

Science and Art.

Cultivating Potatoes.

The following statement is from a farmer who has been eminently successful in producing this crop:—

"In the first place I plow deep and harrow, and then make the drills by running the plow each way in the same furrow in order to make it as deep as possible, then draw manure, consisting mostly of refuse cornstalks that have been fed to cattle and horses, and spread in the furrow, drop the potatoes and cover; the after culture being the usual practice of cultivating, plowing, and hoeing. This method has never failed to produce good potatoes in a dry loamy soil."

During the past few years our farmers have generally failed to produce good crops of potatoes, hence such esculents have sold at enormous prices. They have not paid sufficient attention to their cultivation; let them devote more care this season. English, Irish and Scotch potatoes of very fine qualities have been imported into New York for two years past. This should not and need not be if our farmers bestir themselves.

The Louisiana Sugar Crop.

According to the latest accounts, the damage by the recent frosts in Louisiana has not been so great as to diminish the productiveness of the cane essentially. At first a material curtailment of the crop was predicted. No doubt the young cane was severely bitten, but as a general rule it promises to regain its vigor, or at least to a fair proportion of saccharine juice. Cotton and corn being less hardy, have suffered to a greater extent; but the damage is more easily repaired by replanting, and in this work the planters are busily engaged.

The condition of the Louisiana sugar crop has become a subject of general solicitude; and we therefore hope that the yield will be good this season. It is reported that the cuttings obtained by the special vessel sent to the West Indies by our Government at so much expense have mostly proven worthless.

Blacking for Horse Harness.

Melt four ounces of mutton suet with twelve ounces of beeswax, and twelve ounces of sugar candy, four ounces of soft soap dissolved in water, and two ounces of indigo finely powdered. When melted and well mixed, add half a pint of turpentine. Lay it on the harness with a sponge and polish off with a brush.

This blacking is for working harness, which should be cleaned and polished up at least once per week when in constant use.

The following is a recipe for carriage harness blacking:—

Take three sticks of black sealing wax and dissolve them in half a pint of alcohol, and then apply with a sponge. Lac dissolved in alcohol, and colored with lamp black, will answer the same purpose. This is a quick drying, hard varnish, liable to crack the leather, and should therefore be put on as seldom as possible.

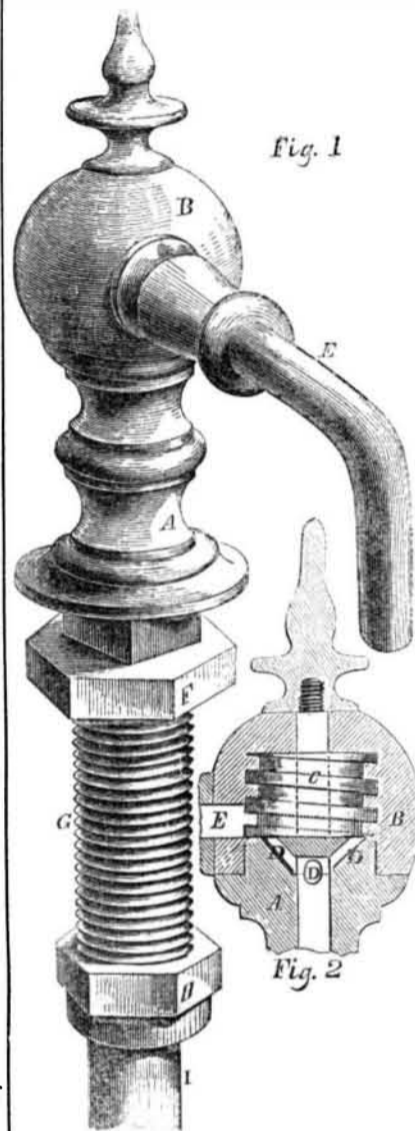
Improved Cock for Basins.

On the 3d of March last a patent was issued to Robert Leitch, of Baltimore, Md., for the improvement in cocks represented by the accompany figures, 1 and 2, a perspective and sectional view. The parts and operations of this cock are very simple, as the following description will render evident:—

A represents the stem; B is a globe having the spout, E, on it. This globe turns on the stem to let in and shut off the flow of water by raising and depressing a stop piece, C. The periphery of this stop piece or valve is chased with a short right screw thread; the interior of the globe, B, has a short left screw on it, meshing with the thread of the stop piece, C. A shoulder or square spindle, F, is secured in the top of the stem piece, A, and extends up through the inside of the globe piece, B. The screw piece, C, has a square central opening and fits on F, and is free to be raised up and forced down. A thread is cut on the top of shoulder, F, and when the

globe piece, B, is fitted on, with the stop piece, C, inside on its shoulder; by screwing the small top cap on that of the top of shoulder, F, the globe is secured firmly in its seat. A series of small holes, D D D, through the top flange of the stem, A, communicate with the interior of the globe, B, and when the stop piece is raised the water flows out of them through the spout, E.

Operation.—By simply turning the spout, E, with its globe around in one direction, the thread on the inside of the globe raises the



stop piece, C, (not turning it) on the shoulder, F, to the amount of the pitch of the screw (as shown by dotted lines) when the water flows up and out of the spout; by turning the globe in the contrary direction, the stop piece, C, is forced down on its seat, and the flow of water is shut off.

