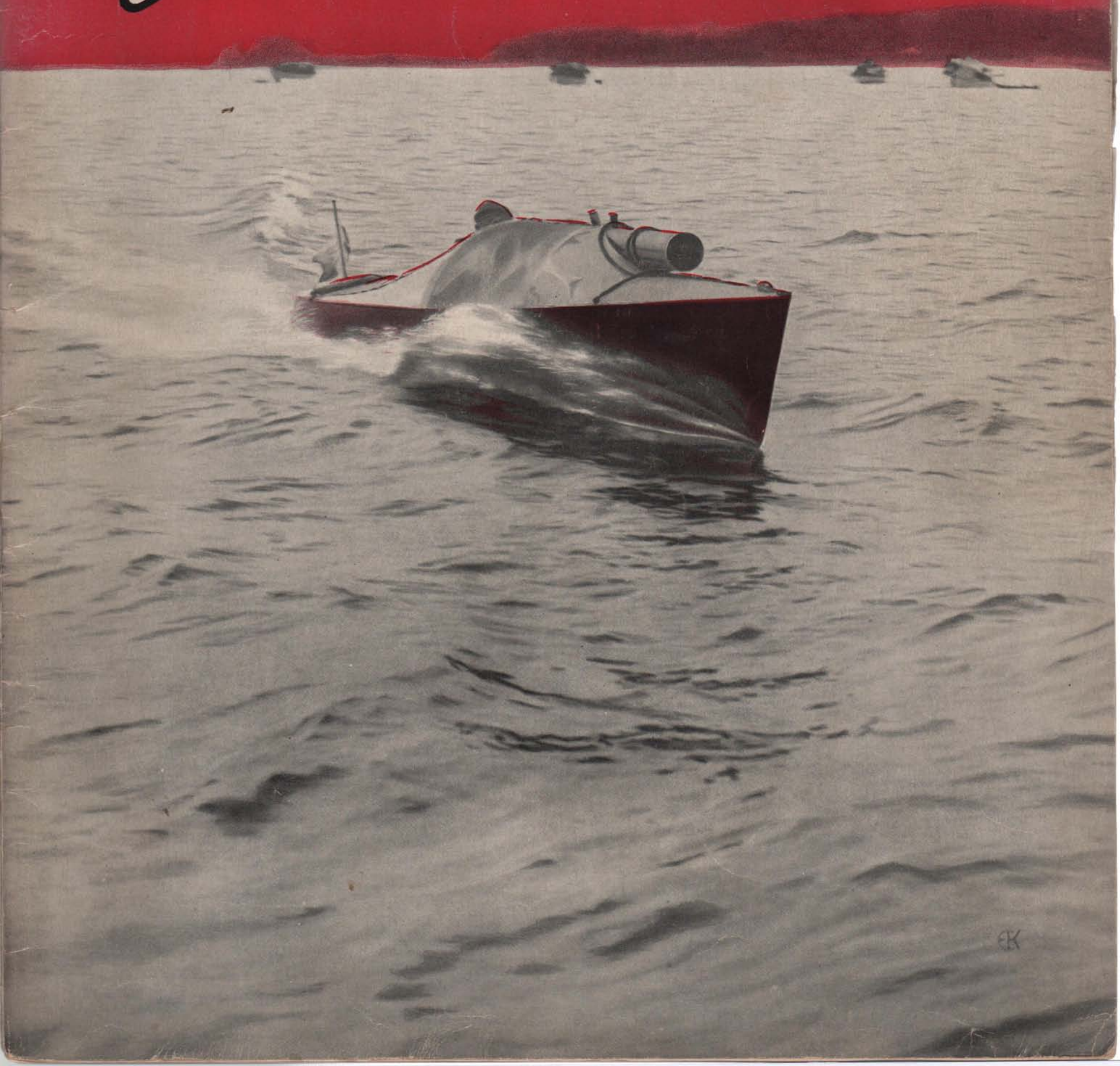


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Yachting



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The Evolution and Development of the American Fishing Schooner

A SHORT HISTORY OF THE CRAFT NOTED THE WORLD OVER FOR SPEED AND SEAWORTHINESS, AND THE IMPORTANT PART THE GASOLENE MOTOR NOW PLAYS IN THE INDUSTRY. DESIGNING AND BUILDING HAVE REACHED A HIGH STATE OF PERFECTION

By ALBERT COOK CHURCH

Drawings by the Author



its present state of high development the up-to-date, modern-designed American fishing vessel represents a type that, for speed and seaworthiness, is unsurpassed by any in the world. Since the first crude efforts of the early Colonial ship-builders were produced over 250 years have elapsed, and during that interval many important changes have been made, both in model and rig. The American fishermen were ever progressive, being constantly on the watch for improvements, and adopting at once any changes that tended to increase the speed and strengthen the vessels or add to their utility. The rapidity with which the gasolene motor has found its way into the fleet is but an instance of this.

