

The results were as follows;—The Bass's ale came out all sound and good, the same with the lemonade and ginger-beer. The small space left by the bottler between the cork and the liquor was filled up. With this exception all was the same. The first empty bottle the cork was driven in, and as a matter of course the bottle came up filled with water. The second bottle with the large knob was also driven in, and the bottle came up full. The third, that had the wood cylinder inside, on which the cork rested, was driven in to a certain extent not whole, and this bottle came up also full, showing that at these great depths no corking however secure, will prevent the water from getting into an empty bottle; and when you send the bottle down filled and well corked, there is no danger of the liquor making its escape and being filled with another; so that the sailor must have drank the wine first, and sent the empty bottle down afterwards.

Another interesting experiment was tried to test the accuracy of Dr. Wallich's statements as regards living creatures at great depths in the ocean.

It is a generally received opinion that no living creature exists at the bottom of the Atlantic—that in these dark and silent regions of the great deep eternal silence and solitude reign, the bottom being a fine deposit of diatomates too minute for the naked eye of man.

To demonstrate this, some live carp, lobsters, eels, &c., were put in the cylinder; the same pressure (Atlantic depth) and the same time—one hour. The whole perished and came out quite stiff, thus proving that the general opinion on this subject is correct, and that Dr. Wallich's statement wants confirmation.—*Engineer*.

#### Oiling Wool by Machinery.

We have had an opportunity of inspecting an invention by Mr. Leach, of the firm of Messrs. Littles, Leach, and Co., Britannia Mills Leeds, which appears effectually to meet a requirement long felt in the woollen trade. In order to render wool more workable than in its native state, it is customary to oil it, a process which has the effect of causing the fibres to slip more readily and evenly and assures more perfect cording and regular yarn. Hitherto the oil has been distributed by hand from a syringe, watering can, or similar instrument; and the result has been that the oil has been diffused very irregularly, in some places the wool being saturated and clotted, and in others escaping altogether. This equality in the oiling of the wool produces similar inequality in the yarn, and the defects of the process are discernible in the various stages of manufacture. It is to obviate this difficulty that Mr. Leach's invention is intended. The invention has the advantage of being readily attached to willies, teasers, pluckers, burring, and other machines employed in the manufacture of wool, and is so constructed that it can distribute oil to any given extent, the machine measuring and distributing the liquid with unerring accuracy. As the wool passes along the feed-sheet of the preparing machine, the oil is, by means of the apparatus invented by Mr. Leach, scattered over it in the form of a spray or mist; and on examination afterwards we found that the wool was

thoroughly oiled, a fact which could be detected by feeling the wool; but the oil having been so evenly and accurately distributed, was not perceptible to the eye. The quantity of oil can be varied at pleasure; and, by a simple arrangement, it can be conveyed to the machine in pipes from the cask or cistern, thus saving much labour and preventing waste. An invention of so much importance to the woollen trade, notwithstanding that it is said to be slow in adopting improvements in machinery, cannot fail to be universally acceptable.—*Leeds Mercury*.

#### Best Time to Cut Timber.

A writer in the *Scientific American* says:—

"I have found the months of August, September and October to be the three best in the year to cut hard-wood timber. If cut in these months the timber is harder, more elastic and durable than if cut in winter months. I have, by weighing timber, found that of equal quality got out for joiners' tools, is much heavier when cut and got out in the above named months than in the winter and spring months, and it is not so liable to crack.

"I have walnut timber on hand which has been cut from one to ten years—with the bark on—which was designed for ax-helves and ox-bows, and not a worm is to be found therein. It was cut between the first of August and the first of November. I have other pieces of the same timber cut in the winter months, not two years old, and they are entirely destroyed, being full of powder-post and grub worms. Within the last ten or twelve years I have stated the result of my observation on, and experience of, cutting timber in different seasons of the year, to many of my neighbours and others; and all who have made the trial are satisfied that the above statement is correct."

#### Photo-lithography.

A communication has been read before the Academy of Sciences, Paris, from M. Meorvan, in which he describes his method for obtaining direct photographic impressions upon stone, which he can afterwards print off. He first gives the stone a coating, applied in the dark, of a varnish composed of albumen and bi-chromate of ammonia. Upon this he lays the right side of the image to be reproduced, whether it be on glass, canvas or paper, provided it be somewhat transparent. This done, he exposes the whole to the action of light, for a space of time varying between 30 seconds and 3 minutes, if in the sun; and between 10 and 25 minutes, if in the shade. He then takes off the original image, and washes his stone, first with soap and water, and then with pure water only, and immediately after inks it with the usual inking roller. The image is already fixed, for it begins to show itself in black on a white ground. He now applies gum water, lets the stone dry, which is done in a few minutes, and the operation is complete; copies may at once be struck off by the common lithographic process. The varnish has been fixed and rendered insoluble by the action of light wherever it could penetrate; but all the parts of the varnish protected by the dark portions of the image still retain their solubility, and are removed by the soap.