







# The Complete MODELLIST:

SHEWING

The true and exact way of R aifing the Model of any Ship or Vessel, small or great, either in proportion, or out of proportion.

ALSO,

The manner how to find the Length of every Rope exactly:

TABLES which give the true bigness of every Rope in each Vessel.

Together with

The Weights of their Anchors and Cables.

Performed by Thomas Miller, of great Yarmouth Seaman; And Mafter in the Art of Raifing the Model.

#### LONDON,

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To the Right Worshipful Major

## William Burton,

### ALDERMAN

of the Town of great Yarmouth, Esquire. SIR,



Wish you much peace and happiness both in Soul and Body. Sir, I do very well know, and am fensible, that you are a great deal better knowing in this Art of Rigging, then my weak

fancy will ever attain unto, which did invite me to present You with my weak Works: And knowing You to be one that was ever very free to accept of the well meaning of any one; which did the more urge me to the performance of the same, not fearing but it would have a loving acceptance from Your Worthy self to publish the same. So desting not to be tedious, but only to present my humble thankfulness for former Courtesses received from You, I shall ever remain,

Your Worsbips

Humble Servant

THOMAS MILLER.

## To the READER.



Entle READER, I do here, prefent you with the flow and Exact may of Rigging by the Modell. But I must confest it is by the performance of firme that have the true tastle of it: for I did not intend to publish it as y't, but taking it into a ferious consideraration, I thought it not con inkin any longer to obscure the reflection of such a true

light, and as it is truth, so it is so plain and easie, that any one although be could never before obtain to cut out a ships. Rigging, may by this way Rigg any Ship small or great, with a weeks practice or less. But if it were half so easie again as it is, which is almost impossible, yet I say, if it were so easie, it is possible a man may have the Book, and yet never come to Rigg a Ship, if he do not endevour to get the use of the Book, which is a thing that may soon be obtained.

Likewife, I could have shewed a great deal of Curiosity in the.

Models and have drawn them perfectly like a Ship: for, for

not this may matter of deafting, few or none go beyond me. But I find it not on Reging a convenient, for at fift, I did do by, and fone that I learned, will hold use were fo wife to be could almost have left the coast to run after in all Vetels, the Feather, that is, they were so affected with the drast of the multiperate to the skip, they minded that more than the ship, they minded that more than the ship and a more plain of poportion, manner, and as I find this Book to be accepted of, I shall present test, eanner you with another in the suture. So I conclude,

hold, but will deceive those trust to

And remain yours

in all my Practice

THOMAS MILLER.

## Instructions for the raising of the Model of any Ship or Vessel, small or great.



Hen you go to raife the Model of any thip or veffel, you must in the first place know the length of her Keel, and the depth in her Hold, and the breadth of her Ream.

First knowing the length of the Keed, take The length of the Keel off your Scale, and place the Keel. It on your paper that you intend to raise your Model on, making two pucks one with one point of the Compasses, the other with the other

then draw aline with your pen or penfil of black lead, as from A to B.

Then take the depth of the Hold off from your reale with your Com. The depth of the paties, and fet one foot in the end of the Keel line at A, and with Keel so the theother make a prick at D, and like wife from B to C: then with your Duck Ruller and black lead, or pen, draw another line parallel with the Keel, and that is the line for the fift Deck.

Then for the height between the first and second Dock, which appea. The beight bereth in the figure following, to be 6 foot and a half, then take 6 foot times use fifth
and a half of firm your Scale, and let one foot of your compaties at D.
and with the other make a prick at E, and likewise from C to F. So
must you doe for the height between the 24 and 34. Dock, and so for the
Cabin and Coch and round House above that, and for the fore-castel all

in the same manner, and then draw lines from prick to prick.