As a result of the early tendency of settlers to engage in the fisheries, a fleet of vessels was employed as soon as the country was occupied. According to the old records, snows and ketches were employed in the Bank cod fisheries when the business was first established, and sloops also were engaged in fishing at an early date, a distinguishing feature being that many, if not most of them, carried square topsails. The ketches were smaller than the sloops, and were probably employed to a greater extent than any other type at that period. They were open boats, with two masts, the mainmast being nearly amidships and a second and smaller mast near the stern. In model they were full-bowed, round-bottomed craft, built full and heavy, and it is probable that most of them carried lateen sails, with square sails set above them.

In the records of Massachusetts Colony, 1680, the statement is made that "We have eight or ten ships (probably snows) of one hundred tons or more, and about forty or fifty fishing ketches of betwixt twenty and forty tons." The snows were generally larger than the ketches, square-rigged on two masts, and having a small jiggermast at the stern. The ketch rig, though popular in the seventeenth century, was particularly unsuited to the variable winds of the New England coast, as the lateen yards then used had to be lowered and changed to the opposite side of the mast when tacking, involving much labor. This was extremely undesir-

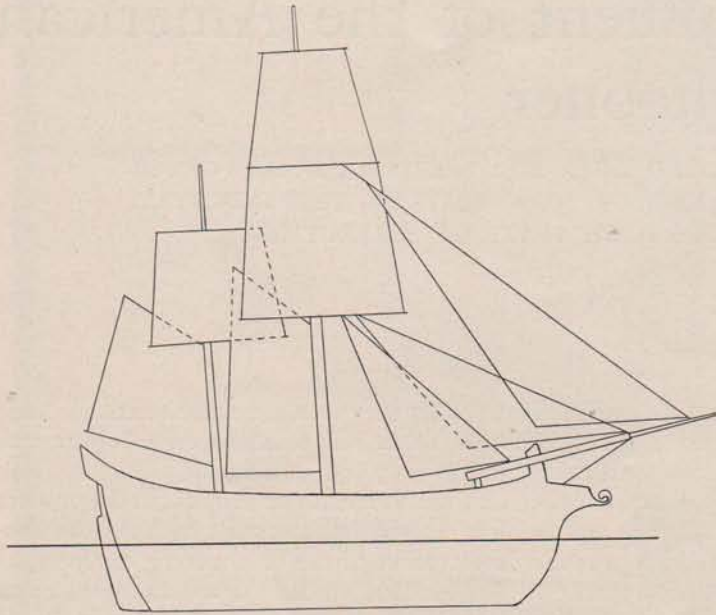
able, as it was imperative that they should be able to change their course at short intervals and to sail equally well on either tack without the necessity of lowering and shifting the sails.

This, no doubt, caused the fishermen to cast about for a more suitable rig, and the first marked improvement in American fishing vessels was the development of the schooner rig early in the eighteenth century. The incident which gave to this rig the name of schooner is thus described: "Captain Andrew Robinson, of Gloucester, built and rigged a ketch, as they were then called, masted and rigged it in a new and peculiar manner. When launched, the peculiar motion she made as she glided into the water from the stocks caused one of the bystanders to exclaim: 'Oh, how she scoons!' Robinson instantly dashed a bottle of rum against her bow and exclaimed: 'A scooner let her be.'" This event happened at Gloucester in 1713, according to the historical account. There is, however, considerable doubt as to whether the rig was original with Captain Robinson, although the name may have had its origin in that instance, there being evidence to the effect that the rig existed abroad before that period some fifty years at least.

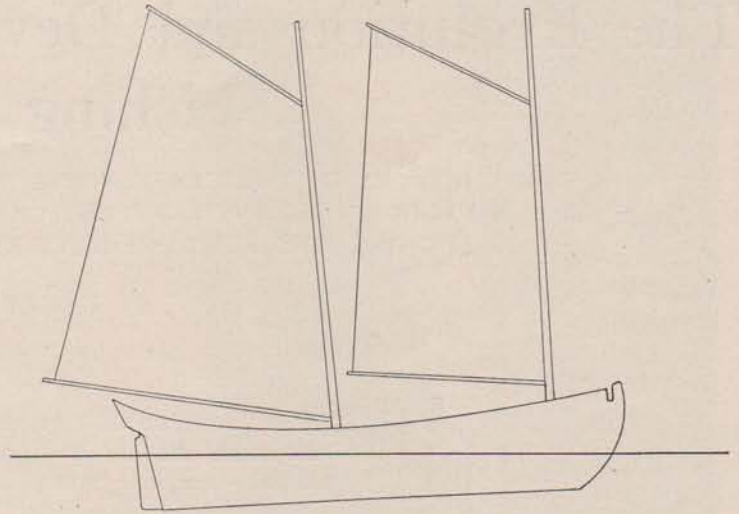
Undoubtedly the rig was a novelty for those waters and a great improvement; it could sail much closer to the wind than the clumsy ketches, was easier to handle, and soon became very popular. About seventy of these "scooners" were owned in Gloucester in 1741, and many of them were of 50 tons or more, suitable for use on the Grand Banks and other distant fishing grounds. They were of nearly uniform model, with bluff bows, high stern and kettle bottoms, presenting the greatest possible contrast to the graceful clippers of the present day. The early schooners were usually without bulwarks forward of the quarter deck, or, at most, with a plank spiked to the top timbers, because at that time it was considered unsafe to prevent the unobstructed sweep of water across the main deck. The quarter deck, being so much higher, was comparatively dry when the schooner would be all awash forward; consequently, the men stood there to fish in rough weather. The cabins at that time were roughly finished; the heavy hemp cables were hove in by a rude log windlass, worked by handspikes, and the steering was done by a long wooden tiller, none of the modern steering devices used on fishing vessels having been invented at that time. The schooners employed in the Grand Bank cod fisheries from New England previous to the War of Independence were all full-built, round-bodied craft, specially noted for having short and high quarter decks, from which peculiarity they



