



Phil. DeLoraine
Longway of Lay the 17th 1813

8-10-12

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Rules for Building Merchant Ships.....

- 1st. Lay off your proposed Length of the Keel. that is the Length Given by the employer then from each end of the said Keel rise a Perpendicular.....
- 2^d. Take $\frac{2}{3}$ of the Length of your Keel. for the Extreme Breadth for Sloops. and Cutters.. And for Brigs take the Mean between $\frac{2}{3}$ and $\frac{1}{2}$. for the Extreme Breadth and for large Ships Take $\frac{1}{2}$ for the Extreme Breadth.
- 3^dly. Take $\frac{1}{3}$ of the Extreme for the Depth of the Hoald.. and set it off on both perpendiculars then Draw a straight line a Cross them both.
- 4th. Then set off 8 Inches for every foot in height on the Right line from the form

Perpendicular for the after Part. of the Steer
head and $1\frac{1}{2}$ Inches on the straight line.
for every foot in height for the after part of
your Sternpost.

5th For every foot in Length give 2 Inch.
for Sheer then take your Sheer Mould and
draw your Gunnel observing to keep it.

Higher aft then forward 1 foot or 1 foot and 2.

6th Let fall a perpendicular from the fore
Part of the Steer head to the keel then divide
that Distance in to 12 Equal parts then set
off 5 of them from forward for your dead
flat or Main frame.

7th Then rise a perpendicular up to the Gunnel
which divide into 3 Equal Parts, set off.

2 of them from the upper part. of the
Keel. for the Middle of your Benches then
raise with the same Sheer as your Gunnel
set off the Breadth of your Pint

Stroke and Draw it.

8th Then set off $2\frac{1}{2}$ Inches on a straight line.
Upon Deack from the after part of the Stern
timber then set off the Round of your

Tramson on the lower edge of the upper
Bend plank. then take your Mould and
lay it upon Both Places and keep the
Nuckle upon the middle of the Top Sides
And it will give you the Round of your
Counter.

9th Then set off your proposed Number
of frames then draw them up Perpendicular
to the keel and Down below it as far as
the $\frac{1}{2}$ Breadth.

10th then set off your half Breadth Below
the keel on the $\frac{1}{2}$ Breadth on the dead
flat divide your Dead flat in to 3 Equal
Parts then set off two of them on the Per-
pendicular let fall from the after Part

= at the foot of the Perpendicular in the
Middle of the Extrem Breadth, then
Take out the length of the floor in the
Compasses and set it upon the perpendi-
cular and it will Give the head of the first
and then set the Compasses again as before
along to the floor end and then turn
them upon the perpendicular and it
Will Give the head of the second then
the Distance to the first Mark and set
it upon the Perpendicular will Give
the head of the 3 and so on for the 4 and so
15th. Then take and set off the rise of
of your floor on the Sheer Plane and the
right and the height of the first Diagonal
on the Main post then Draw the first
Rubber line with an Equal rise aft
and forward.

16th. Then take the Compasses and take off
the rise upon each frame and set it

Perpendicular upon the first Diagonal line
and it will Give the Rise of Each floor on the
first Diagonal line and the same Rule will
Answer for the second Diagonal to Give the
Rise upon it.

17th. Then take the Compasses and set one
foot on the head of the first Diagonal line
and take the Distance between it, and the
after frame, along the Diagonal line in the
Compasses and set it down on the after frame
on the half breadth and do the same from
aft to forward with every frame on all the
Diagonal lines and it will Give the Round
of the Rubbons on the half Breadth but if
it Does Not run fair the line on the Sheer
Plane is Not run fair.

18th. Having all the floors run fair, then take
the Compasses and take off the height of the
lower height of Breadth on each frame
Likewise the upper and the Gurnel.

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Middle of the Extrem Breadth, then
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Rubber line with an Equal rise aft
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aft to forward with every frame on all the
Diagonal lines and it will Give the Round
of the Rubbons on the half Breadth but if
it Does Not run fair the line on the Sheer
Plane is Not run fair.

18th. Having all the floors run fair, then take
the Compasses and take off the height of the
lower height of Breadth on each frame
Likewise the upper and the Gurnel.

Mark them up in the Body Plane at
the breadth upon each frame from the
midship perpendicular at the Bends.
And Gunnel and do the same for all
the frames, then take the Mould and
Draw them then having drawn them
take and prove them upon each diagonal
the same as you have done the floors.

19th then to prove them further take
And divide the dead flat into 4 Equal
Parts from the upper part of the Bends
Reel to the lower part of the Bends both
upon the Sheer plane and the Body plane
And draw 4 lines parallel across with
Blue Ink which Call water lines.

20th Having the water lines run, then
take the Compasses and set one foot on the
Water line Where it cuts the perpendicular

in the Middle of the Body Plane and then
take the Distance along it to where each frame
Cuts it and then set it down on the half Breadth
the same as the ribbons Lines and if they
do not run fair the frames are not well
drawn Which they Must be altered until
they Run fair.

21th Then having the Water Lines by taking
them off Run fair then Proceed with the
Reed Lines by taking them off the same
Way as the water lines by setting one
Foot of the Compasses on the Plane
Where each frame cuts the diagonal
Line and other Square across to the
Midship Perpendicular, then set that
Distance down upon each frame on the
half Breadth the same as the water line
Observing that the Reed lines Join at

on the Fashion piece

Then set it off perpendicular on the half -
 Breadth and it will Give the Round of the
 Trameers on the half Breadth and so - -
 Proceed for the Round of them on the two
 After frames then take the Distance
 Between the Place where each of them
 Cuts the Fashion piece and the after frame
 on the same trameer. Will Give the
 Place where the Fashion piece Cuts each
 trameer in the Sheer plane - - -

25th to find the Beavel of the trameers
 Draw 4 or 5 lines perpendicular from
 the upper trameer in the Boddy Plane
 to the upper ~~Trameer~~ Part of the Keel.
 Keeping the first one a small Distance
 from the Stern post and increasing the
 Distance Betwixt them all the way as
 they go out upon the Trameer
 Let them be put on the Sheer
 and take the Distance from the upper

Part of the Keel in the Boddy Plane to
 Where the Beavel lines Cut upon the two
 after Frames and the Fashion piece then set
 Each of these Distances upon the same frame
 in the Sheer plane will Give the Round of
 the Beavel lines on the Sheer plane upon
 Each frame

9	8	1	7	1	6	2	1	6	3	2	1
4	3	1	8	1	7	2	1	5	1	2	3
6	6	4	8	6	4	5	6	4	8	9	4