Then for the Stein tails a perpendicular line from the fore-part of To rails the Keel to the second Deck, then take two thirds of the depth in hold, Stem. which in the figure is 12 foot, then set 1 foot of your compasses 12, and with the other mark a prick at G. so likewise set 1 foot in the upper and of the line at H, and with the other foot make a prick at f, then

draw a line from G to I parallel to that from B to H, then from that

outermost line, draw the Stem to the Keel with what sweep you please running the top of your stem 3 or 4 foot above the line, as it is in the figure, then you may draw it double as you please, and the Keel likewise,

Note.

And when you draw your Deck-lines, let your lower Deck-line run a foot or a beyond the end of the Keel aft, and to in like manner all your Decks, and then joyn them together formething rounding, that the Model may have a Rake aft, and thew thip thape. You muit draw your Model and Scale together at this Keel, as you feel in the figure D, and note how many feet toever your Model is by the Keel, formake and

The making divide the Scale into 15 equal parts, as is the wed, the a first equal parts of the Scale divide into 20 feet, 6 of thois feet are one lightons, and 12 of thos feet are two Fathons. And the other 4 of divinions numbred by 10, 20, 30, &c. to 130 are 10 feet a piece. By the Fathoms 1 measure the length of the Ropes, and also the Canvais for the lilest and by the Scale of equal parts, I measure the Model, the larger you draw the Models of your veilels or ships, the better you may see to do your works.

### A Rule for masting and yarding by proportion, but for my part I make no use of it, because it will not hold.

The main mast Tile Main-mast must be twice and one half the length of the Beam.

The fore-Mall The Fore-mall eight ninths of the Main-mall.

Main top-mast, The Main-top-mast half the Main-mast, and the Main-top-gallanter top-gallant-mast, half the Main-top-mast.

The fore-top-mail, half the Fore-mail, and the Fore-top-gallantmail, by top-mail, half the Fore-top-mail. reliant-Mail.

The Bolt-fpris. The Bolt-sprit, the length of the Fore-mail.

The millin Mall. The Millin-mail, the height of the Main-top-mail from the quarterth millin 10p. Deck, and the Millin-top-mail half that.

Main-said de Tee Main-yard 6 feaven parts of the Main-maft, and the Main-top-Main-sey-fail, ball-yard half that, and Top-gallant-yard half that.

The

The Fore-yard eight ninths of the Main-yard, and the Fore-top-fail- Fore-jard & yard half that, and Top-galfant-yard half that,

fore-top- ail-Miffen gard.

The Missen-yard something shorter then the Fore-yard.

& Crof-jack-

The Sprit-fail-yard and Crof-jack-yard both one, the Crof-jack-yard Sprit-fail-yard half the Missen-yard. sard.

The Sprit-fail top-fail-yard half the Sprit-fail-yard, and the Sprit-fail Sprit-fail top-Mall, and sopa fail yard.

top-mait almost half the Sprit-sail-yard. Note, That all the small yards, are half the great yards from Cleat to

Cleat, or from one earing of the Top-fail no another, you may have Note. what Yard armes you please.

### The Use of the Model.

N these figures you see two yards one Hoysted, and the other Lower- We. ed or a Portlens, the top-fail-yard also one Hoyfed, and the other down upon the Cape, to mult you make in all the Models you raife: the yard a portlens gives the length of top-fail-heats, and lifts, and tye or Jeers and Bunt-lines, and Leech-lines, or Halli-yards measuring from the Hounds to the Deck.

The yards Hoysted gives the length of Clew-lines, Brases, and Clewgarnets, and Tackles, and Sheats, and Bow-lines.

In the small ones, is shewed the length of Shrowds and Top-sail

Halliards with Brases, and Lifts, as in the figure B.

In the figure A is shewed how to give a near estimation, how many Note. yards of Canvass is in a main Course. When you come in any Ship or Vessel, and defire to know how many yards of Canvais is in the main or, fore-Courie; First, you must know the depth of your fail, and the breadth of the Canvass that the sail is made of, then take off so much from the Scale as you see the Cloth is in breadth, and place so many cloths in the Model on the main or fore-yard, the same depth that the fail is on, as you fee the main-Course in this figure : After you have so done, then take a Fathom or two off from your scale, and measure every cloth up and down as you do the Ropes, and that gives you the number of yards.