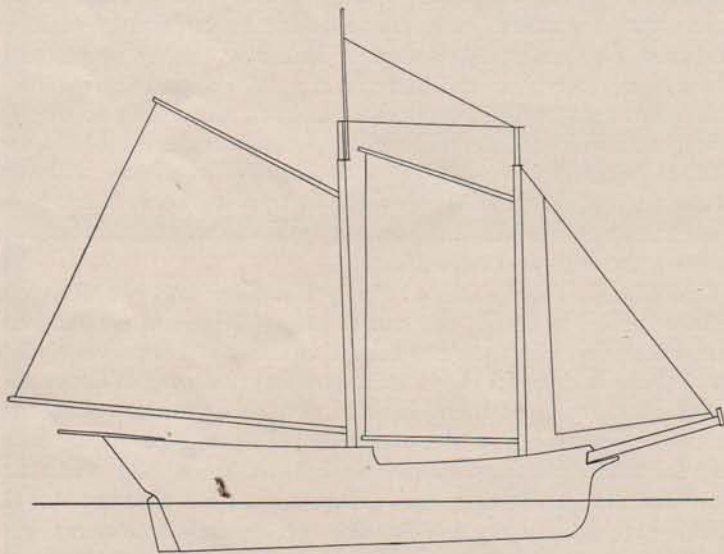
A GRAND BANKER OF 1885.



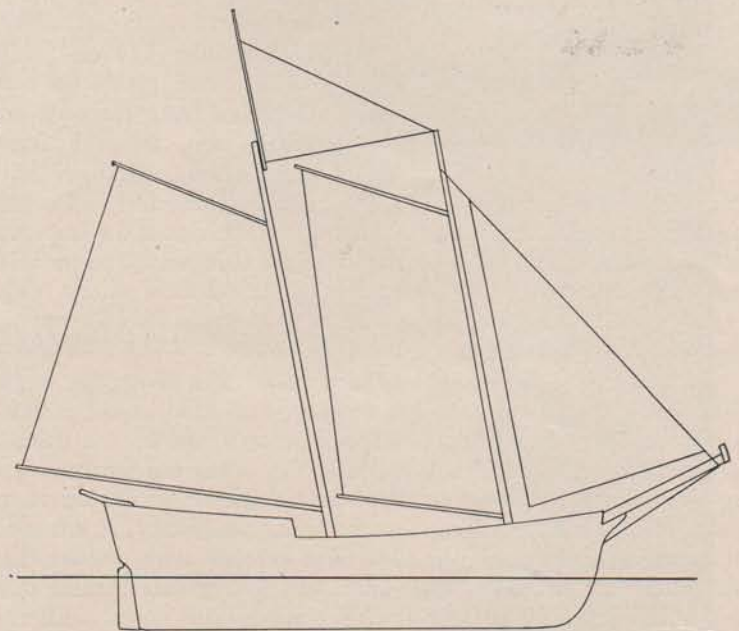
KETCH, 1650-1713, ABOUT 55 FEET.



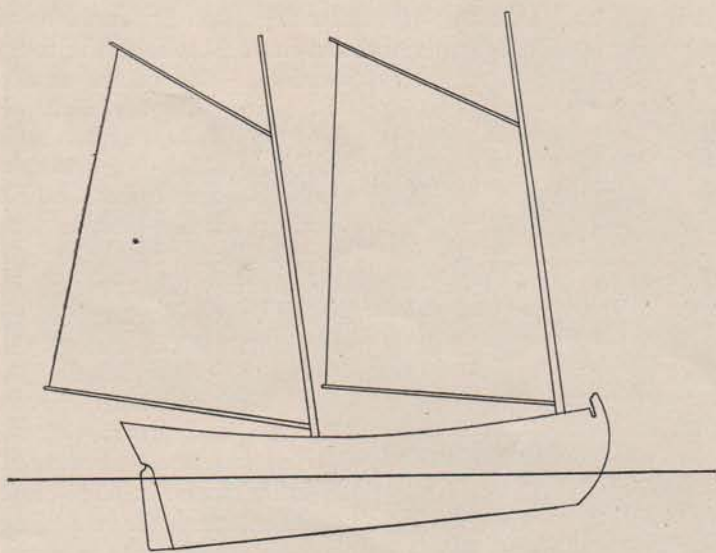
DOGBODY, 1800-1810, ABOUT 36 FEET.



