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## A RUMOR ABOUT THE COMPASS.

The London Electrician has a dispatch from Berlin to the effect that a means has been discovered of using electricity for ascertaining the true north, instead of the magnetic needle; that, in short, the new means will be altogether superior to the compass, and islikely to supersede it.
If this is true it will be welcome news to the mariner for since the coming of iron and steel ships the needle has played many fantastic tricks; requiring a fairly good knowleage of magnetism and other phenomena to understand it. The liquid or "Ritchie" compass, that came with the monitors, in which the needle is submerged in spirits of wine or alcohol, is, of course, a great improvement on the old-fashioned and wabbling " card;" and the lines of deviations, and the corrections for the same, laid down on all the ocean: charts, are powerful aids to the mariner. But there are times-during magnetic storms or because of curious conditions of cargo-when, on an iron ship, the compass in the binnacle may say one thing, the "telltale" compass swinging in the cabin another, and a third in the tops istill another-" pointing three ways for Sunday," as the phrase goes. Aboard a man-o' war it is not so bad, for there they have plenty of technical talent. But the master of a merchantman is more likely to be a sailor than a scientist, and all he can do, if near the coast under such conditions, is to turn her head hard off.

## RECIPES FOR MAKING GOUT."

Under this title, an English society journal, having exhausted, and it infers without avail, its best advice as to the prevention of this dread malady, lays before its epicurean readers some specimen compounds peculiarly adapted to develop gout in those previously free and to excite its most virulent symptoms in the already afflicted. It has medical authority for its promise that the recipes it gives are really among the most exciting causes yet discovered in scientific or even what might be called haphazard cusine; taking no account of the lesser causes, no doubt crediting the gouty with sufficient intelligence to foresee the effect upon the metatarso-phalangeal joint of the great toe of the midnight lobster and the after-dinner port. It introduces a certain Dr. Hunter, whom it seems to regard as an authority on gout, and one can almost see a testy little doctor, rotund, red-faced, shortwinded, with good living, and knowing his subject from sensation as well as study, as he takes up a famons cookery manual and reads: "Giblet soup, par excellence: veal stock, lemons, yolk of egg, forced meat balls, and Madeira." This, he says, contains a considerable amount of gout and scurvy. Of an unusually rich mock-turtle soup, he says: "A dangerous dish, and will soon bring a man to his crutches." An-
other of the same he declares most diabolical-only fit for the Sunday dinner of a rustic who is to work the six following days in a ditch Dottom; while of a third, mock-turtle soup made with beef, ham, giblets, lemonpeel, truffles, eggs, orange-juice, forced meat, and Madeira-a dish much admired by the patrons of a famous London restaurateur-the doctor says testily : "There is death in the pot."
It has often been observed of those afflicted with gout-the tone of the letters addressed to the society journal in question furnishes still another evidence of it-that they appear more concerned to discovering new remedies to lessen the pain when they shall be again attacked than in adopting a practical means for preventing its recurrence. They try colchicum, soothing topical applications, acetate of potash and other alkalies, and perhaps nitro-muriatic acid, the latter for supplying the oxygen necessary for the conversion of the excess of uric acid from which they are suffering into oxalic acid, and the latter into carbonic acid and urea-always with the hope, so it would seem, of accomplishing by chemistry what regular habits, air, and exercise would ordinarily yield.

## HEMP VS. IRON IN OCEAN CABLES.

A timely and instructive letter it is that Judge R. L. Weatherbee, the manager of the cable companies' repairing service, sends to the Halifax (N. S.) Chronicle. He refers to the rapid impairment of ocean cables, and asserts that the cause of this is to be found undoubtedly in the use of iron, which rots away where hemp would stand. That is to say, the gutta-percha which enwraps the copper core should, to his way of thinking, have a serving of hemp alone instead of hemp and iron, as now. He says that down in those depths of ocean where the cables lie, there is not enough motion motion, that is to be feared-an action which hemp will readily withstand, but softening iron so that one may pare it as he wonld a piece of cheese. Any one who has ever tried a jack knife on a propeller or other iron that has been in salt water several years without repainting, will well understand this. He says that for eight years Halifax has been connected with the town of Dartmouth by a submarine core covered with hemp only, and it is as good as new, so far as is known, and the hempen rigging taken not long ago from the
wreck of the Royal George, sunk in 1782, "is as perfect as when submerged.'
How important this subject is may be understood from the fact that thirteen cables have been laid across the Atlantic at a cost of $\$ 75,000,000$, which, so far, have cost $\$ 25,000,000$ for repairs ; 7,000 miles of this is, at this moment, lying abandoned because of unsubstantiality; the average life of a cable of the present construction having been estimated at twelve years.

