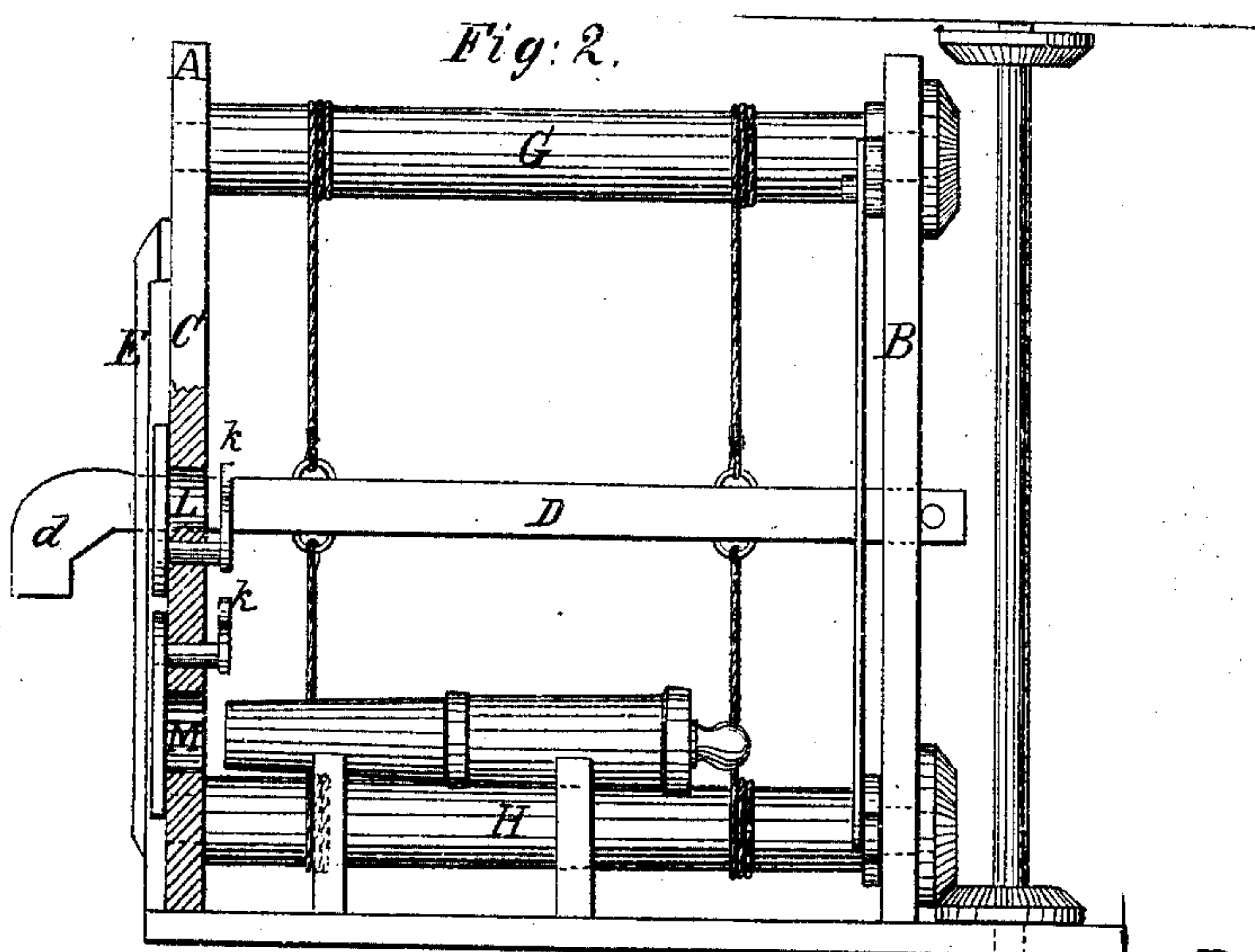
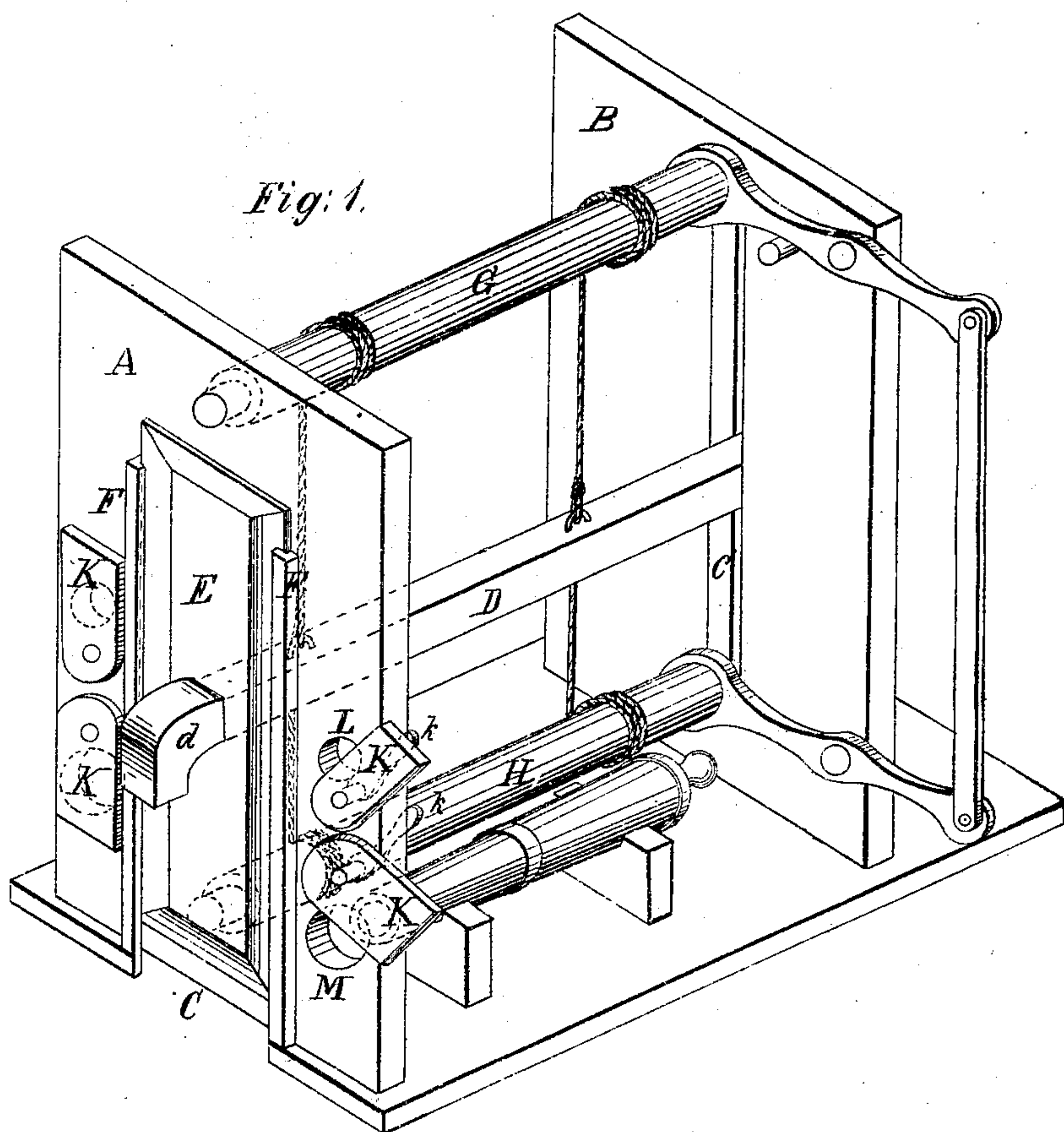


