

at least half of these fishermen are under twenty. In many cases the skipper himself is as young as three and twenty. Indeed, it is said at Gloucester that there is no "old" bank fisherman; that is to say, there are none who have for many years continued to fish during the winter on George's and the Grand Banks.

Grim death menaces the life of the Bank fishermen in too many ways to permit of such a career. A few successful seasons of this fishing will often put several thousand dollars and sometimes very much more in the pockets of a single hand. Then is the time for him to quit the business. He usually does this, and employs himself thereafter in less hazardous enterprises afloat or ashore.

The statistics show that the number of fishermen lost on the Banks has averaged nearly one hundred and fifty a year for the past decade from the port of Gloucester alone. Heavy seas, fierce winds, and fogs and thick weather prevail on the fishing grounds all winter and these serve, of course, to intensify the peculiar dangers to which these fishermen are exposed. Most of the time the fishing schooners must be hove to under storm trysail; for should they come to anchor, the holding ground is so uncertain that, swinging with the tide, they are like to foul it and, athwart seas, tear their bows out with plunging. Sometimes during gales, they drift down on to one another, and this nearly always means disaster. Another and no less serious danger is that of being run down by the transatlantic steamers, for they lie almost directly in their track. Perhaps the most menacing danger of all is that experienced by the "trawlers" in setting and hauling in their nets. The "trawlers" always set four nets at some distance from their vessel. One of these nets is ahead, another astern, and one on each quarter. Two men go out in each dory, and are sometimes gone for hours. If the weather be thick, the fog horn is kept going on the schooner, but those to windward are not always able to hear, and those to leeward not always able, if a heavy sea is running and a gale blowing, to get back. Now, to be adrift on George's or the Grand Banks in a dory under such conditions of weather is more than dangerous, it is perilous. If a crew have their net aboard, they are likely any moment to be upset, and their only chance of a rescue lies in the possibility of drifting down upon some other fisherman and of being picked up.

The crew of a banker has a share in the catch; this share, under certain circumstances, amounting to one-half the fish they take. But the skipper and the cook, who is always next in rank, get the largest share. They are a sober, steady, and fearless lot of men, these fishers, whose habits and customs differ wholly from those of the ordinary Jack before the mast.

"Slow Burning" Construction.

The Boston Fire Underwriters' Union have issued several circulars recently which are full of suggestiveness to property owners. One of these gives rules for the proper construction of fire doors, so as to meet the requirements of the underwriters. Another important circular gives a brief standard schedule of what is needed to construct a slow burning building. We print this last mentioned circular in full for the benefit of the many whom it concern:

Mills, factories, stores, warehouses, and other buildings used for similar purposes, constructed in accordance with the following instructions, will be slowly combustible, and will receive the lowest ratings from the Boston Fire Underwriters' Union, viz.:

Walls.—To be of brick; of such thickness as the intended occupancy and building laws of the city may require, and not to exceed 60 feet in height from the sidewalk. The inner surface to be left plain or plastered direct on the brickwork.

Cornices.—To be of brick.

Roof.—To be flat and of "mill construction" (i. e.,

made of heavy timbers and planking, without plastering or sheathing), and covered with gravel or metal. No wooden Mansard or French roofs allowed, as they are regarded as "lumber yards up out of reach of water," furnishing so much additional material for the fire to feed on, as well as greatly increasing the risk of fire from adjoining property.

Girders and Columns.—To be made out of the best Southern pine timber. Iron girders and columns not allowed.

Floors.—To be made of "mill construction," consisting of heavy Southern pine timbers from 5 to 10 feet apart, according to the burden they are expected to carry; covered with three inch tongued and grooved plank; then two layers of asbestos or other heavy floor paper (in stores and warehouses an inch of lime mortar can be used instead), and then an inch flooring above. These floor timbers and floors to be left exposed beneath, without plastering or sheathing.

Elevators and Stairways.—To be placed in brick well holes extending at least two feet above the roof, and crowned with a skylight having an iron frame and thin glass protected with a wire screen. All openings

NIGHT SKY.—MAY AND JUNE.

BY RICHARD A. PROCTOR.

