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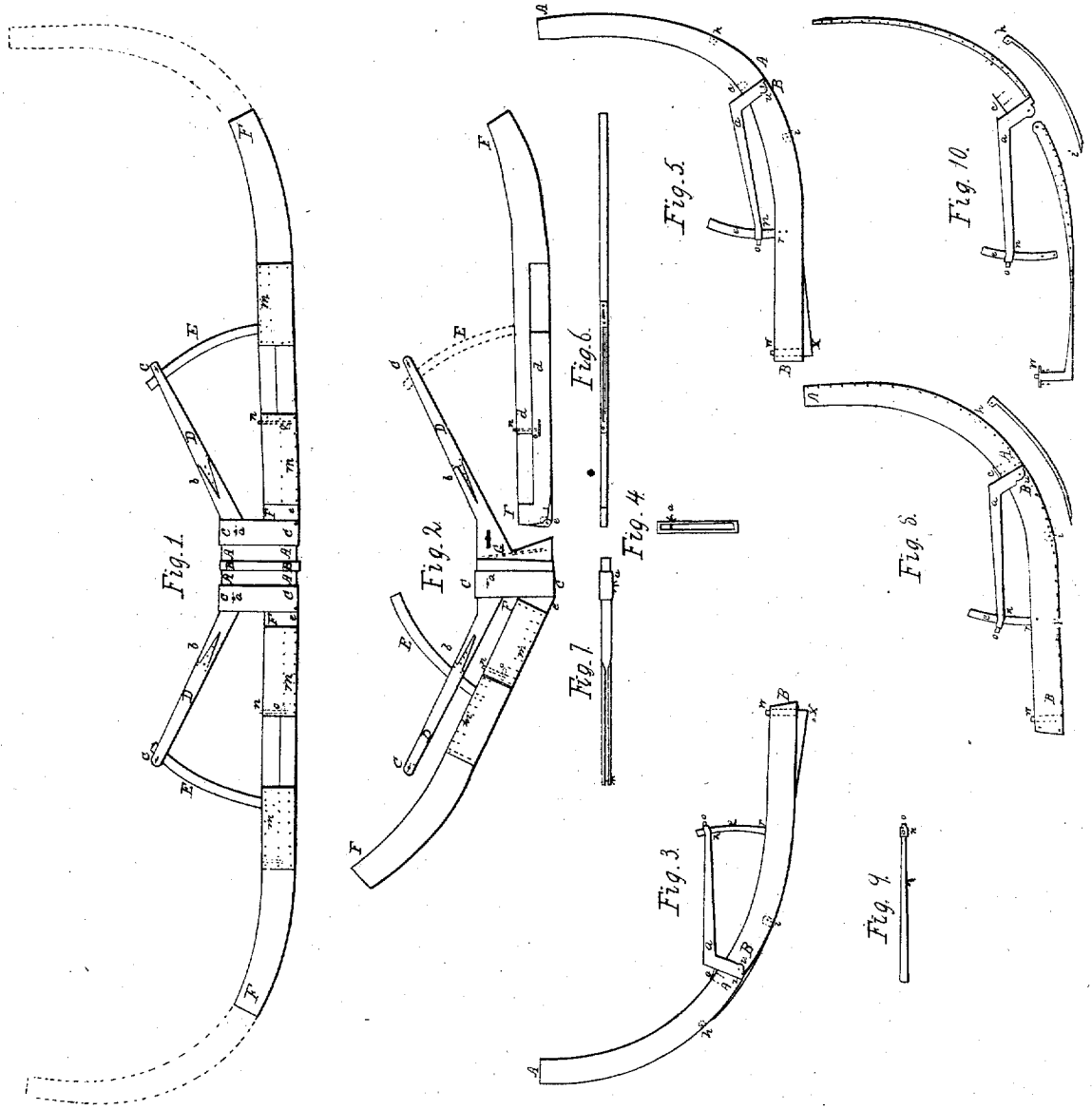
6693X

J. Wallace.

Ship's Implement.

No

Patented Aug. 9, 1831.



N. PETERS, PHOTO-LITHOGRAPHER, WASHINGTON, D. C.

6693 X

Aug 9 1831

James Wallace,

Letters Patent.

The schedule referred to in these Letters Patent and making part of the same containing a description in the words of the said James Wallace himself of his improvement in graduating moulds, for moulding and shaping the timbers of boats and vessels, —

There are two separate moulds or patterns which each shape all the timbers of a boat or vessel, Figures 1 & 2 in the annexed drawings present a side view of one mould. Figures 3. & 4. present a like view of the other mould, the part coloured red are of wood being of board or plank the part in blue are of iron

The red part A A on figure 1. are in the place of the keel of the boat or vessel and may be of any width or dimensions required. a band of iron B, B, passes around the centre of the mould to give strength and firmness. the blue part C, C, are moveable iron bands which pass around the keel part of the mould and move either way as the keel is to be made wider or narrower. Figure 4 presents a section of these bands, at a is a thumb screw to fasten the bands C, C, when at the right place, — the part D is an arm or shaft made fast to the upper half of the centre part or keel part of the mould, and is set elevated to such an angle as will enable the three moveable parts, E, E, when raised to give a moral curve or sheer rise as is wanted to any timbers