L kewite, here is thewed in this figure the way how to place your Garnet and Runner, and Sprit-fail-top-fail, Cran-lines, and main flay, and fore flay to find the true length of them.

In the figure C is thewed the way to find the number of yards, that is in a main or fore-top-fail, the fame way that you measure one fail,

you must measure ail,

But this you must observe, that you are to place your middle Cloath first in a top-sail, and from thence to each yards arm, that your goers at the Clew may fall out right.

so likewife to Likewite it showeth the length of main-top-fail-bow-lines, and so find the trageb you must do to find the length of fore-top-fail-bow-lines: draw only of dl Rops.

2 line from the top-fail-yard-arm, to the main-yard-arm with your pan, or black-lead: Note from the further yard-arm, that you may

pen, or black-lead. Note from the further yard-arm, that you may take them at the largest extent, and to your Brases: in like manner, it thems also the length of main-bow-line, and main-sheat, and main-

tack and fingle-Garnet.

All this I could have performed in one Model, but then it would have been to full thir you would not fo well have underdood it: but you may perform all in one figure, in flarching 3 or 4 theets of paper together, and then your Model will be of a very good volum, for the bigger it is, the leftle errour will be, and your beft way to perform all in one Model, is, to draw your yards with black lead only, especially the low-fl yards, and then you may rub them out after you have meatured out your Riggings, Isaving only a little speck or spot, at the end of each yards-arm, that you may the easier draw them again, it you have occasion, the two spots will give you the length of them again without any more trouble, and then it will not be 60 easier for any one to steal away the use of your Model by, as he that hath an ingenious pate may do: and to prevent that, I feldom let any yards be teen, but only leave two little pricks to give me the length of them, at any time, when occasion require.

And then I draw them out again with black-lead, and measure out my Rigging, and write them in a piece of paper, and then with the crums of white bred, and a clean linnen cloth, I rub them out again,

and fo leave only the maft flanding.

The fore-than
Then for the Channel-bines, if you fee the Ship or Veffel, then

subints.

Sold know the better where to place them; or if the be upon the flocks,
that they be not brought too, he this is a Seaman will give a neer guess

where they flouid be, and if they be not placed just in the place

where

where they thould be it is no great matter. But rather endeavour to place them a little too low rather than too high.

Or two thirds of the stay or main-mast is a good Rule for your The length of

Shrowdes, for your flay must be as long as the mast.

allowance for the end of your shrowds to turn up.

Then for the placing of your maft, there is very few but knows the To place the main-mast must stand in the middle, and to that end raile a perpendi- Main musts. cular line from the middle of the Keel, making a little flep fome two foot, or two foot and a half, as is in the figure Dat K; if your flep he not so high as it should be, or if it be a little higher then it should be, so it be not two much, it breaks no iquare, fo long as you give a hand some

Then after you have raised the mast at his proper length, then allow for the mast-head, and their place, the cross-trees, but if you measure your mast as it is allowed any Boat-twain, to do: then you must mind the heigth of the mast-head, and it is the furest way to know exactly the length of the mail and yards, and then you cannot work amis: for I have measured very few masts, but differ something, therefore I

advice you to know the true length of your mast and yards.

Now the fore-mast stands just upon the brest-hook, and there you To place the must place a thing imitating a step, of some 6 or 7 foot high, or 4 fore mass. or 5 foothigh, according as the thip or veffel is in bigne's, or according as you fee the fore-mast will stand in proportion to the main-mast, as your eye will give you that: and as you fee it agrees with the mainmast in height, to place your step as in the Model D, at L: and if it stand half a foot too high or too low, it is no great matter so long as

the shrowdes are long enough.

Now in placing your Missen-mast, your judgment must be better to place the there, than about any mast: because there is no just Rule to be given Missin mast.

but only your eye must be your best Rule.

