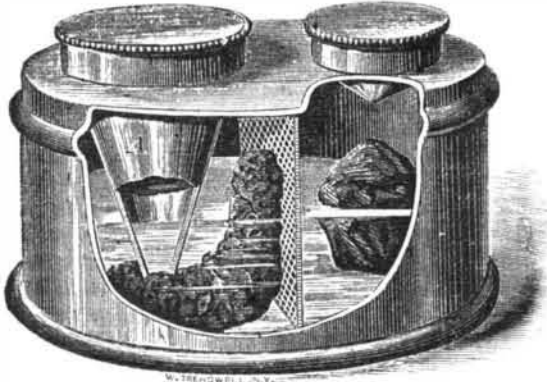


AN INEXHAUSTIBLE INKSTAND.

Mr. Adolphe Teyssonniere, of No. 18 King William street, Westminster, England, has recently patented in this country an ingenious inkstand, which, he says, is capable of yielding ink of a uniform color and quality, for a long period, by the simple application thereto, from time to time, of pure water.

The device, as shown in our engraving, consists of an inkstand divided into two compartments by a perforated partition. Access to both divisions is afforded by orifices above represented, covered with screw caps. In the smaller compartment a quantity of dry coloring matter, which may be aniline of any colors, ink powder, ordinary ink evaporated, evaporated extracts of dye woods, soluble dyes, indigo, Prussian blue, or any other similar material, is placed, after being enveloped in a porous bag or envelope of unsized paper. In the larger compartment is an inverted truncated cone, A, which forms the dipping cup, and the lower end of which rests against a sponge, which serves as a filter to keep back



any particles of undissolved coloring matter which may escape from the envelope containing the pigment. When the case is thus fitted, the cover is secured in place, and the inkstand is ready for the market. In order to use it, water is poured, through the opening for the purpose, into the smaller compartment. A portion of the coloring matter is then dissolved, as the water thus turned into ink flows readily through the perforated partition and sponge, and rises sufficiently in the cone, A, to be taken up by the pen. When all the liquid is used, more may be made by simply adding more water, and this may be repeated until all the pigment is dissolved.

The inventor also proposes several modifications of the form represented herewith, but all are constructed on essentially the same principle.

THE COLORADO POTATO BUG.

The Colorado potato bug, or *doryphora decemlineata*, a representation of which we herewith present, has for several years past made alarming ravages in the potato crops of the western section of the country. Some forty years ago, it was known in the Rocky Mountains, where it seemed to be indigenous, feeding upon the *solanum rostratum*, or wild potato. When the common tuber was introduced in that region, the beetle soon attacked it; and spreading from one field to another, in 1859 it had reached a point one hundred miles west of Omaha. In 1861 it invaded Iowa, and, crossing the Mississippi in 1864-5, it has since proceeded eastward at the rate of about sixty miles per year; so that it will probably reach the Atlantic, unless some means be found for its extermination, during 1878.

Professor Hall, of Chicago, states that the beetle lays its eggs on the under side of the potato leaf. These are speedily hatched. The larva, when full grown, is over half an inch long, very thick in the middle, and tapering towards head and tail. It is of a pale yellow color, often dusky or freckled on the back, with small blackish dots, and along each side are two rows of large black dots. The legs are black, and the head black and shining.



The mature insect, the beetle itself, is nearly half an inch long and a quarter of an inch wide. Its shape is oval, very convex above and flat beneath; of a hard crustaceous texture, smooth and shining, and of a bright straw color, the head and thorax being sometimes tawny yellow; head and thorax marked with black spots; the wing cases with black stripes arranged longitudinally, five on each case. The antennae are twelve-jointed; the first five joints are pale or tawny yellow, the remaining joints black, the last joint being small, and sunk into the penultimate one. The legs are tawny yellow, the hips, knees, and feet being usually black. It requires less than a month to pass from the egg to the beetle state. The accompanying figure, for which we are indebted to the *Field*, is a representation of the insect on an enlarged scale, the line alongside showing its actual length.

Where the bug once gets a footing, it speedily destroys the entire crop. It is believed to effect all its transformations in fifty days, so that a single pair would, if unmolested, pro-