A part of this arm or shaft is of wood, & in junction with the metal piece may be seen at Q on fig 2, which part is there represented as surrounded or without the iron band, the extreme part of the arm is iron and is joined to the wooden part by a tongue at b. this iron part is of the same width and thickness or may be seen by its upper surface as in figure 3. d that a curved ganging plate E can move backward and forward on the right hand bottom of the figure, at the end of this arm at-

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at C, a thumb screw passes through, so that when loosed the curved rod or slide can move either way as wanted and when made tight the life of the arm are compressed and hold fast in its place this curved rod E. The mould F,F, is fastened by a rivet or hinge to the lower corner of the iron band C,C, at c, it will of course move either way as the band C.C, moves, it is moveable on this rivet or hinge and can be dropt to a floor level as in figure 1, or be raised up towards the arm D, as in a part of figure 2, as the timbers of the boat or vessel may require to be moulded. This lower part of the mould F,F, on figures 1 & 2 is composed of two pieces of board or plank, halved and lapped so as to slide past each other as may be seen at d,d, on figure 2, a short iron band passes nearly across each piece as m, m, on figure 1. and each band forms a socket into which the narrow end of the other piece enters and slides.

The mould may be contracted until the band M.M. touch each other, again the mould may be extended until the ends d,d as on figure 2. are drawn almost out of their socket. An iron plate represented by figure b, is fastened on the upper edge of this bottom part of the mould. this iron plate has an opening or mortise or slit as long as the distance the part d,d, move or slide a screw n on the upper edge of the floor mould F,F, passes through the slit or opening, on the edge plate and enters a fixed nut at o.

At whatever distance the ends d,d, are drawn from their sockets the screw n may be turned and holds them fast there.

The curved gauging rod E, is made fast to the floor mould so as to be immoveable at that joint. — The other ends of E passes through the slit or opening in the arm D, and is there held fast, at any desired position by means of the screw at C,

Thus it will be seen that the horizontal motion of the outer part of the floor mould enables one to make timbers of any desired length and the perpendicular circular motion of the whole base F,F, on one side the hook around the hinged axis at a, enables one to elevate those timbers from the keel at any desired point or angle or at any kind rise.

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Thus far illustrations have been by figures 1 & 2 principally.

The other mould or pattern called the fillock mould is represented by the figures 3.5.9 8.

This mould like the elbow is composed of board or plank and is in two part A.A. & B.B. on the part A.A is an elbow of iron a. made fast with screws or rivets. Figure 9 presents a view of this elbow when the edge falls on its top. The back of this elbow is made firm by an iron layer or plate c. nailed or screwed on the upper edge of the board A.A. The lower edge of A.A. is grooved and lined with an iron rod or strip made fast and fitted even with the lower edge of the board A.A. This makes a hard surface to resist the marking iron when this pattern is used and also stiffens the mould the extreme end of this elbow a. has a hole at m. through which passes the curvilinear plate c. a screw in the end of the arm at o. keeps this plate in any place required. This plate is fastened immoveably into the wood mould B.B. at r. and extends up through the hole or edge at the end of the arm a. The wood part of the mould B.B. is fastened to the lower end of the elbow. a at U. by a rivet or hinge on which it may turn. This part B.B. is grooved on its lower edge and a plate of iron is inserted made fast at the end next to the middle of the mould. To the other end of this plate a screw bolt is attached which passes up through the extreme end of B.B. at W. by turning this screw the iron plate may be forced down below the wood part of the mould as at X. in figures 3 & 8. in order to alter the curve.

When the wood part B.B. of this fillock mould is bent down on its hinge it destroys the regular curve as at Z on Fig 3. to restore a proper curve or curve a steel spring h.i. is fastened to the mould A.A. at h. The other end of this spring enters a socket at i in the land of the wood mould B.B.

The elbow and the different iron plates of this fillock mould are represented by figure 10. — all with be seen that by these moulds heels and cogs may be constructed with the greatest possible

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accuracy and expedition, since it is not necessary, as in the common mode of building to trust to the uncertain measurement of the eye — also any number of boats or vessels may be built exactly alike, also a boat or vessel can be shifted exactly — like one of a large or smaller size.

∴ — The following is an explanation of the mode of using mine containing practical directions how to use the preceding described moulds and how to form and construct them.

Form a Model of any convenient size of the boat or vessel to be built, taking care that the outside curve be regular flattening a little towards the bow, and the reverse towards the stern; thus the boat will have the best possible shape and pass easily through the water, cut this model into two equal parts from the stern to the bow, so as to make two equal demi models —

Use one demi model shape it off into sections and with a sawing box and fine saw separate the demi model at say each third sectional mark by perpendicular cuts, also make a diagonal perpendicular cut that will, on the wale, divide the two about equally from the stern to the first vertical section.

The section being made smooth and laid on paper, the outer lines thereof are easily transferred to the section paper by a fine or pencil.

The sections being thus transferred to paper and a scale of proportion determined on the same figures are laid down on a moulding floor, — The moulds are both made from the middle or widest section, Place them on the draft: board and when they are brought to compare with the draft, set down on the minute book opposite the number of the section, the rising and fall of an inch measuring from the arm of the mould directly over the circular line to the top of the mould, Having finished taking every third section according to the cuts of the model, divide the intermediate spaces proportionally and take the remainder, with the minute book the moulds are prepared for business. Dated July 11th 1831

Witness { Moses Clapp
Daniel Goodwin } James Wallace

1773 [illegible]