Therefore, after you have raifed your Model and placed your mainmast, then observe the Model well, and you may soon perceive where you shall place the missen-mast and this observe, that if it becomes not the Model, it will not become the thip, neither that nor no mast nor Rigging about the ship or vessel, for after you have raised the true Model of any thip or veffel, it is just then, as if you were placing of the masts in the Vessel it felf and after you have placed your mists and yards, you may measure out your Rigging as exactly as if you should measure from place to place on Boord the thip or veffel, with a leadline or fpan-yard where every rope frould go.

Note.

The Bolt-Now the Bolt-iprit you muit place as you fee in the Model D, at H fprit.

F (), letting it run from fix foot beyond the fore-mail; this must be done in a thup, but in other vessels they are placed otherwayes, there-

fore you must place them as you see the vessel requires.

For the Now after you have the true length and depth and breadth of any height be. thip or veffel given ou by any one, that you are fure knowes, you may give a guets your felf for the height between Decks, if the have two Decks of the height between Decks, if the have two Decks of the height in the fleridge, and great Cabin and round-houfe if the have any, and likewife the Fore calle, for my own part I never fee no fhip nor veffel fince I began to practice this Art: But I could give a neer estimation of her heights between Decks, and the like without measuring, if I did but fee the fhip or veffel, but indeed if I went a Board, I could gue is the better by my own height. And I would be fure to account them rather with the lowest then with the highest, that my Rigging should fall out long enough.

The prattice Your only way to be expert in raifing of the Model, is to make a Book of large and good paper Royal, and what flip or veffel foever you come in, you may by difcourfe with the Mafter or Carpenter come to know the true length and depth, and breadth, and height of mafts.

and length of yards.

Or if the be a Merchant ship, you may measure the depthin hoold and breach of the beam your self, when she is light and het Ballast cut, and likewise when she lay ashore, with a Carpenters Rule measure the Keel and the masts and yards likewise, when you have opportunity, and then raise the Model of her in your Book.

And likewife, if you be in any thip that lay up in Winter, then you have an opportunity for your own finip, or any thip or welfel that lies by you to get the Model of them, then place them in your Book of Model, then at any time if you fall with a welfel to rigge of any of them demendent

sions, there you have the Model raised to your hand,

And likewise, when you are at home in the day time or in the evening, you may upon your flate or on paper, with your black-lead Penfit, that you may rub out, as before is mentioned, raife an hundred models by supposition, which will bring your hand into the way of raifing a Model complete and handsome.

And likewife, you will by that come to be expert and perfect in giving alond more for the fweep of mails-heads, and blocks, and dead-men-eyes and the like: That when you come to raife a Model by a true proportion, you may go through with your work without fear: for it will

come

come to you wish eafe enough if you take but any pains stall to practice it, and not to do as a great many do, to buy Books and be a little fond of them at the prefent, and afterward lay them up, and never practice by them till they have occasion indeed to make use of them, and then they run so head-long upon the Work, that there is one gross errour or other in their work, and then to like themselves wholl, they impute the fault on the Book or on the Author of it, when the fault lyes wholly in themselves for want of practice,

Therefore it is very good when you have opportunity, to be practifing to raife a Model, for you cannot be too perfect, because the Rigging of a filp is a thing that cannot be done in fecter, and you have many eyes upon you, and if you do not complete your work, it makes such a blot in your Scutcheon that it will ficaree were out in even years time, for every one will be foending his verdick, as well he that knows nothing.

as he that doth.

Therefore to prevent all dangers and to flop all mouths, Ladvile you once more to be very diligent in practiting your felf, till you find that you are perfect in the work, which you will foon be by observing the Rules with I have before mentioned.

For the measuring of the Rigging you must have a penfil of black. For the measlead on purpose for that use, then any Rope that you defire to measure; faring of the first, draw a line with the black lead, and then measure it, and put that Rigging. out again, then your Model will be the clearer to find the rest of the Rigging.