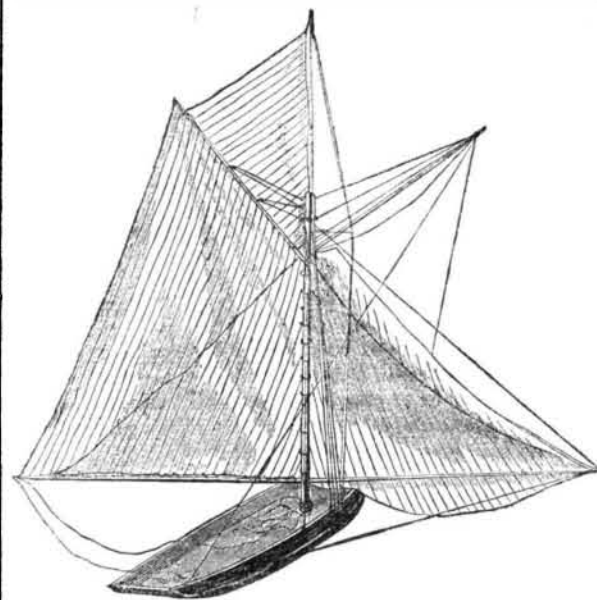
duce sixty millions of progeny in a single season. Various modes of preventing its ravages have been suggested. Brushing or shaking the larvæ from the haulm into a vessel is sometimes tried, but this is a laborious and dangerous operation. Dusting the leaves with white hellebore powder is an effective remedy when it is well done; the powder must, however, be freshly ground, as it loses its efficacy when kept too long. Paris green is also recommended, but both powders are irritating to those applying them, while the latter is extremely poisonous. Birds, it is said, will not destroy the bugs, as the emanations from their crushed bodies are noxious even to human beings, and, it is said, have caused several deaths. The symptoms resemble those caused by the bite of the rattlesnake. The beetle has several insect enemies, especially some varieties of ladybird, which prey upon its eggs and larvæ.

There has been considerable alarm in England, lately, lest the pest should be imported thither in American potatoes, and official investigations have been made in order to determine the advisability of prohibiting importations of the vegetables. The report, however, points out that the larvæ of the parasite are not deposited in the tubers or conveyed by them, and that with the exercise of proper care no danger need be apprehended from bringing American potatoes into the country.

THE SHADOW SAIL.

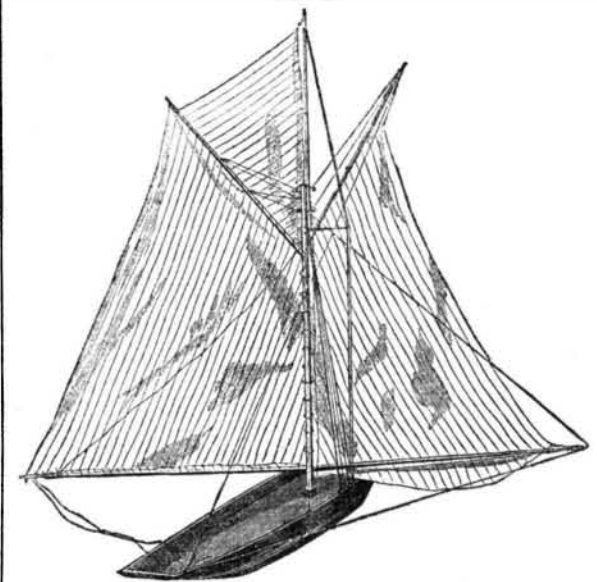
We extract from *Land and Water* the accompanying engravings of a new sail recently patented in England, and called the Shadow. It seems well adapted for racing yachts, as it allows of a remarkably large spread of canvas. The fitting is, however, not American fashion; and although when once distended, the sail would be of considerable assistance, we think that the extra quantity of gear required, and the cumbering of the masthead rigging with an extra gaff, will hardly secure for it much favor from American yachtsmen. We should imagine that the plan might be so modified as to get rid of much of the clumsiness, particularly if the gaff, as our contemporary suggests, could be arranged so as to be easily and quickly shipped and unshipped in any kind of weather.

FIG. 1.



As represented, the gaff is attached by a gooseneck to iron work fitted on the foreside of the mast. This iron work projects from the mast in such a manner as to allow the topmast to pass through it when requiring to be hoisted, and is fixed about two feet six inches below the hounds of the rigging, just above where the jaws of the mainsail rest. The length of the gaff is regulated by the hoist of the mainsail, but should, when hanging down from the gooseneck and in use, reach within about four feet of the deck. In cutters, and for the foremasts of schooners, two halliards are necessary, one on each side of the forestay; but on the mainmasts of schooners, one will be found sufficient. When the

FIG. 2.