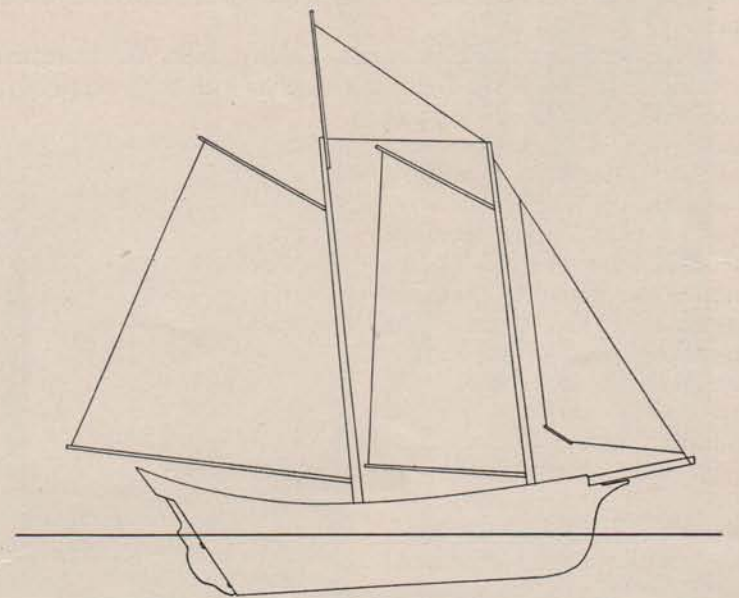
EARLY GRAND BANKER, "HEELTAPPER," 1741, ABOUT 65 FEET.



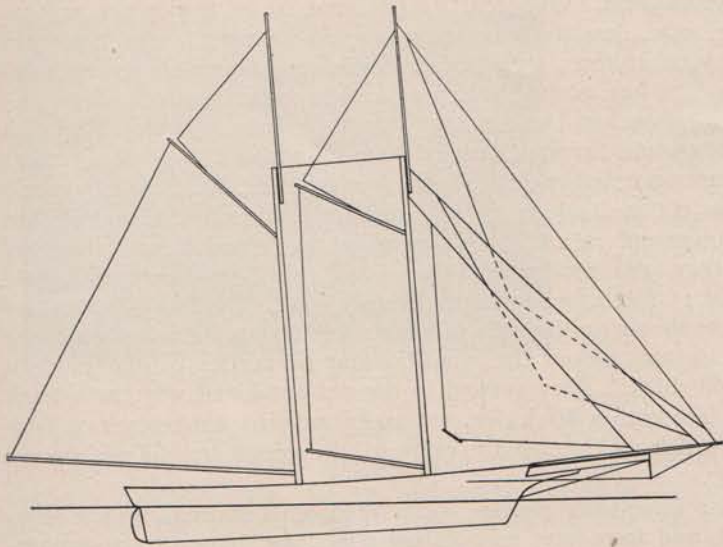
PINKY, 1810-1830, ABOUT 48 FEET.



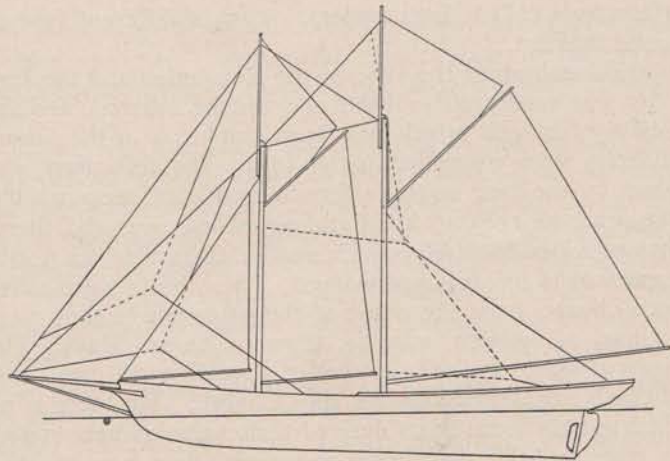
CHEBACCO BOAT, 1780-1800, ABOUT 34 FEET.



