more than one eighth, nor be less than the siding. The piece must be fairly tapered from the but-end to the mid­dle of the length, and must not have more than four inches in the two wanes taken together on either side ; that is to say, if there be but one wane,@@1 that wane shall not exceed four inches. The piece must be so sided, that between the wanes, at half its iength, there shall not be less than the siding with one eighth in addition, and the pane at the top- end must not be less than two thirds the pane at the mid­dle of the length. The piece is measured for contents as far as it holds between the wanes three fourths of its siding. It must be so hewn the moulding way, that the surface of the square shall not be less than one fourth the diameter of the piece at that place, and this dimension must be set off previously to the diameter for measurement being taken. No but-length is allowed, but the timber is measured for contents at the middle of the length. If any piece of tim­ber has length beyond the prescribed proportion of pane, and which is really convertible with the piece, it is received at a reduction of price. Timber having five inches or more of naturally grown rounding in any twelve feet or less of its length, is denominated compass timber.

Timber of certain sidings must have at least certain pro­portionate lengths. These are as follow :

Siding. Length.

20 inches to 19½ must be at least 24 feet.

19 18½ 22 ...

18 17½ 20 ...

17 16½ 18 ...

16 15½ 16 ...

15 14½ 14 ...

14 12 12 ...

12 10 10 ...

Compass oak timber is measured in the same manner as straight timber, with the exception that its moulding must not exceed its siding less than one fifth of that siding ; and that the moulding at the but-end is to be measured as large as it will hold without more than four inches on the two wanes on either side taken together.

Thick-stuff is a name used to designate all planks beyond a certain arbitrarily assumed thickness, which is now four and a half inches and upwards, to tcn inches inclusive. All below four and a half inches in thickness is called plank. It must be cut straight and of a parallel thickness, and the breadth for measurement, which is taken at half the length of the piece, must not exceed nineteen inches nor be less than twelve inches clear of sap. This breadth, at the mid­dle of the length, is measured by taking in half the wanes, thus, provided the breadth

clear of the sap is within two inches of the breadth at which the piece is received. No thick-stuff can be received of less length than twenty-three feet, at which length it must measure nine inches clear of the sap ; and all extra length, as far as it measures nine inches between the sap, is mea­sured into the contents.

The rules for measuring thick-stuff and plank vary slight­ly, in order to accord with the growth of the sort of timber from which they are converted. For example, in the case of Lorraine oak thick-stuff, the minimum length is twenty- four feet ; the measurement for breadth, which must not ex­ceed eighteen inches, nor be less than fourteen inches, is taken at eight feet from the but-end of the piece. The piece must be square edged from end to end, and must measure nine inches at the top-end clear of sap on the most sappy side. English elm thick-stuff of five inches and four and a half inches in thickness, must not be less than fourteen inches broad in the middle of the length, nor less than twelve inches broad at the top-end clear of shakes and dead sap. The planks must average twenty-six feet in length, and no plank may be of less length than twenty-three feet. North American rock elm thick-stuff of five inches and four and a half inches in thickness, is received at twelve inches broad, clear of shakes and sap, of the average length of twenty-eight feet, but none shorter than twenty-four feet in length.

English oak plank of four inches thick must be at least twenty-two feet, and of three inches thick at least twenty feet in length. The breadth between the sap at those lengths must be seven inches, and the plank is measured as far as it holds six inches clear of sap. The breadth for measurement, which is taken at half the length of the piece, and clear of sap, must not be less than nine inches for the four-inch plank, and eight inches for the three-inch plank. This is taking in half the wanes, provided the breadth clear of sap be within two inches of the breadth at which the piece is received.

Dantzig oak plank of four and a half and four inches thick is to mete at thirty-two feet long, with a minimum length of twenty-four feet. It is to be from twelve to fifteen inches broad, and cut square edged its whole length. Plank of three and a half and three inches thick is to mete at twenty-eight feet long, with a minimum length of twenty- four feet, and to be from twelve to fourteen inches broad. Lorraine plank must be square edged from end to end. No plank of four inches in thickness is to be less than twenty-four feet in length, or more than sixteen inches or less than thirteen inches in breadth, at seven feet from the but-end. The length is to be measured for superficial contents as far as the plank runs eight inches in breadth, clear of sap on the most sappy side. For three-inch plank, the minimum length is twenty feet. The breadth at six feet from the but must not exceed sixteen inches, nor be less than twelve inches ; and the length is to be measured for superficial contents, as far as the plank runs seven inches in breadth, clear of sap on the most sappy side. The sap on the two edges taken together on either side of this plank, after the edge is squared, must not exceed one inch ; that is to say, if there be no sap on one edge, that on the other edge must not exceed one inch.

Fir timber received for general purposes is measured for its size at the middle of its length, and the size for mea­surement must be the mean of the sizes taken at the but and top, and the spine must be seen on the four sides from end to end of the piece. The red-pine timber, whether from the north of Europe or from Virginia, is not received of less length than eighteen feet, nor less in diameter than eleven inches. The Canada red-pine timber, which must be felled above Montreal, must not be of less length than twenty feet. The North American yellow pine must be at least twenty feet in length, and sixteen inches square. That which is received for the cheeks of made-masts is re­quired to run as high in dimensions as sixty-three feet in length, and cighteen inches square at the measuring place.

Fir that is received especially for mast-making is re­quired to be of certain proportionate dimensions. It is di­vided into two sorts, inch-masts and hand-masts. The inch-masts are designated according to the number of inches they measure in diameter at a measuring place called the partners, after they have been chopped on each square, so as to show spine ; and their length must be nine feet more than three times the number of feet which they have inches in diameter. The distance of the part­ners from the but-end is in a given ratio to the whole

@@@, Wane is the technical term used to designate the hypothenuse of an angular portion of timber which is wanting to complete the rectan­gular boundary of a log ; while pane is the term applied to the side of the log between the wanes.