Flat-rope. A rope made by plaiting yarns to-gether instead of twisting. Gasket; sennit. Some flat ropes, for mining-shafts, are made by

sewing together a number of ropes, making a wide, flat band.

Grist. 1. (Rope-making.) A given size of rope. Common grist is a rope 3 inches in circumference, with twenty yarns in each of the three strands.

Haul. (Rope-making.) A bundle of three or four hundred parallel yarns ready for tarring. Being dipped in a tar-kettle, the haul is dragged through a grip, gape, or sliding nipper which expresses superfluous tar.

Haw'ser. (Nautical.) A small cable, used in warping and mooring.

A clear hawse is when two cables are down and diverge from each other.

A foul hawse is when they are twisted by the

swinging of the ship at her moorings.

When simply crossed, it is called cross-hawse; another cross makes an elbow; another makes a round-

Disengaging it is called clearing hause. Slackening it is called freshening hause.

Speaking generally, a hawser is not over ten inches in circumference. Above this it is a cable. The laying, however, is not to be disregarded.

Haw'ser-laid. (Rops.) Rope made of three strands, of three yarns each, laid up into a rope. The twist of the strands is the reverse of the individual yarns.

Shroud hawser-laid has four strands.

Three hawser-laid ropes are laid up into a cable, the twist being again reversed.

Lay. 1. (Rope.) The direction in which the respective yarns, strands, etc., are wound in forming them into a rope, hawser, cable, etc.

Hemp is laid-up right-handed into yarns.

Yarns are laid-up left-handed into strands.
3-strands are laid-up right-handed to form a haw-

ser.

3-hawsers are laid-up left-handed to form a cable. The terms signifying the respective forms are, single-laid, hawser-laid, cable-laid.

Left-hand Rope. Rope laid up and twisted "against the sun," as it is termed. Water-laid rope.

Lis'sens. (Rope-making.) The ultimate strands of a rope.

Net'tling. (Rope-making.) a. A process whereby two ropes are joined end to end, so as to appear as one. The ends are scutched or beaten out, and spun or twisted together.

b. The tying of the yarns in pairs to prevent their becoming entangled or confused when laid upon the posts in the ropewalk.

Plait/ing.

2. Interweaving of strands to form a flat rope or braid.

Plait'ed Rope. A flat rope made by plaiting instead of twisting. Sennit.

Ran. 1. (Rope-making.) A reel of 20 yarns.

Shroud-laid Rope. (Rope-making.) A rope made of four strands twisted around a core. A hawscr-laid rope is of three strands twisted together without a core. See ROPE.

Size-box. (Rope-making.) One through which



cordage is drawn in the process of sizing. The cordage having been drawn through the size-box and partially dried is drawn slowly between closely pressing reciprocating rubbers and snuggers, which are stationary relatively to the slowly moving carriage to which

they are attached. The size is flour-paste mixed with other ingredients, and the operation on the rope is called *snugging*, *slicking*, or *finishing*. It smooths down the *sleezy* and *fuzzy* fibers of the twisted rope.

Slee'zy. (Rope-making.) Rough from projecting fibers, as yarn or twine made of inferior material.

Spole-frame. (Rope-making.) One of the parts of a rope-making machine. Each spole-frame has apparatus for determining the torsion and tension of each strand, and a cluster of three spole-frames combines the three strands into a rope. See ROPE-MAK-ING MACHINE.

Strop. 1. (Rope-making.) A rope with an eye at each end, used in twisting strands.
2. (Nautical.) A rope spliced into a circular wreath to seize around a block for hanging it.

Tack'le-post. (Rope-making.) A post with whirls in a ropewalk, to twist the three strands which are laid up into a cord or rope.

Ter'ry. (Rope-making.) An open reel.

Wa'ter-laid. (Rope.) Coiled "against the sun," that is, over to the left. Cablet.

Wa'ter-laid Rope. Rope laid up and twisted "against the sun," as it is termed; in contradistinction to right-hand rope.