The claim is for the arrangement of the loose stop piece, C, with a thread on its periphery, and the means of raising and depressing it vertically without its turning, as described.

F G H and I represent nuts, a screw, and an extension piece of the stem for fitting it into its place and position for use, and are of the usual construction. Stud pins on the inside of the globe, B, fitting into the thread of the stop piece, C, will also operate the stop piece. This is a very convenient basin cock; it opens and closes with a quarter turn of the globe, it never gets hard to turn, is very durable, and not liable to get out of order.

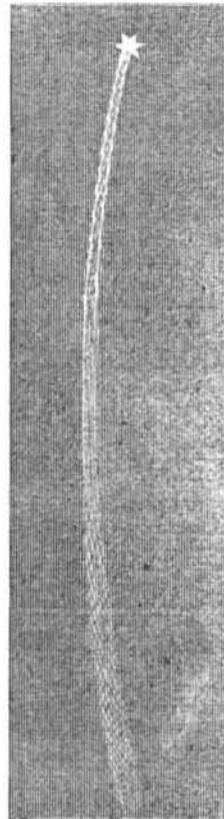
More information may be obtained by letter addressed to R. Leitch, care of Register & Webb, 53 Holiday street, Baltimore.

More about Comets.

The comet of 1843 was in several respects the most remarkable which has ever been recorded. Most of our readers saw this comet, or rather the streak of light forming its tail, which streamed nearly half way across the sky. This comet appears to have approached the sun on the side opposite the earth, so that like a skillful hunter approaching his game, it was not seen until it appeared in very close contiguity to its surface, and so bright that it was seen in the day time by different observers on all parts of the earth. Its existence was not suspected at any of the observatories until it had passed its perihelion, and was rapidly retreating again into darkness. At

some period during the early portion of its visit, it would seem that it must have swept across the face of the sun like an eclipse, and we can hardly forgive the sleepy savans for neglecting to detect this extraordinary event,

FIGURE 1—THE COMET OF 1843.



as it would have afforded so fine an opportunity to note exactly the degree of transparency of all parts of its nucleus or head, which they subsequently decided was 36,000 miles in diameter. Its tail was at one time 108,000,000 miles in length, considerably more than the whole distance from the earth to the sun. At its perihelion passage or point of nearest approach to the sun, it must have almost or quite grazed against its intensely fiery surface; in fact, the plain and unvarnished results of some of the careful calculations made, would imply that it had actually entered its substance. It retreated so nearly directly from the sun's center, that some observers were at a loss to decide which way it had passed around.

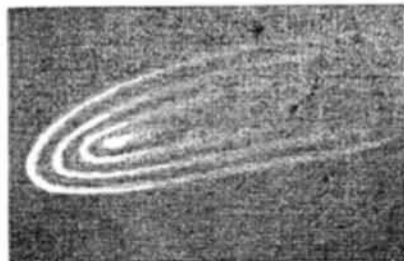
Comets are attracted by, but do not in return produce any sensible attraction on any of the planets or their satellites, near which they pass. But a more intensely overwhelming proof of the tenuity of comets is the

FIGURE 2.



fact that in several instances stars which have been in their path, have been observed to shine dimly through the thickest portion of their substance. It cannot be said that this has been observed with regard to the brightest central point of any large and very brilliant comet, but several instances have been observed where the cometary mass, distinctly ascertained to be several thousand miles in

FIGURE 3.



diameter, has passed over clusters of minute stars, all of which latter have been distinctly seen throughout the whole period of its passage. Some comets are supposed to have a small amount of solid substance, as a nucleus, but the great mass must be composed of something far less dense than cloud, or even than the ordinary gases of our atmosphere.

Many comets exhibit indications that the

luminous portions are supported on the surface of cloudy or or simply transparent atmosphere below. The nucleus, or head of a large comet, is usually light at the center, surrounded, especially on the side towards the sun, by a luminous cap, as shown in fig. 2, which can only be explained by supposing the nucleus to be enveloped at a considerable distance in a light cloudy covering, which is most plainly visible at the edges, where, by looking edgewise through the sheet, a greater depth of light becomes visible.

In some instances there appear indications of several distinct layers of light, which are represented somewhat exaggerated in fig. 3. It is probable that some of the ancient comets which are recorded as having several distinct tails were thus constructed, and that the tails were but extensions of the envelopes.

Berdan's Bakery.

The mechanical bakery of H. Berdan, in Brooklyn, which has been noticed in our columns, was burned down on the 7th inst. It is stated to have been very successful, baking from 75 to 100 barrels of flour per day.

New Steamer.

A mail steamer, to be called the *Scotia*, is now building in Glasgow, to run between Liverpool and the United States. She will be 450 feet in length, which is 60 feet longer than the *Persia*, at present the longest ship afloat.

The Supreme Court of Illinois has decided that animals wandering on the track of an inclosed railroad are strictly trespassers, and that the company is not liable for their loss when on the track, unless its employees are guilty of wilful or wanton injury, or of gross negligence, evincing reckless or wilful mismanagement.

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