served in the British Museum, and the other a part of a palace. It was not possible to secure an authentic representation of a Phœnician house, although the suggestions and opinions of the most competent critics have been followed. The result is therefore not much more than a high probability, but as such it possesses great interest. The dwelling has a stone base, with the upper part of wood, ornamented with long slender columns, and with a balcony above.

Like the Assyrians, the Hebrews have two kinds of dwellings, — one a tent, modelled after a carving in an Egyptian tomb dating from before the time of Moses; and the other a stone house, with a flat terraced roof. Here, also, there is want of authentic material, and the result cannot be regarded as more than approximate. The Pelagic hut is a simple one of large stones, while the Etruscan residence consists of a stone basement taken from an ancient terra-cotta model, and an upper portion of wood, with an open-roofed balcony, which is confessedly the personal fancy of the architect. The result, however, may be regarded as near the actual truth as our present knowledge permits.

This completes the first series, and we come to those peoples whose civilization has been affected by the Aryan invasions. First is the Hindoo house, — a tall, narrow affair, built after a bas-relief from the top of Sanchi, though the architect has availed himself of the criticisms of Mr. Fergusson. The Persian house comes next. It is in two parts, — one closed, intended for the women; the other, with a dome of enamelled brick, is the public part, and intended for the master himself and his friends. It is designed after information furnished by M. Dieulafoy. Then comes a German village, — rude wooden cabins, with an elevated structure on poles, which serves as a sort of observatory. Close to this is the Gaul house, — a circular hut of wood, stone, and beaten earth. The former is taken from the bas-reliefs of the column of Trajan, while the latter is taken from a host of authorities that render it probably exact. A Greek house of simple construction comes next. A projection at one side serves to accommodate strangers. The walls have, among other inscriptions, the name of the proprietor, "*Heracles habite ici; que rien de mauvais n'y entre.*" The Roman house, which comes next, is an exact reproduction of a Pompeiian villa. The plan and details of this edifice have been prepared with the greatest care.

A new element in civilization is now introduced by the invasions of the barbarians. The first represented are the Huns, who lived in a wagon, and had no regular dwelling. A Gallic-Roman house of the fifth century follows, and is built of fragments of other buildings, which gives it a very peculiar appearance. The Scandinavian house dates from the fourteenth century, and is of wood, with a granite foundation. It has been designed after the suggestions of the Swedish architect Boberg, who has made a special study of early Scandinavian dwellings. Three other buildings bring us almost to our own times. These are, first, a Romanesque house of the time of the successors of Charlemagne (tenth century); second, one of the middle ages (twelfth century), and contemporary with St. Louis; and the third, a specimen of the civil architecture of the Renaissance, a reproduction of a sixteenth-century house at Orleans.

Four other examples complete the list of the civilizations contributing to the general culture of humanity. These are a Syrian (Byzantine) house of the time of Justinian (sixth century), which is an exact copy of one restored and drawn by the Marquis de Vogüé. It is of stone, as wood was scarce in that part of Syria. A Slavic house, almost a primitive affair, comes next, and is close to the Russian house of the fifteenth century. This latter is in two parts, — one for men, and one for women, — with an external staircase. No material for an authentic dwelling of this period was to be had, but the edifice possesses characteristic features. An Arab house of the eleventh century carries us into an entirely different civilization. The building is not a representation of any standing edifice, but is a combination of authentic elements. Lastly comes a Soudanese dwelling, which, though comparatively modern, is, by reason of its very strangeness, one of the most interesting of the entire collection. This brings us to the third section of the series, those illustrating isolated civilizations. There are houses of China and Japan, huts of the Eskimo and Laplanders, a negro village from Africa, and an Indian hut from North America. The collection is closed by houses from ancient Mexico and Peru.

Barr Ferree.

NOTABLE DERELICTS IN THE NORTH ATLANTIC.

Of the many wrecks afloat in the North Atlantic Ocean, none has as interesting a history as the Italian bark "Vincenzo Perrotta." Abandoned Sept. 18, 1887, this vessel has been represented graphically on every edition of the "Atlantic Pilot Chart" published since that time. Her wonderful drift began in about latitude 36° north, longitude 54° west; and on April 4, 1889, when last reported, she was about 60 miles north of Watling's Island, in the Bahamas. She had thus made good a distance of about 1,400 miles in a general south-west by west direction in one year six months and sixteen days. She has been reported twenty-seven times in all, and when last seen had mizzenmast and about ten feet of mainmast standing, foremast gone, end of jibboom broken off, and port anchor on bow.

On Nov. 26, 1888, the schooner "Ethel M. Davis" was capsized in a hurricane, in latitude 35° 4′ north, longitude 70° 52′ west. Her crew was rescued after having been adrift four days. The schooner eventually righted, and began a long voyage, unguided, in the general direction of the Gulf Stream. She was last seen June 8, 1889, in latitude 42° 36′ north, longitude 57° 38′ west, and at that time had about three feet freeboard in waist, forecastle and poop well above water. Her poop-house is painted white, and shows out well; mainmast gone, bowsprit and ten feet of foremast standing; general drift, about 900 miles north-east by east; time, six months eighteen days; number of times reported, fifteen.

The same hurricane that wrecked the "Ethel M. Davis" also brought disaster to the schooner "David W. Hunt." This vessel was abandoned Nov. 25, 1888, in latitude 34° 30′ north, longitude 72° 30′ west. She was last reported May 26, 1889, in latitude 45° 30′ north, longitude 41° 30′ west, at which time she had her bowsprit and jibboom complete, stumps of two masts broken off about fifteen feet from deck; general drift, east-north-east about 2,000 miles; time, six months; number of times reported, twenty-two.

The schooner "Palatka" bids fair to rival the above vessels in point of interest. She was abandoned April 10, 1889, off Hatteras, and was last reported June 4, 1889, in latitude 43° 20′ north, longitude 56° 34′ west. She was then water-logged and on fire, stern high out of water, no masts standing. Like the "Ethel M. Davis" and "David W. Hunt," she, is right in the highway of the great bulk of transatlantic commerce, and a serious menace to navigation. In one month and twenty-five days she has made good a distance of about 1,200 miles, on a general north-east by east course; number of times reported, twenty-one.

The above four derelicts were all timber-laden, and this accounts largely for their great tenacity and buoyancy, at the same time rendering their destruction no easy matter. Commander C. H. Rockwell, U.S.N., of the United States steamship "Yantic," recently engaged in blowing up wrecks, says, "From the experience thus far gained in the work, I am convinced that lumber-laden derelicts are very tenacious, and can only be overcome by repeated blows from explosives of great power. These continued will undoubtedly do the work."

PROGRESS OF ENGINEERING.[1]

The provision of the By-Laws of this society which requires that its president shall deliver, at the annual convention, an address upon the progress of engineering during the preceding year, has been observed by my predecessors in various ways. While some of the former presidents have confined themselves strictly to the constitutional provision, by general reviews of the professional progress and scientific advancement of the period, others have dwelt more in detail upon some specific subjects of particular interest at the time. I trust I may be permitted, in this instance, to give you first a cursory glance of the field at large, and then confine myself more particularly to a review of the progress in that

[1] Address of Max J. Becker, president of the American Society of Civil Engineers, delivered at the annual convention of the society at Seabright, N.J., June 20.