

THE VIKING SHIP FOR THE COLUMBIAN EXPOSITION.

The Viking ship, a reproduction of the famous Gokstad find, has reached our shores, after a successful voyage. The trip goes to show how the ocean may have been successfully traversed by such a craft under sail power, and is a corroboration of the possibility of the discovery of America by Leif Erikson. Our cut shows the general appearance of the little craft as she might be seen in midocean speaking a great liner. Seventy-eight feet long, sixteen feet wide, and drawing but four feet of water, she is but a little larger than the long boat for a modern five hundred foot leviathan. In the background of the picture, the bow of a modern ship is seen towering far above the picturesque little cockle shell that, unassisted, has made her way across the Atlantic Ocean.

On April 30 the Viking ship left Bergen, Norway. At 3 o'clock on the morning of May 27 the east coast of Newfoundland was sighted. On May 29 Cape Race was passed. On June 13, at 4 P. M., the port of New London was made, the first American harbor the ship entered. The voyage was highly successful, and went to prove the excellence of the ship's model.

In one severe gale, the ship lay to for eight hours, with a drag or sea anchor out. She rode well, but shipped a little water forward. A second gale was encountered, in which, under close-reefed foresail, the ship successfully scudded before the wind.

The ship and her master and crew have been made the objects of well merited ovation, and her progress to Chicago will be a march of triumph in every sense. The Gokstad ship from which she was built is fully described and illustrated in our SUPPLEMENT, Nos. 241 and 251.

The Blistering of Paint.

Unless caused accidentally by the action of heat, or naturally by the sun's rays, helped along by pitch or oil in the wood, we may conclude that the blistering of paint is due to the presence of moisture in the wood which was either there when the paint was put on or has got there since by leaks, letting the water into the back of the wood, soaking it, and so forcing the paint to let go its hold.

In house painting, much of this occurs from too much haste in painting unseasoned spruce clapboards; or in painting them in the early morning after a very heavy dew has fallen on a hot summer's evening and before the sun has had time to dry them off. The grass about the building is wet; you could not walk through it scarcely without wetting your feet; and why should not, with some movement of the atmosphere, the

sides of your newly clapboarded building be wet also? They are; and though barely perceptible to the feeling of the palm of your hand, nevertheless, those clapboards, like a sponge, have absorbed a considerable amount of moisture, which can but have a deleterious effect upon your paint that you have put on before it has had time to dry out. New spruce clapboards should also stand a fortnight or so after being put on, exposed to sunshine and storm so as to get well "tanned up" by the weather, and the grain opened so as to admit well the penetrating qualities of the paint; and, if dry when painted, your paint will stay there, if good for anything and decently applied. Of course, it is understood that time enough must be given after a storm to have the work thoroughly dry before paint is put on, and this is usually done; but the other conditions above named are not always observed, and as a consequence, somebody's paint is condemned when it is not to be blamed, but the one who used it is the guilty party. I know of three double tenement two and one-half story new houses that were painted in this city recently, two of them

with a well-known and popular brand of ready-mixed paint and the other with lead and oil, all of which blistered more or less, and the ready-mixed paint agent had to stand the cost of repainting his two houses because he guaranteed the paint not to peel, though it was no worse than the other one painted with lead and oil, and the contractor acknowledged the paint could not be at fault. Doubtless the trouble lay in one of the causes I have named and too much haste to get the paint on. When will the avaricious painter ever learn that "haste makes waste," and take time to do work as it ought to be done?

Then, again, a poor brushman is the cause of leakage in nail holes and around joints; he does not fill all these places with paint as he goes along, so as to exclude the water that is sure to soak in later on. Here you may observe the difference between a good and a poor workman; the former wipes his brush into all cracks, crevices, holes, and cross grained places in his work as he goes along, not only making it look much better, but rendering it impervious to moisture, while

and peel from those panels on each side of the car about midway and opposite the let-off valves; not because the steam is hot enough to do this, but because of the moisture from the vapor that is continually arising and soaking into the ends of the panels and behind and around them. In fact, I have seen cars completely enveloped in the clouds of steam which were discharged from the train while standing still, which ought not to be done, but rather should be let off before the terminus is reached, while the train is in rapid motion.

No matter how righteous a paint may be, or however well put on, if the wood gets water-logged, it will blister and let go. Good paint and water have no affinity for each other; water is the third party which will cause a separation between paint and wood, however well married they have been.—By Charles E. Copp, in the *Painters' Magazine*.

Testing 100 Pound Rails.

