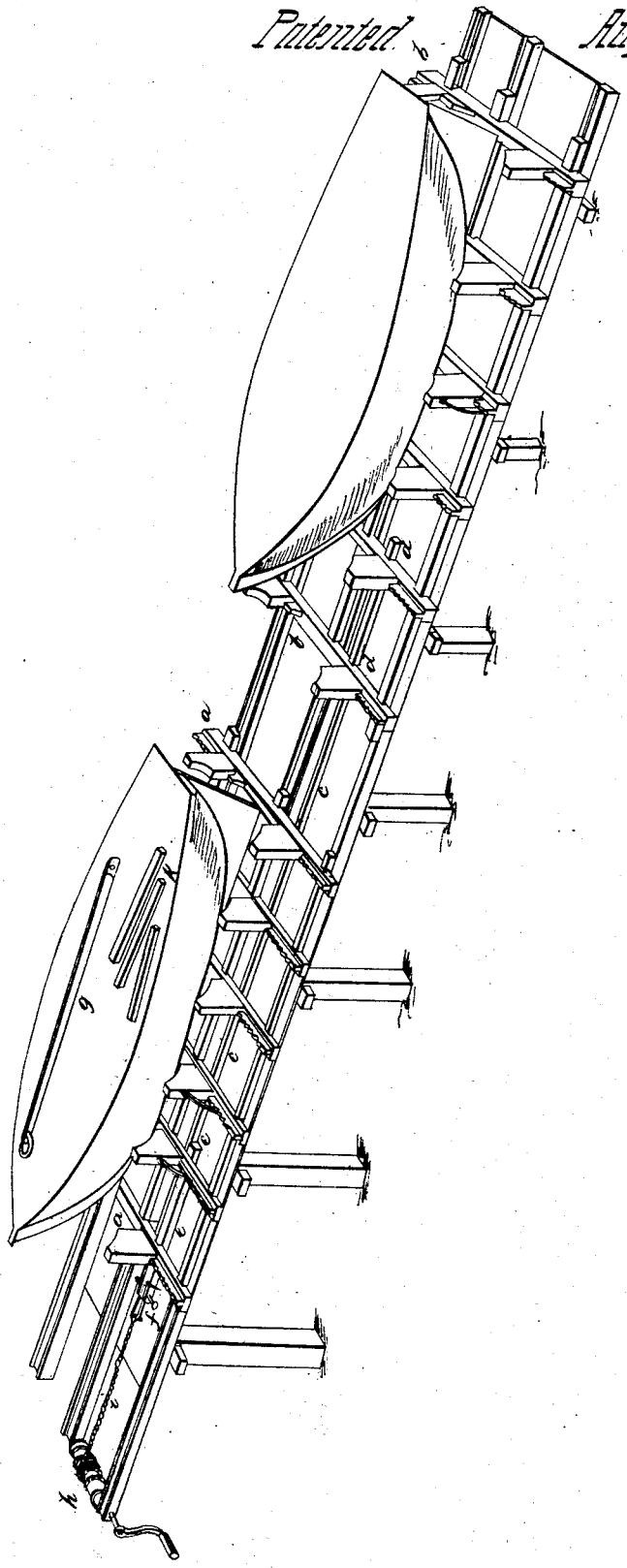
I. Riggin

Marine Railway.

No. 901. Patented Aug. 30, 1838.



UNITED STATES PATENT OFFICE.

ISRAEL RIGGIN, OF BALTIMORE, MARYLAND; ROBERT W. TINDLE, ADMINISTRATOR.

MARINE RAILWAY FOR HAULING UP AND LAUNCHING A NUMBER OF VESSELS ON THE SAME RAILWAY.

Specification of Letters Patent No. 901, dated August 30, 1838.

To all whom it may concern:

Be it known that ISRAEL RIGGIN, shipbuilder, late of Baltimore city and State of Maryland, did invent a new and useful Improvement in Marine Railways, and I, ROBERT W. TINDLE, administrator of the estate of said ISRAEL RIGGIN, deceased, do hereby declare that the following is a full and exact description.

I adopt the usual railway as represented in the accompanying drawing, either with rollers or slide rails as in this drawing, but I make the way long enough to receive two or more vessels upon it at once.

I connect the cradles *a*, *a*, and *b*, *b*, together by means of the rod or tongue *c*, *c*. This tongue is fixed to the lower cradle at *d*, *d* and passes up under the upper cradle to the end of the projection *e e* of the upper cradle where a bolt *f* unites the cradles. I now launch the cradles down into the water till the upper end of the tongue I (which is in the drawing represented as detached and lying on the deck and whose place is between *f* and the windlass *h* in place of the rope or chain *i*), comes to the edge of the water, which gives water enough on the top of the upper cradle to receive or float a vessel on it. Then I attach a rope or chain as represented at *i* to the upper end of the upper rod *g*, the chain reaching to the machinery or engine as represented by the windlass.

Now I have a vessel on the upper cradle which I haul up and I cradle the second vessel as they move upward, then when I have hauled them up so that the upper tongue *g* reaches the machinery above I detach the upper tongue *g* as now represented—then I overhaul the chain down and hitch it on to the lower tongue (which is connected with the projection of the upper cradle by means of the bolt *f*), when I haul the vessels both up the full height required. The pieces at *k* lie on the ways to keep the cradles asunder. To launch, if both vessels are ready to go at once, I lower down the length of the upper tongue *g* by means of the chain. I then detach the chain and attach the upper end of the upper tongue to the end or projection of the upper cradle as now represented in the drawing, then by knocking away the trippers both vessels go at once.

To launch separately I detach the lower tongue *c c* from the upper cradle by withdrawing the bolt *f*. I then knock away the trippers and launch the lower vessel to haul again a second vessel. I pass my chain through a passage under the upper cradle down to the edge of the water and attach the chain to the upper end of the lower tongue and haul up to the first cradle that is the second cradle up to the first and the tongue up to the machinery at one haul without overhauling the chain. I can as the case may require repeat the operation retaining the upper vessel as long as may be required.

Some of the advantages of this plan of raising and launching the additional vessels are as follows:—The upper vessel after the first day only pays half price for lay days and the lower cradle being able to work every day at whole price, doubles the advantage in the use of the railway. I can also work double the number of hands and sell double the amount of materials in the same time.

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

The mode or manner of hauling up and launching the second or third vessels by means of the tongue constructed and applied as before described, the tongue being long enough to reach under the first or second vessel from the second or third below all in the same way as described before.

ROBERT W. TINDLE,
Administrator of Israel Riggin.

Witnesses:
JACOB HARRIS,
JOHN MEREDITH.