The Great Bear (*Ursa Major*) occupies all the upper sky from west to north, except a small space occupied by the Hunting Dogs (*Canes Venatici*). The Pointers are in the northwest, almost horizontal. A line from the Pole Star (α of the Little Bear—*Ursa Minor*) to the Guardians of the Pole, β and γ , now occupies the position of the minute hand of a clock three minutes past an hour.

Due south, low down, lies *Cassiopeia*, while above, somewhat toward the east, we find the inconspicuous constellation *Cepheus*. The Camelopard is in the west of north, and getting upright.

Low down in the northwest lie the Charioteer (*Auriga*) and the head stars of the Twins (*Gemini*) further west. The Crab (*Cancer*) is nearly due west, the Sea Serpent (*Hydra*) holding his head almost exactly to the west point. Above is the Sickle in the Lion, its blade curved downward, and the tail of the Lion (*Leo*) lies above, toward the south of west.

On the Serpent's back we find the Cup (*Crater*) and the Crow (*Corvus*), in the southwest and to the south

of southwest respectively. Above these constellations, and extending beyond the south toward the east, the Virgin (*Virgo*) occupies the mid-heavens.

Above the Virgin we see the Herdsman (*Bootes*), his head and shoulders nearly overhead. Low down in the south is the Centaur (*Centaurus*), bearing on his spear the Wolf (*Lupus*) as an offering for the Altar (*Ara*), which, however, is invisible in these latitudes. Above the Wolf we see the Scales (*Libra*), while the Scorpion (*Scorpio*), one of the few constellations which can at once be recognized by its shape, is rising balefully in the southeast.

The Serpent Bearer (*Ophiuchus*) bears the Serpent (*Serpens*) in the mid-heavens toward the southeast, the Crown (*Corona Borealis*) being high up in the east, close by the Serpent's head.

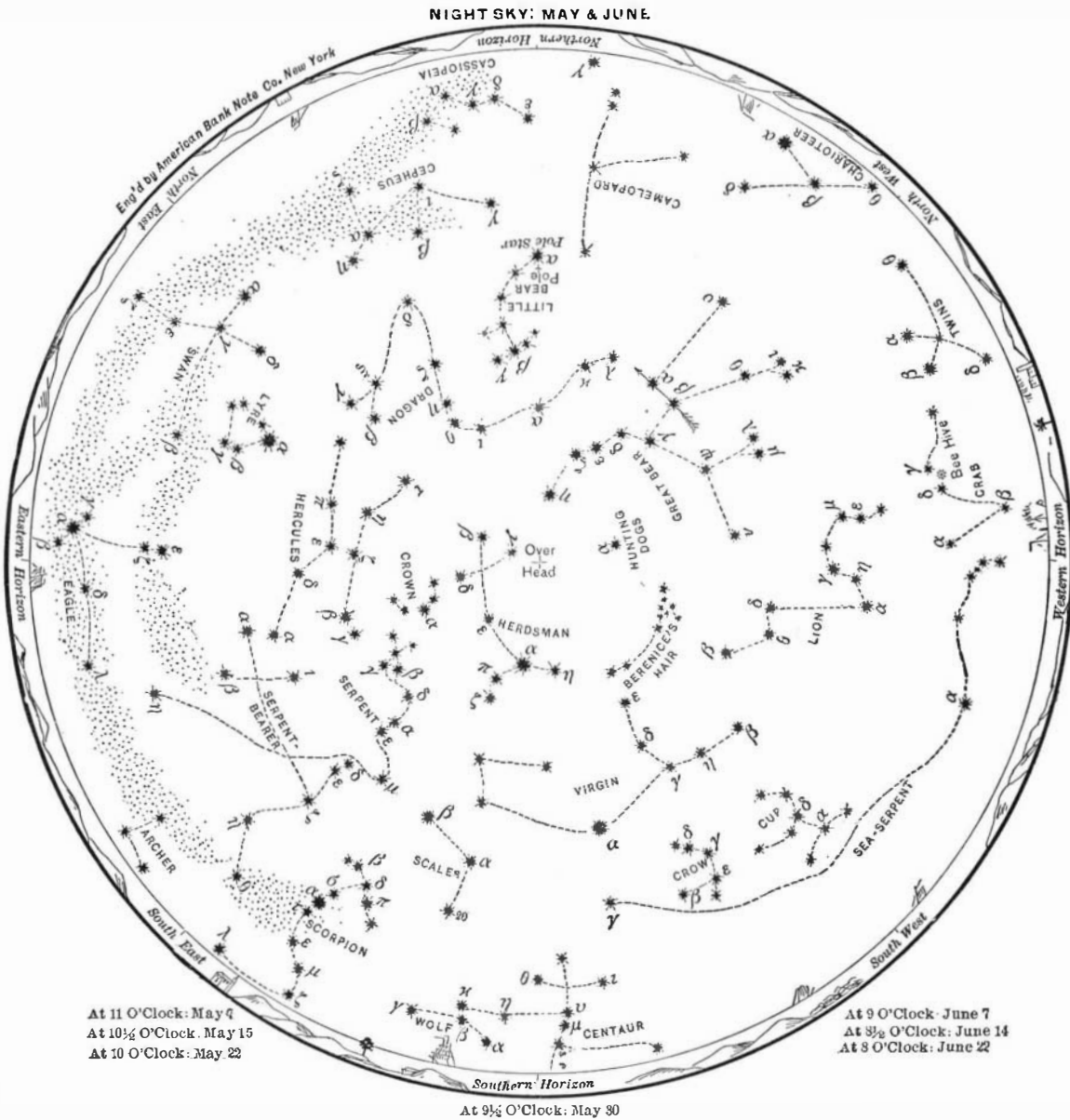
Low down in the east is the Eagle (*Aquila*), with the fine steel blue star Altair, the Swan on the left about northeast, and above it the Lyre (*Lyra*), with the still more brilliant steel blue star Vega. Hercules occupies the space between the Lyre on the one side and the Crown and the Serpent's head on the other. He is high up, due east.

