Scientific American.

ESTABLISHED 1845,

MUNN & CO., Editors and Proprietors.

PUBLISHED WEEKLY AT

No. 361 BROADWAY, NEW YORK.

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A. E. BEACH.

PAGE

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NEW YORK, SATURDAY, FEBRUARY 9, 1889.

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Scientific American.

A RUMOR ABOUT THE COMPASS.

The London *Electrician* has a dispatch from Berlin to the effect that a means has been discovered of using the magnetic needle; that, in short, the new means will be altogether superior to the compass, and is likely 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 knowledge of magnetism and other phenomena to understand it. The liquid or "Ritchie" compass, that came with the monitors, in which the charts, are powerful aids to the mariner. But there National Review (English); the author being evidentare 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 can do, if near the coast under such conditions, is to turn her head hard off.

"RECIPES FOR MAKING GOUT."

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 of the midnight lobster and the after-dinner port. It introduces a certain Dr. Hunter, whom it seems to 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 famous cookery manual and reads : "Giblet soup, par excellence: veal stock, lemons, yolk of egg, forced mock-turtle soup made with beef, ham, giblets, lemon- risked the completeness of the machine gun battery. peel, truffles, eggs, orange-juice, forced meat, and "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.

wreck of the Royal George, sunk in 1782, "is as perfect as when submerged."

How important this subject is may be understood electricity for ascertaining the true north, instead of 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, notaneedle is submerged in spirits of wine or alcohol, is, of bly the southern and eastern portions, the dangers course, a great improvement on the old-fashioned and of invasion, and the best means of protection. The wabbling "card;" and the lines of deviations, and the latest theory is advanced by Captain Willoughby corrections for the same, laid down on all the ocean Verner, and described in the current number of the ly 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 land or the sea. He would have the British coast third in the tops (still another-"pointing three ways marked off into districts, each possessing a battery of for Sunday," as the phrase goes. Aboard a man-o'- the type of machine guns devised by that ingenious war it is not so bad, for there they have plenty of tech- Yankee Hiram Maxim, and the districts so connected nical talent. But the master of a merchantman is by telegraph that 32 of these pepper-boxes could be more likely to be a sailor than a scientist, and all he 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.

Under this title, an English society journal, having He says that at many points of the coast ships could exhausted and it infers without avail its best advice not come close in shore for the rocks a statement its epicurean readers some specimen compounds pecu-] on the admiralty charts; that it would require time to liarly adapted to develop gout in those previously launch and man the boats, and still more to get them free and to excite its most virulent symptoms in the to the beach, thus affording time to prepare the dealready afflicted. It has medical authority for its fense. But let us suppose that the enemy, promise that the recipes it gives are really among the instead of obligingly making ready to fall inmost exciting causes yet discovered in scientific or to 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 upon the metatarso-phalangeal joint of the great toe 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 regard as an authority on gout, and one can almost in boats armed not only with machine guns, but as well with shields to protect them from the fire 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 meat balls, and Madeira." This, he says, contains a might profitably make this his main reliance should considerable amount of gout and scurvy. Of an un- the enemy come up within a mile and a half of the usually rich mock-turtle soup, he says: "A dangerous shore, but in case he did not, perhaps he could not put dish, and will soon bring a man to his crutches." An- in the day hours to better advantage than by teleother of the same he declares most diabolical-only fit graphing for torpedo boats and carefully measuring for the Sunday dinner of a rustic who is to work the distances and finding ranges to make them effective six following days in a ditch bottom; while of a third, when night should set in, even if such preoccupation

Admiral Porter and other high authorities have Madeira-a dish much admired by the patrons of a recorded the opinion that the result of the coming famous London restaurateur-the doctor says testily: 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 Merrinac fight, they realized that their magnificent steam

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He refers to the rapid impairment of ocean cables, and war ships, the finest in the world, were obsolete. Hampton Roads signaled the appearance and preasserts that the cause of this is to be found undoubtedly in the use of iron, which rots away where hemp scribed the type of the ship that was to be; or, as the would stand. That is to say, the gutta-percha which Admiral of the Navy, David D. Porter, says in his recent paper, whose title is quoted above, "the guns enwraps the copper core should, to his way of think ing, have a serving of hemp alone instead of hemp and at Hampton Roads sounded the death knell to all these grand vessels" (the British fleet). For, if the Yankees iron, as now. He says that down in those depths of had ships that could stand to the heaviest guns (then) ocean where the cables lie, there is not enough motion to part a gossamer thread; it is chemical action, not known for more than three hours at close range withmotion, that is to be feared-an action which hemp out sinking, of what avail would oak be against them ? will readily withstand, but softening iron so that one The "wooden walls" of Britain were thereupon changed to iron and steel, and little by little she conmay pare it as he would a piece of cheese. Any one who has ever tried a jack knife on a propeller or other structed what the Admiral is inclined to regard as the iron that has been in salt water several years without greatest fleet now afloat; but so uncertain are the repainting, will well understand this. He says that chances of naval war now become, that even so great for eight years Halifax has been connected with the an authority as he is unable to say whether or no this town of Dartmouth by a submarine core covered with greatest fleet could stand against the French. His hemp only, and it is as good as new, so far as is known, reasons for doubt are as logical as they are interesting. and the hempen rigging taken not long ago from the The French are the most scientific people in Europe,