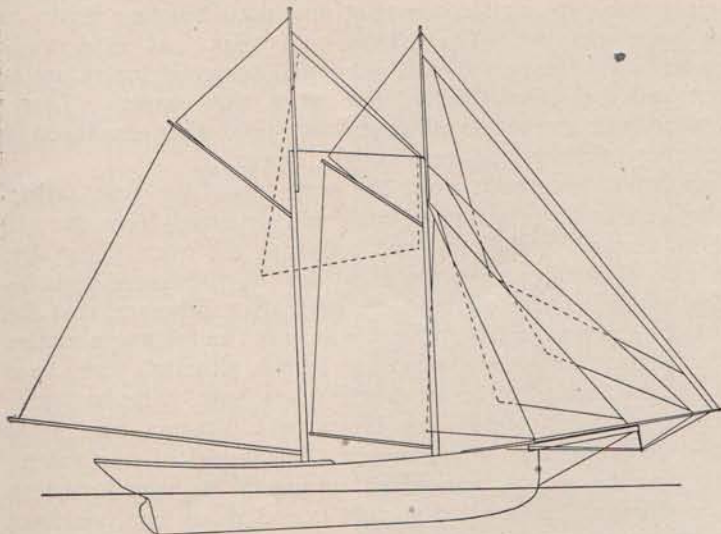
LOW QUARTER-DECK SCHOONER, 1830, 65 FEET.



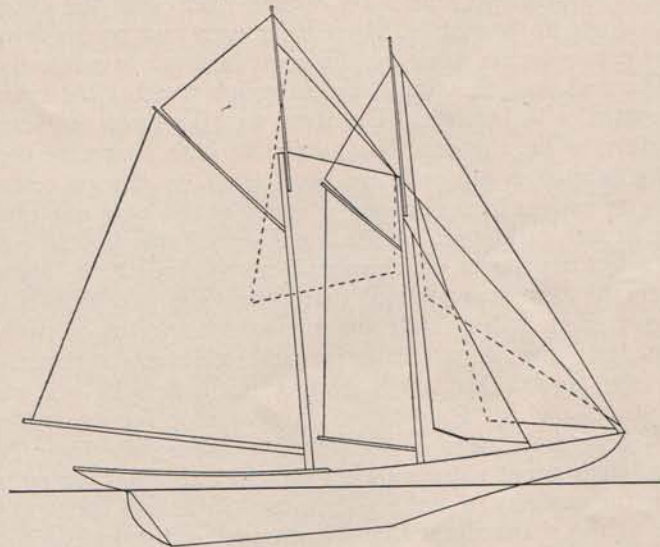
CLIPPER OF 1870, 75 FEET.



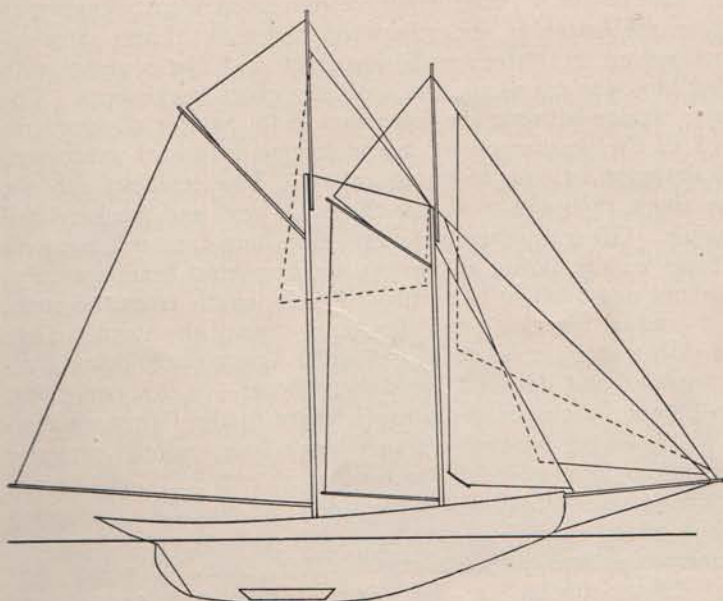
HELEN M. GOULD, 1900, THE FIRST 125-FOOT GASOLENER.



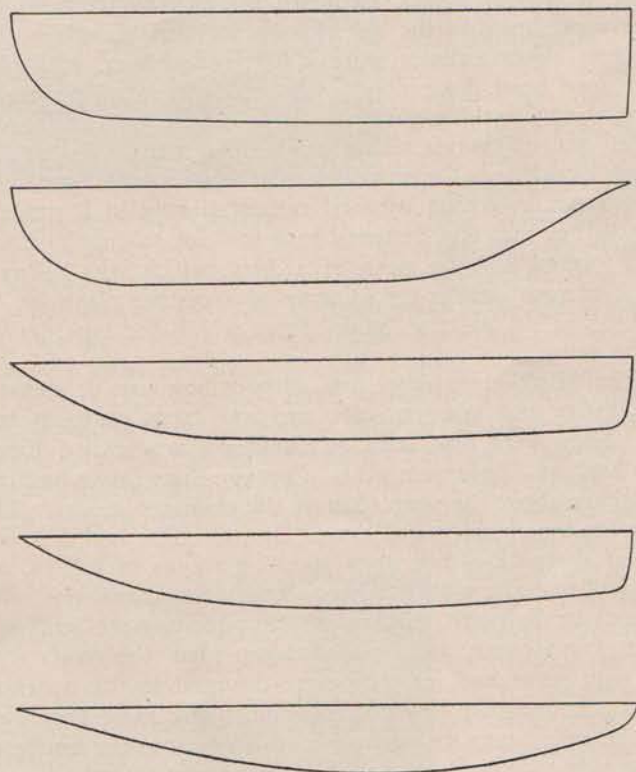
GRAMPUS, 1885, FIRST VESSEL WITH A PLUMB STEM.



