

On Board a Square-Rigger.

Through the manner of handling a square rigged ship depends, primarily, on the form in which the exigency presents itself, and upon the poise, skill and judgment of the officer in charge, yet there are various distinct evolutions which arise from the similarity of rig and conditions, and these have names. Familiarity with these evolutions is part of a seaman's education.

Tacking, going about, or going in stays (synonymous terms) is the most frequent of sea manoeuvres—a simple operation in a schooner, but one requiring all hands and the cook in a square-rigged vessel. As it generally uses up a full hour, it is delayed, if possible, until the change of watches, so as not to break in too heavily on the sleep of the watch below.

Fifteen minutes before eight bells preparations are made by the watch on deck. Braces are flaked (arranged in overlapping coils) on the deck, and the mainsail and cro' jack are clewed up out of the way. The captain climbs to the top of the after house, the first mate goes forward, the second mate remains on the waist and when the watch appears the men go to stations—part of the port watch forward with the mate at the head sheets, the rest at the main braces to assist part of the starboard watch, the others of whom man the cro' jack braces.

The boys of the ship with the carpenter sailmaker and boatswain (or second mate) attend to the lee main, and weather cro' jack braces to let go at the right moment. The cook, night or day, must come out of his sanctum and let go the foresheet at the order, "Hard-a-lee." When all is ready the captain call this order, the mate answers, and jib sheets are slacked, the cook answers, lets go his rope and retires to his work or his bunk, the jib sheet men shift over to trim down the other side, and the ship slowly swings up into the wind. When the weather half of the main topsail is aback the moment has come to swing the after yards. At the order, "Main topsail haul," braces are cast off, and the men opposite round in the slack hurriedly, for the yards swing themselves by the pressure of the wind. All the sails are now aback and materially assist in throwing the ship around, but when it comes to swinging the fore yards, which is not done until the after sails fill, there is a long, hard pull for the men, for with the wind at a different angle, these yards will not swing themselves. All hands man the fore braces, and at the orders, "Fore bowline—let go and haul," slowly bowse the heavy yards around to the accompaniment of the untuneful, but rhythmical shoutings peculiar to sailors when pulling ropes. When the sails have been filled the ship is about. Tacks and sheets are boarded, braces taunted anew, ropes coiled up, and the watch goes below. A failure of the operation is called missing stays, and happens often in light winds.

In a heavy sea a ship will not go about, and in this case, with sea room astern, an opposite manoeuvre is performed—wearing ship. It is merely turning around the other way, and in light winds is often done to avoid calling the watch below, as the men on deck are competent, but in heavy weather, it is a job for all hands, as in tacking. The wheel is put up instead of down, and a ter yards are squared. When the ship is before the wind, the after yards are braced around, and the job is done.

Dropping down with the tide is a simple operation, but one requiring close attention from the captain or officer in charge. The ship is up a tortuous river or channel, and there is a scarcity of tugs, while the wind is ahead. The anchor is tripped, and as the ship swings broadside to the wind—as all craft will with canvas furl'd—the mizzen topsail, the second sail on the mizzen mast, is set, and men stand by the braces. She drifts down with the ebb, pointing her nose approximately across stream, and should she need to lorge ahead to clear a point, or shoal spot on the quarter, the topsail is filled until she has passed the obstruction, then shivered. Shallow water on the bow is avoided by backing the topsail—i. e., bracing it so that the wind bears on the forward side—until the ship has gathered sufficient sternway. By skilful manipulation with this sail a ship may be taken down a snaky channel through which she could safely sail bow on with a fair wind.

Lying to and heaving to are synonymous terms, and also apply to two distinct operations. In general, either means stopping headway. Lying to or heaving to for a pilot, or to communicate with another,

consists, no matter how the wind may be in luffing up until weather leeches tremble and backing the sails on one mast to counteract the forward push of the other. Usually the main yards are backed; but ships have their habits, and some will be steady with the fore yard aback and the others left braced. The resultant force of wind is sideways, and the ship drifts to leeward.

Heaving to in a gale is merely putting ship under short canvas and steering by the wind, as in beating to winward. If she has been running before it, this is a seamanly manoeuvre, and it must not be delayed too long, or disaster may follow. Sail is shortened, usually to topsails, spanker and fore topmast staysail—to less if the gale is fierce. Yards are braced sharp, and two men at the wheel take the command as the last of three heavy seas breaks on the quarter, and grind it down. Unlucky is the ship that loses steerage way before the bow is brought to the seas—she may roll her spars over the side. But, brought to successfully, heading six points off the wind (as near as she can lay) and with oil dribbling from drain pipes or floating bags, she may wallow up and down in the same hole, and drift to leeward with a fairly dry deck. If the wind increases, sail is taken off, little by little, until, as is often the case, a tarpaulin seized to the weather mizzen rigging is enough to keep the bow to the sea.

