This hitch by itself round a large object would not hold and round a small one would jam excessively. See Knot, *l.c.,* fig. 13.

*Two Half-Hitches* (fig. 5).—The half-hitch repeated ; this is commonly used, and is capable of resisting to the full strength of the rope. A stop from *a* to the standing part will prevent it jamming.

*Clove Hitch.—* Pass the end *a* round a spar or rope and cross it over *b*, its standing part ; pass it round again and put the end *a* through the second bight. This hitch is generally used at right angles to the object and is improved by adding a half-hitch with the end *a* round *b*. When pulled in a line with the spar it becomes simply two half-hitches. An illustration is given in Knot, *l.c.,* fig. 15.

*Double Blackwall Hitch* (fig. 6).—Pass the end *a* twice round the hook and under the standing part & at the last cross. The ordinary Blackwall hitch only extends to the first cross at *b*, and is quickly formed by passing the hook of a jigger through the bight of a rope so that the end may be jammed between it and the standing part, as from *b* to *a*. Used for setting up top-gallant rigging and similar light work when a slip is of little consequence.

*Cat’s-paw* (fig. 7).—Twist up two parts of a lanyard in opposite directions and hook the tackle in the eyes *i, i.* A piece of wood should be placed between the parts at *g.* A large lanyard should be clove-hitched round a large toggle and a strap passed round it below the toggle.

*Marling-Spike Hitch* (fig. 8).—Lay the end *a* over *c* ; fold the loop over on the standing part & ; then pass the marling-spike through, over both parts of the bight and under the part *b.* Used for tightening each turn of a seizing.

*Fishermans Bend* (fig. 9).—Take two turns round a spar, then a half-hitch round the standing part and between the spar and the turns, lastly a half­hitch round the standing part.

*Studding-Sail Halyard Bend* (fig. 10).—Similar to the above, except that the end is tucked under the first round turn ; this is more snug. A *magnus hitch* has two round turns and one on the other side of the standing part with the end through the bight.

*Timber Hitch (*fig*.* 11).—Take the end *a* of a rope round a spar, then round the standing part 6, then several times round its own part *c*, against the lay of the rope.

*Snaking* (fig. 12).—This consists of turns and crossings, the latter taken diagonally with a marling hitch each time. Used to keep wooldings and seiz­ings in place. The same term is applied to lines between the backstays to keep a broken part from falling.

*Carrick Bend* (fig. 13).—Lay the end of one hawser over its own part to form a bight as e, *b* ; pass the end of another hawser up through that bight near *b*, going out over the first end at *c*, crossing under the first long part and over its end at *d,* then under both long parts, forming the loops, and above the first short part at *b,* terminating at the end e", in the opposite direction vertically and horizontally to the other end. The ends should be securely stopped to their respective standing parts, and also a stop put on the becket or extreme end to prevent it catching a pipe or chock ; in that form this is the best quick means of uniting two large hawsers, since they cannot jam. When large hawsers have to work through small pipes, good security may be obtained either by passing ten or twelve taut racking turns with a suitable strand and securing each end to a standing part of the hawser, or by taking half as many round turns taut, crossing the ends between the hawsers over the seizing and reef-knotting the ends. This should be repeated in three places and the extreme ends well stopped. Connecting hawsers by bowline knots is very objectionable, as the

bend is large and the knots jam.

*Sheet* *Bend.—*Pass the end of one rope through the bight of another, round both parts of the other, and under its own standing part. Used for bending small sheets to the clews of sails, which present bights ready for the hitch. An ordinary net is composed of a series of sheet bends. See Knot, *l.c.,* fig. 20. A *weavers knot* is made like a sheet bend.

*Single Wall Knot.—*Unlay the end of a rope, and with the strand *a* form a

bight ; take the next strand *b* round the end of *a* ; take the last strand *c* round the end of & and through the bight made by *a* ; haul the ends taut. A *double wall* against the lay (not crowned) makes a good stopper. A *whale knot* is similar, but made with the lay. Fig. 21 of art. Knot, *l.c.,* represents a single wall knot.

*Single Wall Crowned.—*Form a single wall, and lay one of the ends, *a*, over the knot ; lay *b* over a, and c over *b* and through the bight of *a* ; haul the ends taut. See Knot, l.c., fig. 22.