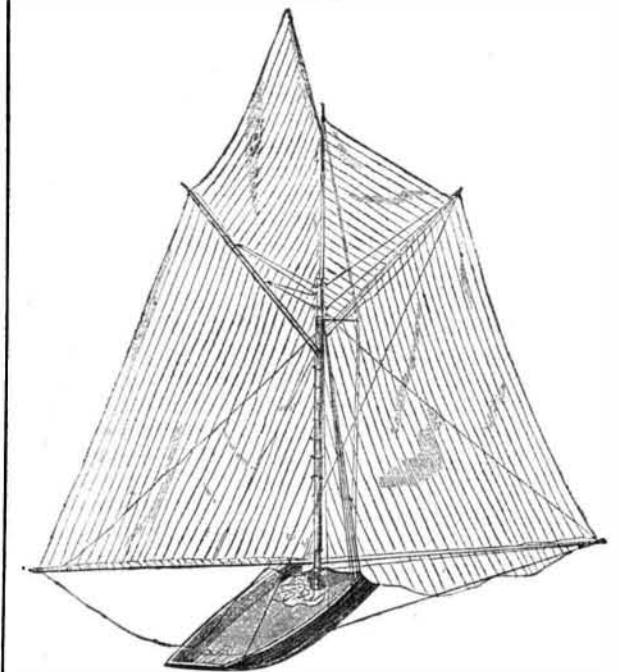


sail is not set, the gaff can be stowed either alongside the mast or lashed to the rigging as most convenient. The sail has hoops seized on it; and when being set, these hoops are slipped over the gaff before hooking on the peak halliards.

As the hoops are passed over the gaff, the throat of the sail is hauled up; and when all are on, the head of the sail is brailled close to the mast. The gaff is then peaked up on the proper side of the forestay, and the boom, which is exactly similar to a spinnaker boom, is rigged out, and the foot of the sail set on it exactly in the same manner as a spinnaker.

Fig. 1 represents the sail as it now is, or when close reefed. Fig. 2 shows the sail when half reefed, or while being set. When the sail is half reefed, the gaff will re-

FIG. 3.



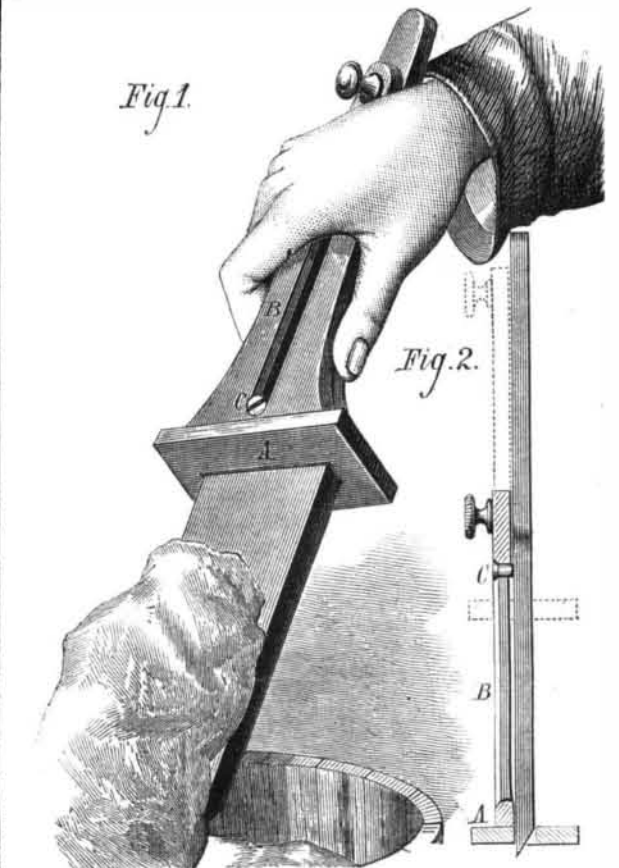
quire more peak to set it. The sail, when fully set, is shown in Fig. 3, which also explains how a topsail can be set over the Shadow in light winds.

From the gaff end are fore and after guys, with which to brace the gaff to its proper position. When gybing, all that is necessary is to brail up the sail, lower the peak of the gaff, unhook the halliards and guys, pass it under the forestay, hook on again, and hoist away, of course having first shifted the boom.

IMPROVED LARD AND BUTTER CUTTER.

We illustrate herewith a new form of spatula adapted for removing lard, tallow, butter, or similar material from the tub, which provides an easy mode of freeing the ladle portion from the clinging material. The device is made of wood, and its lower end is broadened, beveled to a sharp edge, and passes through an opening in the sliding piece, A. To the latter is secured a bar, B, which is slotted and through the opening in which passes a confining stop, C. A button on the upper extremity of the bar allows it to be conveniently moved.

Fig. 1.



After the material is cut and lifted up upon the broad end, as shown in Fig. 1, the piece, A, is slid down to the extremity, as represented in section in Fig. 2, thus pushing the lard off upon the receptacle placed for it, leaving it in a smooth, attractive shape.

The device is simply constructed and easily operated, and will doubtless form a convenient arrangement for the use of grocers, dairymen, and others.

Patented July 30, 1872. For further particulars, address the inventor, Mr. W. M. Bleakley, Verplanck, N. Y.

MOTTO FOR THE TEMPERANCE CRUSADE. "H₂O! every one that thirsteth!"