As for Brafes draw a line from the yard-arm to the place where the For Brafess. Brafe thould go, you may draw it double it you pleate, as the Brafes go, o: you may draw but one fingle line, and so take a Fathom off from your Scale, and where it goes double tell two Fathom, and where it

goes fingle tell but one.

And likewife fore-top-fail-fheats, draw a line from the top-fail yard  $\frac{7 \cdot p}{fail-that}$  is upon the Cape, as you fee in the Model  $D_i$  down to the yards. Betats arm, that is a Portlens, as you fee it is from the fore-top-fail-yard to the fore-yard, then take one Fathom or two off your Scale, and measure from the top-fail-yard to the fore-yard upon the line that you have drawn, and then from the fore-yards-arm into the maft, and so down to the fore-callte, and there you have the just length of your top-fail-fail to the transfer own different on what first you will allow:

fo likewise must you do for your main-top-sail-sheat, and fore-top-

gallant-clew-lines, and top-fail-clew-lines, you must do as you see in

the Model, and to for any Ropes whattoever, if you will have them go after your own way, draw a line with your oblack-lead where you will have it go, and to measure the length of it. And there you have it (as a man may tay) to an linch. So I hope I thall not need to fill your head with any more floties, for here is directions enough for any one that hath any wit at all. And he that fees how to measure one Rope, may eafily undertland all the reft.

The flays. But this, Note, That when you measure the stays, you must measure the Collar first double 3 or 4 Fathom, according as you see the Model require it, for as it becomes the Model, so it will become the strong vessel, and you must know that the Collar belongs to the length of the

The penents of But for the Penents of Brases, you must measure them first 3 Fathom, Brases.

Block, and so measure the length of the Brace from that.

So defiring you to mind well what is before mentioned, for I have cut it off as briefly as pollible I may, that you might the eafier get it by heart, which with finall pains you may, and then you shall be the better able to dicourfe, and likewife to complete your Work.

Here followeth the bigness of Ropes, for such Masts as follow.

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Laniards	4	4 7:	47	4 5	30	2 2	2	3:	3 2	3	3	2
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Pottoks	5	43	4:	4.	3 1/2	3	2 3 4	3.	3	23	$\Gamma_{\lambda}^{\pm}$	101
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Bridles	3 1	33	3	3	2 =	2	I =	2	12 23	1 t 1 t 1	I.	-
Clew-lines	3 8 42	4	4	32	3 .	2 3	2	3:	2 2	Ig	7 3	1
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111

The	bigness	of	the
R.1	Comin m		

Penents of fineats
Sheats
Clew-lines
Garnets
Penents of Erafes
Brafes
Halliards
Tye
Bunt-lines
Horfe
Lifts

be	2	2	2	7	12	7	2	7	2	2	2	2
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elf of 19 inch.

The bigness of the spri fail-top-rigging.		inc	inc	. inc.	5 inc	inc.	mc.	inc.	9 inc.	I O	II inc.	inc.
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Brases	2	1 1	I.	1,	115	E	I	1,	1	t	I	I
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Clew-lines	2.	3	2	2	31	П		2	ı.i	H	I	I
Penents of Tackels	3	3	24	2	1	d		:			3	
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Lifes	2	2	I.	I.	11	1.3	I	12	11	1	I	I
Puttockes	13	3	2 -	2	2	3	2			2	2	I -
Parrel-Ropes	2	2		Ti	13	12	I	13	1:	1	1	I