*Double Wall and Double Crown.—*Form a single wall crowned ; then let the ends follow their own parts round until all the parts appear double ; put the ends down through the knot. A very excellent and generally used cable- stopper. See Knot, *l.c.*, fig. 23.

*Matthew Walker.—*Unlay the end of a rope. Take the first strand round the rope and through its own bight ; the second strand round the rope, through the bight of the first, and through its own bight ; the third through all three bights. Haul all taut. An easily made and useful knot. Illustrations are given in Knot, l.c., figs. 24 and 25.

*Inside Clinch* (fig. 14).—The end is bent close round the standing part till it forms a circle and a half, when it is securely seized at *a, b,* and c, thus making a running eye ; when taut round anything it jams the end. It is used for securing hemp cables to anchors, the standing parts of topsail sheets, and for many other purposes. If the eye were formed outside the bight an *outside clinch* would be made, depending entirely on the seizings, but more ready for slipping.

*Midshipman’s Hitch* (fig. 15).—Take two round turns inside the bight, the same as a half-hitch repeated ; stop up the end ; or let another half-hitch be taken or held by hand. Used for hooking a tackle for a temporary purpose.

*Turk's Head* (fig. 16).—With fine line (very dry) make a clove hitch round the rope ; cross the bights twice, passing an end the reverse way (up or down) each time ; then keeping the whole spread flat, let each end follow its own part round and round till it is too tight to receive any more. Used as an ornament variously on side-ropes and foot-ropes of jibbooms. It may also be made with three ends, two formed by the same piece of line secured through the rope and one single piece. Form with them a diamond knot ; then each end crossed over its neighbour follows its own part as above.

*Spanish Windlass* (fig. 17).—An iron bar and two marling-spikes are taken ; two parts of a seizing are twisted like a cat’s-paw (fig. 7), passed round the bar, and hove round till sufficiently taut. In heaving shrouds together to form an eye two round turns are taken with a strand and the two ends hove upon. When a lever is placed between the parts of a long lashing or trapping and hove round, we have what is also called a Spanish windlass

*Slings* (fig. 18).—This is simply the bight of a rope turned up over its own part; it is frequently made of chain, when a shackle (bow up) takes the place of the bight at s and another at *y,* connecting the two ends with the part which goes round the mast-head. Used to sling lower yards. For boat’s yards it should be a grummet with a thimble seized in at *y.* As the tendency of all yards is to cant forward with the weight of the sail, the part marked by an arrow should be the fore-side,—easily illustrated by a round ruler and a piece of twine.

*Sprit-Sail Sheet Knot* (flg. 19).—This knot consists of a double wall and double crown made by the two ends, consequently with six strands,—with the ends turned down. Used formerly in the clews of sails, now as an excellent stopper, a lashing or shackle being placed at *s,* and a lanyard round the head at *l*.

*Turning in a Dead-Eye Cutter-Stay fashion* (fig. 20).—A bend is made in the stay or shroud round its own part and hove together with a bar and strand ; two or three seizings diminishing in size (one round and one or two either round or flat) are hove on taut and snug, the end being at the side of the fellow part. The dead-eye is put in and the eye driven down with a commander.

*Turning in a Dead-Eye end up* (fig. 21).—The shroud is measured round the dead-eye and marked where a throat-seizing is hove on ; the dead-eye is then forced into its place, or it may be put in first. The end beyond *a* is taken up taut and secured with a round seizing ; higher still the end is secured by another seizing. As it is important that the lay should always be kept in the rope as much as possible, these eyes should be formed conformably, either right-handed or left-handed. It is easily seen which way a rope would natur­ally kink by putting a little extra twist into it. A shroud whose dead-eye is turned in end up will bear a fairer strain, but is more dependent on the seizings ; the under turns of the throat are the first to break and the others the first to slip. With the cutter-stay fashion the standing part of the shroud gives way under the nip of the eye. A rope will afford the greatest resistance to strain when secured round large thimbles with a straight end and a sufficient number of flat or racking seizings. To splice shrouds round dead-eyes is objectionable on account of opening the strands and admitting water, thus hastening decay. In small vessels, especially yachts, it is admissible on the score of neatness ; in