## MACHINE GUNS IN SHORE DEFENSE.

A discussion is now going on in the English press regarding the defenselessness of the British coast, notably the southern and eastern portions, the dangers of invasion, and the best means of protection. The latest theory is advanced by Captain Willoughby Verner, and described in the current number of the National Review (English) ; the author being evident$y$ an artillerist, and of the land forces rather than of the marine ; his theory, like most of those preceding it, sound or shaky, according as it is regarded from the and or the sea. He would have the British coast marked off into districts, each possessing a battery of the type of machine guns devised by that ingenious Yankee Hiram Maxim, and the districts so connected by telegraph that 32 of these pepper-boxes could be assembled at short notice at a threatened point. It would not be necessary to have heavy guns on the coast line, he says, because, where the intent was invasion, men would have to be landed in boats, and these he would open on as soon as in range.
He says that at many points of the coast ships could not come close in shore for the rocks, a statement abundantly supported by the soundings, as given on the admiralty charts ; that it would require time to launch and man the boats; and still more to get them to the beach, thus affording time to prepare the defense. But let us suppose that the enemy, nstead of obligingly making ready to fall into this cleverly constructed mouse trap, should select a bold portion of the coast for his enterprise, occupying himself during the day hours with making things lively about the shore, and, at short range, playing upon everything having the appearance of a battery, and when night came, and under cover of a hot enfilading fire, embarking his expeditionary force in boals armed not only with machine guns, but as well with shields to protect them from the flre of those in battery ashore. Captain Verner speaks of the American dynamite gun in high terms, and believes that, too, would prove useful on such occasions as those he would prepare for. Indeed, it would seem as if he might profitably make this his main reliance should the enemy come up within a mile and a half of the shore, but in case he did not, perhaps he could not put in the day hours to better advantage than by telegraphing for torpedo boats and carefully measuring distances and finding ranges to make them effective when night should set in, even if such preoccupation risked the completeness of the machine gun battery. Admiral Porter and other high authorities have recorded the opinion that the result of the coming naval war, let it be between powers whose relative forces have heretofore been well defined, is likely to be uncertain, because of the introduction of war material of a novel description and the necessity for a complete change in tactics. Because of this change in conditions and the lack of data gathered from the operations of actual war, it is not easy to suggest a theory of attack or defense which does not contain a self-evident fallacy. One military authority tells us that shore batteries, unless of the most powerful and elaborate description, cannot hope to beat off big modern ships. Another explains with careful detail how that torpedoes in the channelways and torpedo boats in the roads may be looked to to stop the advance of anything that can- be floated. Both arrange the details of their plans under the most favoring conditions, and each seems plausible, perhaps conclusive, until the other is examined.

## NAVAL WARS OF THE FUTURE.

When the English heard of the Monitor and Merrimac fight, they realized that their magnificent steam war ships, the finest in the world, were obsolete. Hampton Roads signaled the appearance and prescribed the type of the ship that was to be; or, as the Admiral of the Navy, David D. Porter, says in his recent paper, whose title is quoted above, "the guns at Hampton Roads sounded the death knell to all these grand vessels" (the British fleet). For, if the Yankees had ships that could stand to the heaviest guns (then) known for more than three hours at close range without sinking, of what avail would oak be against them? The "wooden walls" of Britain were thereupon changed to iron and steel, and little by little she constructed what the Admiral is inclined to regard as the greatest fleet now afloat; but so uncertain are the chances of naval war now become, that even so great an authority as he is unable to say whether or no this greatest fleet could stand against the French. His reasons for doubt are as logical as they are interesting. The French are the most scientiflc people in Europe,