	nch.	inch.	inch.	inch.	such,	inch.	inch.	inch.	inch.	mch.	nch.	inch.
	34	32	30	50	38	20	26	24	233	19	13	12
The bigness of missen	Maftof	ast of	Jo of	aft of	aft of	aft of	16.16	aft of	Maft of	of of	fo of	to of
rigging.	M	M	July.	14.	M	W	14.	M	M	Mak	M	Maft
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	inch	inch	inch	in n	136	HEN	inch	sach	IBCD	incb	inch	inch
Penents of Tackles	5:	5_	40	46								- 1
Runners Falls of Tackles	3	3	2=	2-								
Shrowdes	5:	5	45	4	32	3	2.	4	1	3	2	2 1
Lanyards	3_	3-	2:	2 '	4	2	$\Gamma_{k}^{\frac{1}{2}}$	2_	2	14	I :	1 2
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Halliards	6	4.	) B_	3-	2.	2 .	2 -	30	3	2	2	
Stay Lanyards	33	5	21	21	2	3 =_	1.	21	4_	15	7	2
Sheat	4	32	3	24	21	2,	2	3	3	2 4	2	1
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Bow-lines	4,	3	2 _	2 _	2	2 _	II	2 2	2	I a	1	H
Brayles Parrel-rope	5-	2	2 _ 4	3	3	2 _	2 2	31	24	12	2	- 1
THITTET TOLO	12	,	3_	3 _	) _	3 _	The same	74	2	T-2	-	-

The Cross-jack.

Lifts Brafes Penents Halliards

			10									
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	40	50	to	10	to	40	fo .		of o	an.	30	5
Bigness of of miffen-top-mast	2/0	Mafe of	Mak	Maple	MAK	1/1	1	1441 OF	Jo of The De	S.	4	Afaft of
verging.	Z	11	7	12	7	3	Most	Z	3	7	7	5
	- Maft	2	3	4	5	O Maje		8	9	10		12
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			2:	1			INC.	340.			inc.	-
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Boy-lines	2.1	2	12	12	14	I	T	12	ī	1		
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Tye	3	3	3	2-	2:	2	,	3	2	2	2	11
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Lifts	2	2	17	I =	н	1.	ш	ī	î.	I	3.	
Parrel-rope	2	2 1	2	1		1:	T:	2	1 2	T	T T	E
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	3		2.4	2	1.1				-			0
Penent of the stay	10	3	- 0				11.				-	1
Top-rope	4	3 %	3 3	2 4	2	2	1 =			1		
Parts of the stay	Z	2	1 0	1 3	1	1	I		1			E
Penents for the back-	3.	2 %	12:							1		1
Falls (stays	20	2	IA				3.17		1	To	1	-

The

The bigness of the main top gallant Rigging.	- 1.11aft of 34 inch.	0 Mil f 32 11 cb.	" Maft of 30 inch.	A M. A of 29 inch.	A Maft of 28 inch.	on Maft of 20 inch.	A Maft of 26 inch.	of Mast of 24 inch.	O Made of 23 inch.	3 Mak of 19 inch.	Maffof 13 inch.	Wast of 12 met.
	nel	nch	mel	nel			inch					12
Penents of Tackles Falls of Tackles Shrowdes Lanyards	3 2 8	3 2 3 1 2	2 a 3 4 3 4 1 4 H	2 3 1 1 1	2 3 3	3	2 1 1 2 2 2 4 2 1 4	2	2	I I	ing!	I L
Puttocas	3.	3	2	2	2	2	11	1 4	I S	I		I
Penents of backstays Falls to them	3 2	3 2	2,	2 I1	2	2				1		I.
The Stay	3	3.	3	2 %	2	2	11	2	11/4	1	1	E
Lanyard	~ 0	- A	2,	2	2 !	2	I.	14	1+	1	A	1
Braies Penent of Braies	2:	1 . 2	1 = 2	14 2	I della	I I i	I	I	T	\$ T	4	4
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Bridles	3	I 2	1 4	14	1	I	I	1	1	î	3	
Top-rope	4=	4	3.	2,	12	3				ř.		1
Parrel-rope	2 2	2	2	2	I	I	1	2 3	1	1	T	T
Tye Halliards	13	5:	3	2 .	2=	F.	1 4	IL	2	2	13	12
Lifes	3,	2 3	2	2,	14	11	1	I's	$I\frac{1}{2}$	I a	Ti.	II.
Flag Raffe Ray	2 5	-	I	12	1	E.	I	I	I	1	I	Y
Clew-lines	2	-	1	1-5 y 1	100	00	1			-		10