THE FIRST KNOCKABOUT TYPE OF 1902—HELEN B. THOMAS.



MASSASOIT, 1898, THE FIRST FISHERMAN TO CARRY OUTSIDE BALLAST.



HALF-BREADTH DRAWINGS.

Early Grand Banker, "heeltapper," 1741; pinky, 1810-1830; Romp, the first sharp-bowed craft, 1847; mackerel clipper, 1880; Massasoit, 1898.

were afterwards called "heel tappers," when a different type of vessel came into use.

The period embracing the War of the Revolution and the Embargo Act was a very unfavorable one for the fisheries, and the larger class of vessels which had been employed in the Grand Bank fishery were compelled to lie idle. The fishermen, impoverished by the long struggle for independence, were unable, after the peace of 1783, to build and equip large vessels; therefore, they provided themselves with smaller craft in which to fish on the grounds in the adjacent waters. These boats were called "chebacco" boats, from the name of the place where they were built—a part of Ipswich, now the town of Essex, Mass. The name has a striking similarity to that of a small vessel mentioned in the French marine dictionaries, the "Chabek"; but there is no doubt that our chebacco boats derived their name as here stated, and it is quite probable that, in rig and model, they were peculiar to Cape Ann and were first used in its waters. They had two masts, but no bowsprit, and were decked over, with the exception of a space in the middle, where there were two rooms across the boat nearly to the sides for the crew to stand in while fishing. The deck had no railing, and in rough weather the rooms were covered with hatches. The stem was the most characteristic feature of the chebacco boat; standing high above the bow, generally painted bright red, and because of its fancied resemblance to an ancient battering ram, a vessel of this type was often called a "ram's head boat." The stem served the specific purpose of a bitt head, over which was placed the eye of the hawser by which the boat was secured to its mooring. At first these boats were sharp at both ends and averaged about ten or twelve tons; but later they were built larger (though rarely so large as twenty tons) and decked, while many were made with a square stern and nick-named "Dogbodies." About 1800 some two hundred of these craft were engaged in the shore fisheries. The growing importance of this industry created a demand for an increase in the capacity of the craft engaged in it, and about 1810 the size of the sharp-sterned craft increased, a bowsprit with a jib was added, and a new style of fishing vessel, the "pinkie," was the result—a type of vessel celebrated for its seaworthiness and extensively employed in the fisheries for several decades. The pinkie's chief characteristics were a full, round bow, with plain gammon knee head, long floor with kettle-shaped bilge, and a well-formed run, making their model somewhat on the familiar cod's head and mackerel tail principle. A special feature of these quaint craft was the extension of the rail and bulwarks aft from the stern, sweeping upward rather sharply in a graceful curve until they met and fastened to a narrow, raking V-shaped transom, formed like the stern of a dory, which was hollowed out like a crescent at the top to serve as a resting place for the main boom. This was the "pink" from which the type derived its specific name.

The original old-style pinkie was without bowsprit or shrouds, had two masts and hempen sails, and was from 12 to 25 tons burden. They were first built at Chebacco, now called Essex, but later built at Annisquam also. Captain Epes Davis built the first one there about the year 1800 on the chebacco model. This pinkie was 20 tons burden and named Dromo. She had the usual features of the pinkie—two open standing rooms to fish in, one forward and one aft, with hatches to cover them, and was without shrouds or bowsprit. Many of the pinkies were built several miles from shore, and in the winter when the roads were covered with snow and ice they were dragged to the water on stoutly-built runners by oxen; thus when spring came they were ready to be rolled into the water and floated from the cradle by the rising tide. These boat haulings, as they were called, were quite common at one time, and it is said that on one occasion a pinkie of 55 tons was launched in this manner. Some of the pinkies were as large as the ordinary fishing schooner, with spars

in proportion. One craft, considered to be a monster at that time, was described as being an old-fashioned standing-room pinkie of 42 tons, with timber heads coming up along her sides 6 or 8 inches, around which a plank was bent to serve as a bulwark. She had two standing rooms, a fore cuddy with a brick chimney and fireplace, carried fore and aft sails, and had neither shrouds nor bowsprit. She had hemp sails, then called raven's duck, cotton duck being unknown at that time, and carried an arrangement called a scout horn to wet them down when the weather was moderate. The scout horn consisted of a pole about 15 feet long with a leather pocket for holding water at one end to throw on the sails to close them up, as the hemp was very porous and lacked the wind-holding properties of the modern cotton duck. They cooked in the old-fashioned way, in a brick fireplace with a brick chimney and a wooden smokestack or funnel, which was intended to carry off the smoke, but did not always do so.