Though heaving to is a last resort with sea room, running before the gale is the position easiest on a ship's framework; the danger is that the following seas will broach her to in the trough, or, in boarding her, damage her deck fittings and disable the crew. Yet while under perfect control, a ship hove to and pounding into a head sea may start a butt (a plank end) from the violent stress and strain on her joints, and then—to the pumps. If the leak is a bad one, a sail may be thrummed, passed under the bottom and tentatively secured, while the pumps are sounded at intervals, until it is known by the lowering of the water that the leak is covered. But a leak close to the keel, or in the concave of the bow or quarter cannot be stopped in this manner, and the water gains until it is measured in feet. An ensign is hoisted union down, boats are made ready and provisioned and the horizon watched eagerly for a rescuing ship. Then should all hope of rescue disappear, the ship's people take to the boats, possibly to drown in the attempt at launching or to float and perhaps die of starvation or thirst before they are seen.

A troublesome factor in a captain's calculations is a lee shore. No good comes of successfully riding out a gale, if, in doing so the ship risks the embrace of jagged rocks and breakers. Better the deep sea than the devil. Every West India hurricane whirling up the Atlantic coast carries a front of easterly wind that is a serious menace to craft caught on soundings. The storm centre is coming and a lee shore threatens. It is an emergency which offers no alternative. The ship must be laid to the wind and driven to hold every inch possible. If close in, the tack that will drift slowest toward the shore is preferable regardless of the storm centre. If the wind hauls to the southward, and the vessel has escaped the beach by the time it reaches southwest, and she has spars and canvas left, she may take the tack nearest her course and sail as wind and sea will permit; for devil and deep sea have changed their character. The same if the wind has hauled to the northward—the storm centre is passing to seaward; and, confident that he cannot overtake it, the captain may safely wear ship and head away from the coast.

And if the wind does not change, but maintains a steady and increasing violence from seaward, while the barometer lowers rapidly, there is still a desperate chance or two left, even though a black coast or nest of breakers may be seen from the top of the sea. The storm centre, which is surely bearing down, may pass over and on before the ship strikes bottom, and in the few hours of respite in the light airs of the eye of the storm she may be prepared, if still a ship, to meet the wind in the following semicircle of the storm; for this wind will blow away from the coast.

Caught on a lee shore, many a good ship has been saved by clubhauling, a feat of seamanship which, in nautical history, has often been performed aboard men-of-war than aboard short-handed working craft. It is available only when the gale is not blowing directly toward the shore, but at

such an angle that the ship, if placed upon the other tack, could clear it. There is not room to wear however, and too much wind and sea to risk an attempt at going about with the ship's momentum alone. So, the lee anchor is made ready, a range of chain overhauled and the end cleared of a shackle disconnected, ready for slipping. A strong and long rope is coiled down on the lee quarter, the end taken forward outside the rail and all rigging and fastened to the ring of the anchor; or, if the rope is doubtfully short and the ship carries an old fashioned log windlass, the rope may be taken in through the hawse pipe and fastened to the chain just forward of the windlass.

Preparations are made for going about in the usual manner; but, as the ship luffs up, wavers, stops swinging and begins to drift sternward, the anchor is dropped and chain and rope payed out until the anchor bites. It may drag, but will probably straighten the ship head to wind before she has gone two lengths toward the shore. The after yards are swung at the usual time, and there will come a moment when the ship heads slightly toward the other tack. Now is the time to slip the chain and bring the strain on the rope leading to the quarter. If all goes smoothly, she will pay off, and if the foreyards can be swung before the ship is driving for the beach bow on, the line is cut and she sails on toward sea room and safety.

The anchor, chain and rope are not necessarily sacrificed; for a buoy may easily be attached to the rope on the quarter, and if the ship has time, they can be recovered.

THE LAZY BALL PLAYER.

Invented the Automoroller Skates That Proved His Own Destruction.

'It's odd,' remarked the fat ex-mascot of the Lightfoot Lilies, 'how all great inventive geniuses seem to be lazy men. I suppose it's because they're always trying to get next to some scheme for minimizing exertion. Now, there was old Dean Brayley, who did the twirling for the Lightfoots when they held the championship of Jones county. He was the laziest ball player I ever set my peepers on and no one can deny that he was the father of the automoroller skates.'

'As a pitcher the Dean had no equal; ten strike-outs in one game on thirty balls pitched was considered nothing for him. And yet he knew right well that the only reason he took such pains to fan a batter out was that it only took three balls to do the trick, while if he should ever let a man walk to first it would require at least four efforts, and there'd be one more batter to dispose of. When it came to fielding he was all right there. Flies, lines, bouncers—he froze on 'em all. Why? Just because he knew that if he dropped the ball he'd have to stoop to pick it up. Pure laziness. Why, would you believe it, he wouldn't even take the trouble to sit down on the players' bench between innings. 'What's the use?' he'd say. 'You only have to get up again when the other side comes to bat.'