15

The bignesse of the Fore-top gallane Rigging.	Mall inc.	R to Maft of 32 inch.	HE Maft of 30 inch.	1 + M. It of 29 inch.	By Maft of 28 inch.	inc.	7 inc.	ins.	B. O Maft of 23 inch.	The Mafe of 19 such.		Br Maft of 12 inch.
Tyc	2 1/2	2 =	14	I =	II	I'a	14	2 %	2	1 =	14	1 =
Tye Halliards	2 1	I 1	1 1	T	I	I	1	II	I.	Ε.	I	t
Bow-lines	2	2	I i	I in I	I 4 I 1	IA.		I	I	4		
Bridles	II	14	1.	1 1 1	I,	141		I	I	4		
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Shrowdes	2 -	2 1	2	2	I.	13	H	2	I .	I		
Laniards	1 1	1 1	1,	1	1	I	I	Hariana H	1	4		
Parrel-Rope	2	2	1 2	I T	I	I	1	11	I z	I		
Clew-lines	2	14	T.	11	14	1 +	1	I h	I.	I		
Brafts	2	1 4 1 1 2 1 3	1 4 I - 3	1,	I 4	I	I	I	1	3		
Lifts	2	13	I,	1 1 2 x	14	I	T	I	I	1		
Top-rope	3 3	3	3	2 1								
Penent of the tackles		21	1 1						1			- 4
Falls	2,	2	2				1.					
Puttockes	3	2 = 2	23	2	14	L	I t	1	I	1	I	
Back-stayes	2 =	3 1	12	-	1		k			1	1	

C 2

The

(16)

5
Sheat-anchor 60 0 0 3| Sheat-anchor 19 0 0
Bell-bower 56 0 0 1
Small-bower 23 0 2 Stream-anchor 20 0 0
Stream-anchor 20 0 0
Stream-anchor 20 0 0
Stream-anchor 2 0 0
Stream-anchor 2 0 0
Stream-anchor 2 0 0
Stream-anchor 2 2 0
Stream-anchor 4 2 0

2 6 10

Sheat-anchor 43 0 0 0 Sheat-anchor 28 0 0 Sheat-anchor 1r 0 0 Best-bower 40 0 0 5 Best-bower 27 0 0 Best-bower 10 0 0 Small-bower 39 0 0 5 Small-bower 16 0 0 Small-bower 9 0 2 Stream-anch 2 0 0 1 2 Kream-anch 2 3 2 Kedg-anchor 7 2 0 0 Kedg-anchor 2 3 0

3 7. II

 Sheat-anchor 35 3 3 2
 Sheat-anchor 22 0 2
 Sheat-anchor 70 0
 Reft-bower 11 0 0
 Beft-bower 6 0 0

 Small-bower 31 2 2 7
 Small-bower 91 0 0
 Small-bower 5 2 0
 Small-bower 5 2 0

 Stream-anch 11 3 2 5
 Stream-anch 5 0 2
 Kedg-anchor 2 0 0

1 8 12

Sheat-anchor 32 0 0 0 | Sheat-anchor 27 0 0 | Beft-anchor 5 0 2 |
Beft-bower 30 0 0 0 | Beft-bower 23 3 5 | Beft-bower 4 0 0 |
Small-bower 27 0 2 | Small-bower 23 0 0 | Small-bower 3 2 3 |
Streem-anch, 11 0 0 0 |
Kede-anchor 3 1 0