The later-built pinkies were fitted with shrouds and a bowsprit, and were very reliable sea boats. Although some square-sterned vessels were employed in the meantime, the pinkie remained in general use until about 1840, when the low quarter-deck, but still full-bowed schooner, was extensively introduced.

The requirements of the mackerel fishery made swift-sailing vessels a necessity, and about 1845 ambitious builders began to make some changes. The Bankers of 1845 had moderately sharp bows for the period, and were well designed for riding at anchor and for seaworthiness, but were slow sailers. Later, they were built sharper to attain greater speed when employed in the mackerel fishery, and were called clippers.

Vessels had been built along the same model for years, when one builder, more progressive, suddenly departed from the old ideas by sharpening the bows and hollowing the run. Naturally, these radical changes created a great deal of discussion, both favorable and otherwise. It was not until 1847, however, that the first really sharp vessel, the Romp, was built; and it was a matter of record that men were afraid to go in her, although when once tried she was found to be an excellent sea boat. She has since made the passage around Cape Horn to California, and it is claimed by some that this change in the model of our fishing vessels was the source from which sprang the famous American clipper ships which soon after this period made our merchant marine so justly celebrated.

During the period of change from full-bowed to sharp vessels it was believed to be unsafe to build a vessel very sharp on the rail. It was thought that, with a full, rounding bow on top and much flare below, a vessel would be prevented from plunging as deep in the water as she otherwise might do. Later developments proved this theory to be incorrect, and that a vessel with flaring bow was not as good as with straighter top timbers. The intense rivalry between the fishermen in the matter of speed resulted in the production of many diverse forms of schooners, each designer striving to outdo others. The tendency of the times about 1850 was to follow the cod's head and mackerel tail principle. Generally they had fairly easy lines forward, but with the bows widely flaring at the top; their greatest beam was usually about one-third to two-fifths of their length from the stem, and a gradual tapering from that point toward the stern. They were rather straight on deck, and had a heavy drag, being shallow forward and deep aft, with sharp floors—in this particular, as in others, bearing a sharp resemblance to the Baltimore clippers. A striking feature on many was a long, pointed cutwater or head, having a gilded fiddle head at its extremity and carved and gilded trail-boards along the sides. It was also customary to have gilded mouldings on the sterns, and in some cases this ornamentation was very elaborate. This class of vessel was called "sharp-shooter" at that time. Unfortunately, however, in the effort to attain speed and great initial stability in order that



THE NARROW, GRACEFUL STERN OF THE MASSASOIT.

This type continued to be popular, and for many years previous to 1885 the tendency was to build vessels employed in the deep-sea fisheries wide, shallow and sharp, the object being to obtain speed and sail-carrying power, as that was believed necessary to produce a swift sailing schooner. However, this not only failed to produce the best results in speed, but was highly dangerous, for vessels built on such principles were liable to capsize in a gale or be tripped by a heavy sea, and, as the center of gravity was not sufficiently low to enable them to right again, the result was that in such cases schooners generally filled and sank with all on board. In the ten years elapsing between 1874 and 1883, inclusive, Gloucester alone lost eighty-two schooners by foundering at sea, costing the lives of 895 fishermen.

While an increase in the depth of these vessels was the most important object to be attained, there were, nevertheless, many other objectionable features besides shallowness in the typical clipper schooners of that period. Almost without exception a vessel of that type was built very wide aft, with a heavy, clumsy stern and flat counters; the two mastheads were of the same height above the waterline, and they carried a large jib extending from the bowsprit end to the foremast. It is evident that these features were objectionable, and in 1885 Capt. J. W. Collins, of the Fish Commission, prepared designs for a schooner in which it was proposed to eliminate these features. The Grampus, as she was called, was a radical departure from the vessels commonly engaged in the New England fisheries prior to her advent, and her superiority in safety, speed and other desirable qualities was demonstrated. She differed mainly from the typical fishing schooner of that date in being from 18 to 24 inches deeper, having 6 to 10 inches less beam and an easier after section. She had less proportional width aft, more rake to stern, and had

much sail could be carried with a comparatively small amount of ballast, a rather shallow, extremely sharp vessel was produced, with great breadth of beam, upon which the stability mainly depended.

the pilot boat bow, with straight stem above the waterline. Changes were also made in the head rigging, a stem staysail and jib being adopted in place of the large jib then commonly in use.