'The only thing that made us really peevish with the Dean, however, was his conduct at the bat. Rather than have to run to first he'd invariably strike wild at every ball, whether it came high, low, wide or over. Well, sir, you can imagine how he felt when one day the opposing pitcher hit him with the ball and forced him to amble down to first. That seemed bad enough to the Dean, but when Bull Thompson, the next man up, lined out a homer his anger knew no bounds. The Bull had to grab him by the shirt collar and trousers and push him all the way around the bases. By the time they'd crossed the plate the Dean broke loose and made a rush at Bull.

'That's a nice trick,' he roared. 'Oh, no; I suppose you didn't know that home run on purpose, did you? If I pitch too swift when you're trying to catch, why don't you come out and say so like a man instead of trying to even up with your low down sneaking, underhand tricks!'

'That put us in a pretty fix—our pitcher so dead sore at the catcher that they wouldn't speak and the annual game with the Ringtail Roarers only ten days off. Soon after we reached home, however, Dean began to feel ashamed of his baby conduct and made it all up. For the next few days he kept pretty much to himself, but that didn't worry us, for he always took long sleeps when preparing for a great effort.

'The day of the big game came at last, and such a sight as the grounds were I never expect to see again. It seemed as if every man, woman and child in Jones county had come to town for the occasion. The Sheriff had previously torn down the fences in order to satisfy the demands of a dealer of chewing gum account against the management, and the crowds were spread out on the grass for a quarter of a mile.

'When Dean came to bat in the sec-

ond inning the Roarers were one run to the good and we all felt some anxiety as to how he would act.

'Buck up and hit the ball, old man,' pleaded Capt. Slugger Burrows.

'The Dean simply smiled and began to undo a paper box which he had kept tucked under his arm. He took out what at first appeared to be a pair of roller skates. As he adjusted them to his feet, however, we noticed that they had a complicated series of stops and levers running up the sides with a steam whistle and bell attachment. He paid no attention to the astonishment of the crowd, but glided gracefully up to the plate. The first ball pitched he basted far out into left. For a moment or two he stood motionless. Then there was a sharp wheezing of steam and he suddenly shot forward toward first. At first base a simple turn of a lever switched him off in the direction of second. The Roarers' shortstop stood dumfounded in the middle of the base line. Clang! clang! clang! went the gong and the Dean sped on. By the time he had rounded third the people had partially recovered from their surprise and the reception they gave the Dean was deafening. Men were dancing on each other's toes and embracing other men's wives. And above the mighty shouts of joy could be heard the sweet strains of 'When Johnnie Comes Marching Home' as distributed by the Lightfoot Lily Band. Dean's only comment, as he rolled up to the players' bench at half speed, was: 'I must get a fender, it's dangerous as it is.'

'Well, sir, thrice more did the Dean tie the score, and thrice more did the crowd go wild with glee. When he came to bat in the eleventh inning with the score 17—17, Capt. Burrows could no longer control his curiosity.

'For Heaven's sake, what are they, Dean? How do they work?'

'They're automoroller skates,' replied the Dean. 'I'll explain when I get home.'

'But he never did, poor chap. He hit the ball all right, and he started for first all right. But when he went to turn for second the steering lever snapped, and he couldn't change his course. On he went out into right field.

'Help, Help! Stop me!' he cried with a heart-rendering look of terror. But the people seamed in a trance and mechanically sank back to make way for him. On he sped. Once he was lost to sight in some valley only to rise again on the crest of the hill beyond. Soon he became only as a fly speck against the sinking sun. Then, after a farewell flicker or two he was absorbed entirely by the glaring ball of fire in the far West. The game was never finished.

'Where he is now I don't know. Several years later I heard he had a job as Rip Van Winkle in a wax-works tableau up State. The management fired him though, because he snored. Poor old Dean!'

Worth Ten Dollars a Bottle.

Any person who has used Polson's Nervine, the great pain cure, would not be without it if it cost ten dollars a bottle. A good thing is worth its weight in gold, and Nervine is the best remedy in the world for all kinds of pain. It cures neuralgia in five minutes; toothache in one minute; lame back in one application; headache in a few moments; and all pains just as rapidly. Small test bottles only cost 10 cents. Why not try it today? Large bottles 25 cents, sold by all druggists and country dealers. Use Polson's nerve pain cure—Nervine.

Hemorrhage From the Lungs.

Bleeding from the lungs is one of the not uncommon symptoms of consumptum, occurring at some time in the course of the disease in perhaps two thirds of the cases. It is often the first indication of lung trouble in a person who has been losing flesh and growing weak without any apparent cause, but it more often occurs in advanced stages of the disease.

