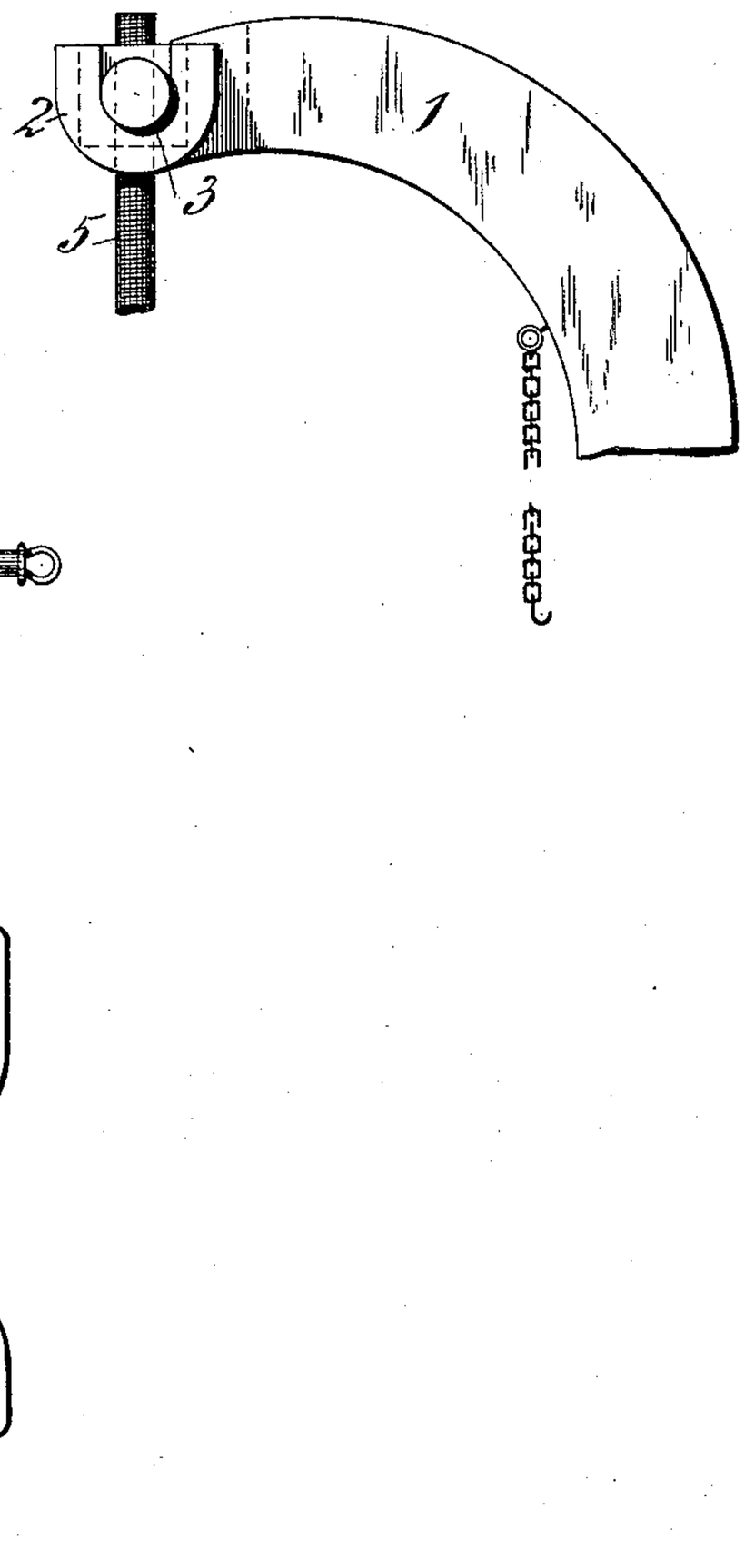


Fig. 2.



Witnesses
E. C. Duffy
H. E. Peck.

Inventor
F. A. L. de Gruyter
per Atty. O. E. Duffy

UNITED STATES PATENT OFFICE.

FERDINAND ARNOLD LUDWIG DE GRUYTER, OF AMSTERDAM, HOLLAND.

APPARATUS FOR RAISING AND LOWERING BOATS.

SPECIFICATION forming part of Letters Patent No. 407,892, dated July 30, 1889.

Application filed July 24, 1888. Serial No. 280,934. (No model.) Patented in England May 24, 1888, No. 7,631; in France June 25, 1888, No. 191,415; in Sweden July 2, 1888, No. 1,582; in Norway July 9, 1888, No. 1,028; in Belgium July 10, 1888, No. 82,514; in Italy September 30, 1888, XLVII, 119; in Spain October 2, 1888, No. 8,482; in Austria-Hungary October 26, 1888, No. 30,047, and in Canada November 2, 1888, No. 30,081.