There was a marked improvement in the vessels following this period, special attention being given to the attainment of the maximum speed, due chiefly to the imperative demands of the market fishery. The best skill of several eminent naval architects was devoted to the development of fishing schooners, and their services proved of inestimable benefit. Prominent among them was the late Edward Burgess, the vessels designed by him being a decided improvement over any previously built, and some of them, notably the Fredonia and Carrie Phillips, were so speedy that he became famous as the foremost designer of fishing craft at that time. Others prominent in designing fishermen of this period were D. J. Lawlor, of Boston, a noted designer of pilot boats, who modeled the Harry Belden, winner of the famous fishermen's race of 1901; and Captain George M. McClain, who modeled the schooner Lottie S. Haskins, a smart little vessel of 70 feet, winner of the first prize for small vessels in the same event. The Carrie Phillips was of the plumb stem type and the first vessel to be fitted with a pole bowsprit, doing

away with the long jib-boom in common use at that period. When the Fredonia was built she was matched for \$6,000 a side against the fast Boston pilot boat Hesper, winning the match handily; and on another occasion she is said to have logged 13 miles per hour for twelve consecutive hours. So fast were these Burgess models considered that the term "flying fishermen" was applied to the type and continues in use to the present day.

Although the cost of building such schooners was somewhat increased in proportion to their carrying capacity, the additional profit to be obtained

by the ability to market the catch in the briefest possible time was so fully demonstrated that comparatively little was thought of a considerable increase in expenditure provided a vessel could be produced which would outstrip all rivals.

The majority of vessels built during the following eight years were moulded along the general lines of the Burgess flyers, which proved so successful, and it was not until 1898 that any remarkable changes were made. During that season, however, the first of the modern round-bow schooners were built, several being constructed at the same

time along similar lines. The Massasoit, a small schooner of 32 tons, may be taken as a representative craft of this type as they were originally built, and was, perhaps, the more notable by reason of her graceful lines (Continued, page 456)



A FINE EXAMPLE OF THE MODERN FISHERMAN—THOMAS GORTON.



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Evolution of the American Fishing Schooner

(Continued from page 413.)

and exceptional speed. The sharp hollow lines of the preceding clippers were replaced in the new model with long, easy curves, sweeping fore and aft in an unbroken convex arc, producing a forebody somewhat more full on the waterline than had been the practice. The afterbody was very graceful, the stern being narrowed in considerably and drawn out into a long overhang, ending in a neatly beveled oval. Part of the ballast was carried outside in the form of an iron keel casting, a decided innovation on fishing craft, which, however, was not generally adopted. The Massachusetts was designed by Thomas F. McManus, of Boston, who also designed the majority of vessels of that type which followed. They proved to be very popular and soon displaced the clipper from general favor.

In 1900 radical departures from the general type were introduced, which in the past decade have completely revolutionized the American fishing vessel; namely, the use of gasolene engines for auxiliary motive power and the introduction of the so-called knockabout type.

The schooner Helen M. Gould, built in 1900, was the first of her class to be fitted with gasolene motive power in addition to her regular sail-spread, the machinery installed being a 100-horsepower Globe gasolene engine, intended for use in light weather and baffling winds principally. The sail plan was made small for that reason, the vessel proving to be exceptionally able, carrying her reduced rig well in heavy weather, and demonstrating the great advantage of auxiliary power to vessels of that type, particularly in the mackerel fishery, in running down the schools in light weather and in getting the catch to market.

(To be continued.)

The Rating Rule of the A. P. B. A.

(Continued from page 419.)

It is to be regretted that so many boat owners have an entirely wrong impression relative to the function of a measurement rule. The prevailing impression seems to be that if any number of boats are measured and rated under a rule, their corrected time should be all exactly the same when the race is finished. If the rule fails to accomplish this, "it is no good" in their estimation. Now, as a matter of fact, this is exactly what the rule will not do, for the rule assumes an ideal or perfect boat, and as such a craft has not yet been produced, it is clear that the boat with the poorest model, motor, propeller, etc., must inevitably make the poorest showing. We are all striving for something higher and better, and any rule that places inferiority on the same level with superiority is wrong in principle and practice.

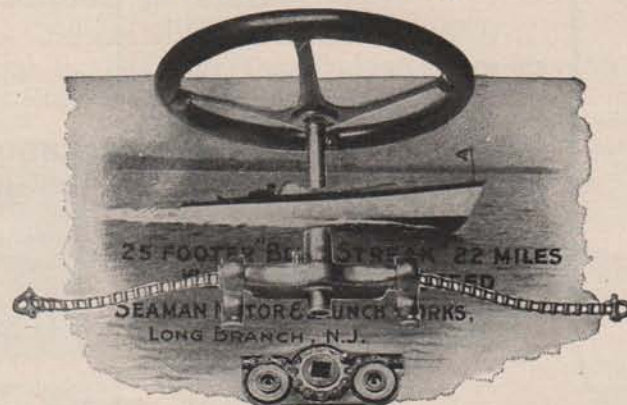
In one of the Gold Cup races on the St. Lawrence five out of the seven starters on corrected time finished the 30-mile course within two minutes of each other—certainly a splendid showing.

The Bermuda races during the past three or four years were held under the rules of the American Power Boat Association, using 60 per cent. of the time allowance, but in the coming Havana motor boat race the formula and time allowance table will be used as it stands, which means that this rating rule has proved its worth under the crucial conditions of long-distance racing.



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