There may be one hemorrhage only, or the trouble may occur frequently; and the amount of blood expectorated may be barely enough to tinge the phlegm, or the bleeding may be most profuse—a cupful or even a pint or more.

It very rarely happens that the quantity is so great as to endanger life, yet the blood may be poured into the bronchial tubes more rapidly than it can be coughed up, and so actually drown the sufferer.

The treatment of hemorrhage of the lungs consists first of all in absolute quiet. The patient should be in a cool room, lying down, but with shoulders raised, and should be forbidden to talk. Swallowing cracked ice may be serviceable, and also cold applications to the chest, but of course a physician must be called to administer suitable remedies for the control of the bleeding if it is at all profuse.

Quiet, deep breathing is useful, but the patient should avoid any attempt to keep back the blood, for when it has once escaped from the blood-vessels it is better coughed up than remaining in the air-tubes. Fear or excitement only makes the

bleeding worse, and patients should be taught that the hemorrhage is a usual occurrence in consumption, and that it seldom has any effect upon the course of the disease; especially that it does not at all preclude absolute recovery upon proper hygienic treatment.

Rome physicians tell consumptive patients that they must expect one or more attacks of hemorrhage, possibly quite severe ones, but that such hemorrhage is usually of no great moment.

In some cases, indeed, when the spitting of blood is due to congestion rather than to any actual tear of some of the blood-vessels, it may be beneficial, as tending to relieve the stagnation and to give the circulation a chance to reestablish itself.

An important fact to remember, one which may tend to relieve the sufferer's anxiety, is that the blood which is expectorated is much more often from the throat or nose than from the lungs, and may have nothing to do with the fact that the patient is a consumptive.

Bess—They say Maud Goody kissed a man at the Jones' lawn party the other night.

That's true.

Bess—How do you know?

Jack—I had it from her own lips.



PROGRESS.

Some time ago there was a notable automobile procession in the city of Buffalo, N. Y. It was notable for its size, and also for the fact that it was entirely composed of automobile wagons (like that in the cut above), built to distribute the advertising literature of the World's Dispensary Medical Association, proprietors and manufacturers of Dr. Pierce's medicines. In many a town and village Dr. Pierce's automobile has been the pioneer horseless vehicle. These wagons, sent to every important section of the country, are doing more than merely advertise Dr. Pierce's Remedies—they are pioneers of progress, heralds of the automobile age.

And this is in keeping with the record made by Dr. Pierce and his famous preparations, which have always kept in the front on their merits. Dr. Pierce's Golden Medical Discovery is still the leading medicine for disorders and diseases of the stomach and digestive and nutritive systems, for the purifying of the blood and healing of weak lungs.

Women place Dr. Pierce's Favorite Prescription in the front of all put-up medicines specially designed for women's use. The wide benefits this medicine has brought to women have been well summed up in the words "It makes weak women strong and sick women well."

The reputation of Dr. Pierce's Pleasant Pellets as a safe and effective laxative for family use is international. It may be asserted without fear of contradiction that no other firm or company engaged in the vending of put-up medicines can rank with the World's Dispensary Medical Association, either in the opinion of the medical profession or of the intelligent public. The Invalids' Hotel and Surgical Institute, which is connected with the "World's Dispensary," is alone sufficient to prove this supremacy. Here is a great modern hospital, always filled with patients, where every day successful operations are performed on men and women whose diseases demand the aid of surgery. No hospital in Buffalo is better equipped, with respect to its modern appliances, or the surgical ability of its staff. Dr. R. V. Pierce, the chief consulting physician of this great institution, has associated with himself nearly a score of physicians, each man being a picked man, chosen for his ability in the treatment and cure of some special form of disease.

The offer that Dr. Pierce makes to men and women suffering with chronic diseases of a free consultation by letter, is really without a parallel. It places without cost or charge the entire resources of a great medical institute at the service of the sick. Such an offer is not for one moment to be confounded with those offers of "free medical advice" which are made by people who are not physicians, cannot and do not practice medicine, and are only saved from prosecution by artfully wording their advertisements so that they give the impression that they are physicians without making the claim to be licensed.

Those who write to Dr. Pierce, chief consulting physician to the Invalids' Hotel and Surgical Institute, Buffalo, N. Y., may do so with the assurance that they will receive not only the advice of a competent physician, but the advice of a physician whose wide experience in the treatment and cure of disease, and whose sympathy with human suffering leads him to take a deep, personal interest in all those who seek his help and that of his associate staff of specialists.

Dr. Pierce's Medical Adviser (in paper covers), 1008 pages, is sent free on receipt of 31 one-cent stamps, or 50 stamps for the cloth-bound volume, to pay expense of customs and mailing only. Address Dr. R. V. Pierce, Buffalo, N. Y.