Cables

ĭ Inches	2 Inches	3 Inches
Cables of 21	Cables of 20	cables of 17
Cables of 20	Cables of 19	cables of 16
Cables of 14;	Cables of 13	cables of 12
Cables of 10	Cables of 9	cables of 8
Cables of 9	Cables of 8	1
		6
4	1 11 2	· ·
cables of 17	cables of 15	cables of 13
cables of 16	cables of 14	cables of 12
cables of 11	cables of 9	
-7	8	9
cables of 10	cables of 16	cables of 14
cables of 9	cables of 15	cables of 13
	cables of 10	cables of 12
	200	cables of 12
	THE RESERVE	cables of 8
10	11	12
cables of 12	cables of 8	cables of 8
cables of 11	cables of 7	cables of 7
0,0,00	cables of 6	cables of 6
		Weight

## VV eight of Cables

	Inches		C.	9.	I.
A Cable of	21	doth way	90	0	0
A Cable of	20	doth way	80	0	0
A Cable of	19	doth way	70	0	0
A Cable of	18	doth way	66	0	0
A Cable of	17	doth way	59	0	1-1
A Cable of	16	doth way	53	2	7
A Cable of	15	doth way	46	2	7
A Cable of	14	doth way	40	2	0
A Cable of	13	doth way	34	2	10
A Cable of	12	doth way	29	2	1
A Cable of	11	doth way	25	3	6
A Cable of	10	doth way	20	3	4
A Cable of	9	doth way	17	3	13
A Cable of	8	doth way	13	3	17
A Cable of	7	doth way	9	3	12
A Cable of	6	doth way	7	1	0
A Cable of	5	doth way	5	3	12
A Cable of	4	doth way	3	3	0

An

#### An Index.

IN the first Page is showed, how to raise the Model of any ship, for vessel, small or great.

In the second page is thered a Rule for masting and yar ing.

From the third to the eigh is the wed the use of the Mod I.

In the first column of the ninth page, where the figure of a stands on the top, is showed the bigness of Rieging that is required in a ship, that the main-mast is 34 inches through.

In the second column is shewed the bigness of the Rigging the

main-mailt is 32 inches through.

In the routd column is thewed the bigness of Rigging for a main-mast of 30 inches through.

In the fourth column is shewed the bigness of Rigging for a main-

In the fifth colum

of 28 inches through.

In the fixth column is shewed the bigness of Rigging for a main-mast

of 201 ches through.

In the seventh column is thewed the bigness of Rigging for a main-mast of 26 inches through.

In the eighth column is thewed the bigne's of Rigging for a main-

In the einth column is shewed the bigness of Rigging for the main-

In the tenth column is the wed the bigness of Rigging for a main-mail of 10 inches through.

In the eleventh column is shewed the bigness of Rigging for a mainmast of 13 inches through.

In the twelfth column is shewed the bigness of Rigging for a mainnast of 12 inches.

In the tenth Pare is showed in the ra columns the bigness of Rigging for the fore-mast, answerable for the main mast, and main topmast in the moth page.

In the 12 columns of the eleventh Page is shewed the bigness of sprit-fail, and sprit-fail-top-mail Rigging for such ships.

In the 12 columns of the twelfth Page is shewed the bigness of

In the 12 columns of the thirteenth Page, is thewed the bigods of

In 12 minms of the fourteenth Page, is thewed the bigners of

was the Mant River.

1. The in column at the friteenth Page, is showed the bigness of

In the 16 pare is showed by the 12 figures, the Anchors for In

thips that are to be mafted and Rie ed.
In the 17 page is showed by the 12 figures, the Cables for such

In a 18 page is shewed the weight of Cables.

From a Cable of 21 inches to a four-inch-rope.

In the 19 page is harved the Model of a great ship, of an hundred and 25 foot by the Keel, and like wife the making of the Scale.

In the 20 page is showed the 3 mail models.

Likewile, Note, that on the top of every column in the 9, 10, 11, 12, 13, 14, and 15 pages, three is a figure fee, as thus, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12. Which is to direct you aright to complete a whole flight grigging in bianels.

And as for the length, the Model gives you that so true, that you

nee not feat, but that four in p will be well Ri ged.

So leaving you to your practice, and withing you a good proceeding as well for your good as my credit, I conclude, and Re-t

Yours

T. M.

FINIS.



