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Pens, fountain, C. W. Livermore, Providence, R. I.  
Sewing machines, E. A. Wilkinon, New York city.  
Soap, manufacture of, W. West, Denver, Col.

Notes & Queries

HINTS TO CORRESPONDENTS.

No attention will be paid to communications unless accompanied with the full name and address of the writer.  
Names and addresses of correspondents will not be given to inquirers.  
We renew our request that correspondents, in referring to former answers or articles, will be kind enough to name the date of the paper and the page, or the number of the question.

Correspondents whose inquiries do not appear after a reasonable time should repeat them. If not then published, they may conclude that, for good reasons, the Editor declines them.

Persons desiring special information which is purely of a personal character, and not of general interest, should remit from \$1 to \$5, according to the subject, as we cannot be expected to spend time and labor to obtain such information without remuneration.

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Correspondents sending samples of minerals, etc., for examination, should be careful to distinctly mark or label their specimens so as to avoid error in their identification.

(1) M. G. F. asks: Can you inform me of the ingredients and the process for making soda water, so extensively used as a summer drink? A. Soda water, so called, is a solution of carbonic acid gas under pressure in water, and is evolved from a mixture of marble dust and oil of vitriol in a peculiar apparatus for the purpose. For the sirups used in flavoring this soda water, see SUPPLEMENT No. 77.

(2) A. B. C. asks whether it is scientifically true that there is an equinoctial storm? A. It is customary to call any general storm occurring any time within a month of the equinoctial passage an "equinoctial." It is only accidentally coincident with the sun's crossing of the "line." Sometimes the season passes without any "equinoctial."

(3) A. J. P. asks: Can water be drawn through a pipe two inches in diameter by a steam pump situated three thousand five hundred feet from the reservoir, and about twenty feet above its level? A. Yes, if the pipe is tight, but the supply of water will of course be much less than if the pipe was but a few feet in length.

(4) M. E. W. writes: I have a telescope with a 1 1/2 achromatic object glass, focus about 25 to 30 inches with celestial eyepiece, power 146 times. In using it for star gazing, they look upside down. Could I attach a terrestrial eyepiece to remedy this, and could I see Jupiter's moons and Saturn's rings with the telescope, if I used a terrestrial eyepiece? If so, please let me know the size and power of eyepiece I would need, and if I could attach it to the one I have. A. If your telescope of 25 inches to 30 inches focus bears a power of 146 times, you ought not to complain of the objects being upside down, as all astronomers see them in that position, and get used to it. A terrestrial eyepiece will only magnify from 20 to 40 times in your telescope. You could, of course, have one fitted to your telescope which would do excellent work on terrestrial objects, but would lack brilliancy and power on celestial objects; would show Jupiter's satellites, but would not give satisfaction with Saturn.

(5) T. P., Kansas City: All brook and mountain trout, both Eastern and Western fish, have scales.

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