Lastly, the Dragon winds from between the Pointers and the Pole round the Little Bear, toward *Cepheus*, and then eastward toward the feet of Hercules, close by which we see his head and gleaming eyes, β and γ .

THE Textile Manufacturer, London, thinks there is likely to be a great deal of trouble growing out of the winding up of the New Orleans Exposition. The governments of Honduras, Ecuador, Peru, the Argentine Republic, the Samoan Islands, Uruguay, Chili, Santo Domingo, Hayti, Nicaragua, and Russia sent goods under the guarantee that all expenses of transportation to and fro would be paid by the Exposition Company. Even Dom Pedro, Emperor of Brazil, has his son on the way with goods, in expectation that the show would be open into the fall. The enterprise has closed a miserable failure, and the goods of these nations are held for the charges due. It would seem not at all improbable, from the moral support the United States gave the affair by granting it subsidies, that it would in good faith be bound to take these goods out of pawn and send them back.

Brooks Comet No. 3.

On the evening of May 22, Professor Brooks, of Phelps, N. Y., discovered another comet, having a right ascension of 11 h. 51 m. 15 s., and a north declination of 8° 55' 15". The wanderer is reported as large but faint, and has a slow motion to the southeast. Its discovery secures to Professor Brooks the first, second, and third Warner prizes of the year.



In the map, stars of the first magnitude are eight-pointed; second magnitude, six-pointed; third magnitude, five-pointed; fourth magnitude (a few), four pointed; fifth magnitude (very few), three-pointed, counting the points only as shown in the solid outline, without the intermediate lines signifying star rays.

on the various floors to be protected with standard tin clad fire doors.

Well Holes for Light.—Not allowed in this class of buildings.

Shutters.—To be placed on all windows and other openings at the rear and sides of buildings, when exposed by other property or by another section of the same property cut off by division brick walls. To be of standard construction, and the fastenings so arranged that they can be opened from the outside.

Blind Attics.—And other concealed places that cannot be readily reached by firemen not allowed.

Boilers.—For heating or power, to be placed in separate buildings or fire proof rooms, and provided with regular boiler chimneys.

Preservation of Wood.

The prevention of decay in wood is said to be effectively accomplished by exhausting the air from the pores and filling them with a gutta percha solution, a substance which preserves the wood alike from moisture, water, and the action of the sun. The solution is made by mixing two-thirds of gutta percha to one-third paraffine, this mixture being then heated to liquefy the gutta percha, when it is readily introduced into the pores of the wood, the effect of the gutta percha being, when it becomes cool, to harden the pores.