## THE ENTRIES FOR THE GERMAN EMPEROR'S OCEAN CUP RACE.

We present a spirited picture, showing all of the ocean yachts that are entered for the great race from Sandy Hook to the Lizard, which gives one a realistic impression of the magnitude of this great sporting event. It is not an infrequent occurrence for a dozen or more yachts of moderate size to be entered in a single contest during a vachting season here or abroad; but rarely, indeed we may safely say never, have nigh upon a dozen of the biggest sailing yachts in the world gathered for an ocean race, or indeed for a race of any kind. Indeed, for a parallel, we should probably have to go back to the ever-famous contest when the "America" captured her historic cup; and the biggest yachts in that race were of modest proportions compared with such vessels as the "Valhalla," the "Apache," or the "Utowana." In the annual cruise of the New York Yacht Club, the portto-port races have served to send a large number of the big fellows across the line; but never such a crowd as that which is shown on the accompanying page.

On looking at the table of dimensions, etc., and at the

## Scientific American

long, straight-keeled vessel of the "Utowana," "Hamburg," "Sunbeam," and "Valhalla" type.

The most imposing vessel of the fleet is, of course, the huge "Valhalla," a full-rigged auxiliary ship of 1,490 tons Thames measurement, now owned by the Earl of Crawford. Although she is a ship in size, "Valhalla" has fairly easy lines, and she carries a big sail spread. With her crew of one hundred men, and an experience gained on long-distance cruising in all parts of the world, she should be sailed for everything that is in her; and if the winds are fair, and strong from start to finish, especially should it be necessary to tie down reefs, the big ship may be regarded as a not-unlikely winner.

The next largest vessel, the "Apache," like the "Valhalla," was built in England; but she is now enrolled in the New York Yacht Club and owned by Edmund Randolph. She is 178 feet on the waterline, 28 feet broad, and draws 16.6 feet of water. These dimensions may be compared with those of the "Valhalla," which is 240 feet long on the waterline, 37.2 feet in breadth, and 20 feet in draft. Then follows the Americanbuilt "Utowana," 155 by 27.8 feet by 14.6 feet, an auxiliary fore-and-aft schooner, owned by Allison V. Armfleet, the "Hamburg," a fore-and-aft schooner built in England and formerly known as the "Rainbow." She measures 116 feet by 23.9 feet by 15 feet draft. The schooner "Thistle," built in this country in 1901 and owned by Robert E. Tod, is 110 feet on the waterline, by 27.8 feet beam by 14 feet draft. The "Hildegarde," an American-built fore-and-aft schooner, owned by Edward R. Coleman, built in 1897, is 103.4 feet on the waterline, by 26 feet beam, and draws 16.9 feet. Next in point of size is the "Endymion," a celebrated deepsea fore-and-aft auxiliary schooner, which is famous as having made the quickest passage on record over the transatlantic course, sailing from Sandy Hook to the Needles in the fast time of 13 days, 20 hours, and 36 minutes. Judged on this performance she must be regarded as one of the strongest competitors for the cup. Her dimensions are 101 feet by 24.4 feet by 14 feet.

The "Ailsa," now owned by Henry S. Redmond, is 89 feet on the waterline, 25.5 feet in beam, and draws 16.6 feet of water. Built to defeat the "Britannia" she made a good showing against that vessel, winning about as many races as she lost. In her contests with the yawl "Vigilant" in this country, she was more



## THE LARGEST DIAMONDS IN THE WORLD-ACTUAL SIZE.

Koh-i-noor after the second cutting, 106<sub>13</sub> carats.
Loterie d'Angleterre, 49 carats.
Great Mogul of Russia, 279<sub>13</sub> carats.
Orloff, 19434 carats.
Koh-i-noor after first cutting, 279 carats.
Regent, 13634 carats.
Great Mogul of Russia, 279<sub>13</sub> carats.
Orloff, 19434 carats.
Koh-i-noor after first cutting, 279 carats.
Regent, 13634 carats.</

picture itself, one is struck with the great variety in size, rig, and model presented by this fleet. In rig, the vessels run all the way from the yawl "Ailsa," formerly a racing cutter, up to the great full-rigged ship "Valhalla." The fleet includes two-masted and three-masted schooners, the topsail schooner rig, and the bark rig. The models range from the low-freeboard, deep-ballasted "Ailsa," with her comparatively flat floor, deep fin keel, cutaway forefoot, and raking stern post, to the high-freeboard, heavily bulwarked, our. Next in size is the old English-built "Sunbeam," a square-rigged schooner, auxiliary, measuring 154.7 feet by 27.6 feet and drawing 13.9 feet, built in 1874 for Lord Brassey, her present owner. The next largest vessel is the fast and handsome three-masted auxiliary, fore-and-aft schooner "Atlantic," the most modern vessel in the fleet, built in 1903 for her present owner, Wilson Marshall. Her dimensions are 135 feet waterline by 29 feet beam by 16½ feet draft. often beaten than not, although she made a brilliant win of the Astor cup for single-masted vessels and yawls in the season of 1902. The smallest vessel entered for the race is the schooner "Fleur-de-Lys," owned by Lewis A. Stimson and built in 1890. Her waterline length is 86.5 feet; her beam 21.9 feet, and her draft 13 feet.

Then comes the only German-owned vessel in the

THE INTERNATIONAL OCEAN RACE FOR THE KAISER'S CUP.

Yacht.	Rig.	Where built.	Yacht Club.	Length in feet.	Beam in feet.	Draft in feet.	Owner.
Sunbeam. Ailsa. Thistle. Fleur.de.Lys. Valhalla. Apache. Utowana. Atlantic. Hildegerde. Endymion. Hamburg.	Auxiliary Schooner. Yawl. Schooner. Schooner. Auxiliary Ship. Auxiliary Bark. Auxiliary Schooner. Auxiliary Schooner. Schooner. Schooner.	England. England. America. England. England. America. America. America. England.	Royal Yacht Squadron. New York Yacht Cub. Atlentic Yacht Cub. New York Yacht Club. Roy I Yacht Squadron. New York Yacht Club. New York Yacht Club. New York Yacht Club. New York Yacht Club. New York Yacht Club. Kaigerlicher Yacht Club.	$\begin{array}{c} 154.7\\89.0\\110.0\\86.5\\24^{\circ}.0\\178.0\\155.0\\135.0\\103.4\\101.0\\116.0\end{array}$	27 6 25.5 27.8 21.9 37.2 28.0 27.8 29.0 26.0 24.4 23.9	$\begin{array}{c} 13.9\\ 16.6\\ 14.0\\ 13.0\\ 20\ 0\\ 16.6\\ 14.6\\ 16.5\\ 16.9\\ 14.0\\ 15.0\\ \end{array}$	Lord Brassey. Henry S. Redmond. Robert E. Tod. Lewis A. Stimson. Earl of Crawford. Edmund Randolph. Allison V. Armour. Wilson Marshall. Edward R Coleman. George Lauder. German Syndicate.

The race will be sailed without any handicap, and the distance will be from 2,900 to 3,000 miles. The auxiliaries must unship their propellers, and only hand power may be used in working the sails.

THE GREAT PREMIER DIAMOND.

Quite a stir was made a couple of months ago by the announcement that a huge diamond, three times as large as any before discovered, had been unearthed in the Premier Mine, near Pretoria, South Africa. This precious pebble has since been brought to London, carrying, on the way, an insurance of \$1,250,000. The first report that the stone was as large as a tumbler, and was worth three or four million dollars, has proved to be no exaggeration. The mammoth gem