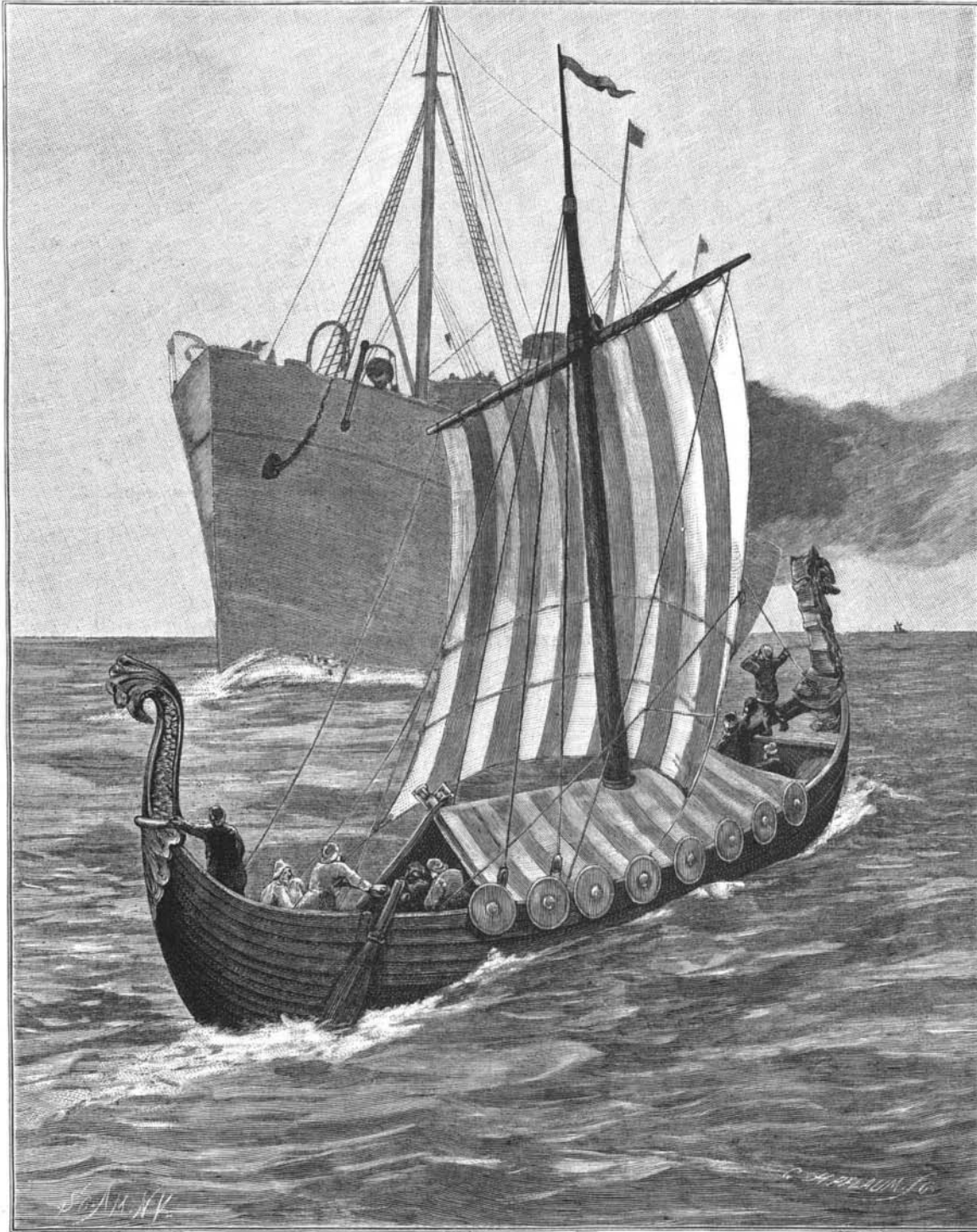
The New York, New Haven & Hartford Railroad has ordered from the Maryland Steel Co. 15,000 tons of 100

pound rails for use during this year. The chemical composition of these rails is left to the judgment of the makers, except that it is to be made of as high carbon as they are willing to make and still meet the requirements of Section 8 of the specifications, which reads as follows: While the heat is being cast two ingots shall be made. The first from steel going into the first regular ingot, the other representing the last one. These test ingots shall be 3 x 3 inches and not less than 4 inches long. From them bars at least 1/2 inch square shall be drawn at one heat. Each bar when cold shall be bent without breaking by the blows of a sledge to not less than a right angle. Should one bar from a heat fail and the other stand the test, a third bar may be taken from a bloom rolled from the same ingot represented by the failed one. If this stand the test, it shall be accepted in lieu of the failed bar. If the maker choose, more than two test ingots may be taken, but they must be from the steel of the first and last regular ingots. If this is done, and a test bar fail, another may be drawn from the duplicate ingot and tested, and if it stands accepted. A rail butt from each conversion shall be placed either head or base upward on solid steel or iron supports, the distance apart of which in the clear shall be 4 feet, and upon them shall be dropped a weight of 2,000 pounds falling freely from a height of 16 feet for under 100 pound and 20 feet for 100 pound rail. Should a test fail to stand the drop without breaking, a second one may be made. If it also

fails, all rails made from that heat shall be rejected, but if the second test stands, then a third shall be made. If this is successful, the rails of that conversion shall be accepted.—*American Manufacturer*.

A Fever Annunciator.

The *Lancet's* Paris correspondent tells of an apparatus of recent invention for registering rises of temperature from friction in a machine, from fermentation in a mass of grain, etc. A small metallic bulb half filled with ether is sealed by a corrugated cover. When the temperature rises so as to expand the ether vapor sufficiently, the cover is straightened out by the pressure and made to close an electric circuit that works a bell. It is said that the inventor, M. Tavernier, cherishes the project of fitting up hospital wards with these bulbs, each of which, secured in a patient's axilla, shall operate a numbered bell in the interne's room, after the manner of hotel annunciators. By this means it is expected a sudden and dangerous rise of temperature in any particular case may at once be brought to the interne's notice.



THE WORLD'S COLUMBIAN EXPOSITION—THE VIKING SHIP RECENTLY ARRIVED FROM NORWAY.

all the poor hand seems to think necessary is to smutch over the work so as to give it the appearance of having been done over with the same color! Thoroughness and appearances are vastly different matters.

Finally, if the painter's attention has been called to some of his work which has blistered, let him prick the blisters, and if water runs out of them, he may rest assured that there is a leak somewhere, letting the water in on the back of his work; and it is only a question of searching until he finds it. It may be a leaky roof, which only much painstaking will locate the spot in. Underneath the projecting "visors" over the platforms of passenger cars I have known much of this trouble to be caused by a leak in a tin roof which has rusted through in a small spot hardly perceptible, by cinders soaked with water lying along beside the water cans. The painter will be blamed until he takes the trouble to get a ladder and begin the inquest. The new steam heat from the locomotive, lately adopted on most roads, when discharged under the cars at terminal points, will cause paint to blister