S. Riggs. Building.

N^o 49,790.

Patented Sep. 5, 1865.



Witnesses:

J. Magu
James H. Layman

Inventor:

S. Riggs
By Kuyke & Bros
attorneys

UNITED STATES PATENT OFFICE.

SILAS RIGGS, OF BLANCHESTER, OHIO.

IMPROVED NAVAL GRAPPLING APPARATUS.

Specification forming part of Letters Patent No. **49,790**, dated September 5, 1865.

To all whom it may concern:

Be it known that I, SILAS RIGGS, of Blanche-
chester, Clinton county, Ohio, have invented
a new and useful Attachment to Gun-Boats and
other Vessels of War; and I do hereby declare
the following to be a full, clear, and exact de-
scription thereof, reference being had to the
accompanying drawings, making a part of this
specification.

My invention relates to a provision or con-
trivance for capsizing the enemy's vessel, and
to a contrivance for making the port-holes and
loop-holes.

Figure 1 is a perspective view of my improve-
ment. Fig. 2 is a longitudinal section thereof.

A represents a portion of the boat's side.

B is a bulk-head, parallel therewith. Both A
and B are slotted vertically (C) to permit the
traverse of a bar, D, whose outer end is hooked
downward, (d.)

E is a shield attached to the bar D just be-
hind its hook d, which shield may be guided
in vertical ways F on the outside of the boat.

G and H are windlasses, by means of which
the bar D is elevated or depressed, the wind-
lass G being employed to elevate the bar and
the windlass H to depress it.

The windlasses G and H may be driven by
any suitable connection with the steam-engine.

In operation the bar D is raised to a con-
venient height, and its hook d being engaged
over the gunwale or bulwarks or rigging of the
hostile ship, the bar is drawn down so as to
capsize said ship.

K are masks or shutters, having handles k
on the inside of the boat, so as to enable the
optional closure or opening of the loop-holes
L or of the port-holes M.

I claim herein as new and of my invention
and desire to secure by Letters Patent of the
United States—

The overhanging hooked bar D, shield E,
vertical guides F, and actuating-windlasses G
and H, or their equivalents, the whole being
arranged and operating substantially as set
forth.

In testimony of which invention I hereunto
set my hand.

SILAS RIGGS.

Witnesses:

GEO. H. KNIGHT,
JAMES H. LAYMAN.