To all whom it may concern:

Be it known that I, FERDINAND ARNOLD LUDWIG DE GRUYTER, a subject of the King of Holland, residing at Amsterdam, in the Kingdom of Holland, have invented Improvements in Apparatus for Raising and Lowering Ships' Boats, (for which patents have been obtained in England, No. 7,631, May 24, 1888; France, No. 191,415, June 25, 1888; Austria-Hungary, No. 30,047, October 26, 1888; Sweden, No. 1,582, July 2, 1888; Norway, No. 1,028, July 9, 1888; Belgium, No. 82,514, July 10, 1888; Spain, No. 8,482, October 2, 1888; Canada, No. 30,081, November 2, 1888, and Italy, Reg. A. W. Vol. XLVII, No. 119, September 30, 1888,) of which the following is a specification.

This invention has reference to novel constructions of apparatus for raising and lowering ships' boats, the object being to enable a ship's boat, even when equipped and manned, to be easily raised clear of the chocks or lowered onto them. For this purpose a screw arrangement is adapted to and used in combination with the tackle-blocks between the davits and the boat, as I will now proceed to explain. At the upper extremities the davits are bifurcated, and each prong is recessed to receive trunnions projecting from a block that is formed like a nut with a hole, with female screw-thread to receive a male screw, that is provided with a handle or lever by which it can be turned. The upper or "standing" block of the boat-lowering tackle is connected by a swivel-joint to the screw, which is provided with a head by which the said tackle is supported.

In order that the nature of my invention may be readily understood, reference is had to the accompanying sheet of illustrative drawings, in which—

Figure 1 is an elevation of part of a davit with boat raising and lowering apparatus according to this invention suspended therefrom. Figs. 2 and 3 are respectively an elevation at right angle to Fig. 1 and a plan or top view of the davit and upper part of the apparatus.

1 is a part of a davit, bifurcated at its upper end. The prongs 2 thereby formed are each recessed, as shown, to form a bearing 3.

4 is a block formed with an internal screw-thread to serve as a nut for a screw-threaded rod 5. The said block is formed with trunnions 6, which are journaled in the bearings 3 in such a manner that they may turn therein and permit the rod 5 to readily adjust itself to the strain thereon. The screw-threaded rod 5, which is provided with a hand-lever 7, is connected by a swivel-joint 8 to the top of the upper block 9 of lowering tackle, that may be of ordinary kind, and which comprises a pair of pulley-blocks, as shown. With this arrangement, by turning the hand-lever 7, and consequently the screw-threaded rod 5, a boat suspended to the lower or "running" block will be raised or lowered according to the direction in which the screw is turned. Assuming a loaded boat to be on the chocks and each of two davits to be fitted with apparatus of the kind hereinbefore described, if the two screws be turned simultaneously, the boat can be raised from the chocks. Then it can be worked out and lowered over the ship's side in the ordinary way, the nuts 4 turning when necessary in their bearings in the davits and permitting the screw-threaded rods to adjust themselves in line with the pull of the lowering-tackle, and thereby preventing lateral strain on the rods.

When the apparatus is not in use, the hand-lever (or levers) may be locked in position in any convenient manner. It may be by a hook and chain connected with one of the davits, as indicated in Fig. 2.

What I claim is—

1. In apparatus for raising and lowering ships' boats, the combination of a tackle-block, a screw-threaded rod connected to said block by a swivel, a correspondingly-threaded nut through which said rod works, said nut being adapted to be pivotally connected to a support in such a manner as to permit said rod to swing in a vertical plane, for the purpose specified.

2. In apparatus for raising and lowering ships' boats, the combination of a davit,

a screw-threaded rod, a correspondingly-threaded nut journaled to said davit, and through which said rod extends and in relation to which said rod is adapted to be turned, and lowering-tackle suspended from said rod by a swivel connection, substantially as herein described, for the purpose specified.

3. In apparatus for raising and lowering ships' boats, the combination, with a davit, and a lowering-tackle, of a screw-threaded rod adapted to be turned about its axis, and a correspondingly-threaded nut or nuts journaled to said davit, prevented from turning relatively to said rod and through which said rod works, said lowering-tackle being suspended from said rod by a swivel-joint, substantially as described, for the purpose specified.

4. In apparatus for raising and lowering ships' boats, the combination of a davit, screw-gearing comprising a screw-threaded rod, a correspondingly-formed nut journaled to said davit, and pulley-blocks suspended from said rod by a swivel-joint and adapted to lower a boat, said rod being adapted to be turned relatively to said nut, substantially as described, for the purpose specified.

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

FERDINAND ARNOLD LUDWIG DE GRUYTER.

Witnesses:

F. G. HANCOCK,

P. DE BOOZ,

Both of Amsterdam.