

men in the habit of using them." "I must again ask you, Mr. Builder, to be so kind as to tell the jury or me how you are certain that the plumb-rule was true; or in other words, let us know how you prove your plumb-rule?"

This was a poser.

"Now, Mr. Builder," continued the defendant's counsel, "you have come into court to make a claim against my client; you swear that the wall was built properly plumb, and that it did not tumble down from bad workmanship. I now ask you as a respectable builder, to just explain to the jury the method of practically constructing and proving a plumb-rule. You are no doubt aware that if a plumb-rule is not correct, the work that it is applied to will not be correct. I am ready to prove that it was not correct, that the wall was overhung. Geometrically speaking, it was out of perpendicular; consequently, I deny that you have any claim for payment."

A silence of some minutes reigned, and then the plaintiff made one or two ineffectual attempts at explanation, but got so confused that he completely broke down.

"It is needless, you see, your honor and gentlemen of the jury, for me to carry this case much further. I will simply conclude by saying, here is an instance of the deplorable consequences attending rash assertions and wrongful claims. Men are found to come forward to make a claim for what they have no right, or have forfeited, and are ready to fortify their unfair demands by swearing that they know practically what they do not know. Well, gentlemen of the jury, as the master-builder, when in the box, was unable to prove his plumb-rule, perhaps he will not take it amiss from a lawyer to tell him how to practically construct, and prove at the same time a plumb-rule, which may be depended upon for plumbing a straight wall, or any other description of perpendicular work.

"Take a piece of board a little more than the proper length, breadth, and thickness which you require. With a pair of compasses strike a circle on its face within a few inches of either end. Plane straight on the edge until the sides of the circle are touched—repeat on opposite edge. When this is done, your piece of board will be of parallel breadth. Then a line drawn through the centre, with a slit for the cord and an opening for the play of the 'bob,' will complete your plumb-rule. I am not an architect, gentlemen of the jury, but I believe that no practical architect, builder, or workman will say I have not given a practical method to prove a plumb-rule. One word more, gentlemen; I think when a master-builder comes into court and takes it upon himself to swear that his work was properly executed, he ought to be able to give us proof, when asked, of the workmanlike manner of its accomplishment. I now ask a verdict for my client.

The jury unanimously declared in favor of the defendant, the foreman saying that he himself and his fellow-jurors were of opinion that the wall was badly constructed and out of plumb, and that that was the reason of its fall.

It may be asked here, Was the counsel for the defendant technically correct in his method of proving a plumb-rule of any length? And it may be further asked, How many master-builders, and workmen too, are there at the present hour, who, if called upon suddenly, could practically demonstrate in proper language, the geometrical construction of a simple plumb-rule or straight-edge? However

astounding it may seem, I have come across a great many workmen who could not, without some thinking and groping, properly set out the egg oval opening, or "bob" hole in their plumb-rule. Archimedes is reported to have said that if a prop or position, and a lever were given to him, he would move the world. Technical knowledge is the prop, the position, and the lever; and without the ambition of the great Greek mathematician, it will enable a man, at some time or other, to lift himself in the world, and, morally and socially speaking lift up the world at the same time.—*Manufacturer and Builder.*

WASHING WOOL.

The reports going the rounds of the industrial and technological papers that bi-sulphide of carbon is successfully used in Belgium, and elsewhere, to free wool of its grease, are totally erroneous.

The facts of the case are, that the French chemist, Claudet, founded in 1858, at Elbeuf, an establishment for freeing wool from fat by this process. It was found, however, that the action was so powerful, and that the wool was so entirely deprived of all oily substances, that it became brittle, and could not withstand the operation of machine-spinning, the fibres breaking continually. After eighteen months, the concern broke up. Moisir & Co. founded in 1855, in the same place, a stock company for washing wool with benzine, with a capital of 350,000 francs. The fat and oil thus extracted from the wool was separated by distillation from the benzine, which could of course be used repeatedly, while the oil was sold to soap-makers and tanners. The opposition, however, of a class of workmen who lost by this improvement was so powerful, that the establishment wound up, after scarcely a year's existence, and was sold at auction for one-fifth its original cost. Then another establishment was founded at Verviers, Belgium, which again attempted to use bi-sulphite of carbon for the same purpose; but as this has since failed, no other attempt has been made either in France or Belgium.

HEMLOCK WOOD PROOF AGAINST RATS.

A correspondent of the *Philadelphia Medical and Surgical Reporter* says:

Being surrounded by these animals, I found it necessary to keep fruits, butter, cheese, and other articles in boxes made up of Hemlock (*Abies Canadensis*). In those boxes I could keep the most toothsome delicacies in the cellar with impunity, even though the box afforded free ventilation, which, in many cases, is highly necessary.

To test the matter still further, I made a box of dry hemlock boards, perforating each end of the box with a 7-8 inch circular hole. Into this box I put a large healthy rat, caught in a hemispherical wire trap, nailed it up securely, put it in a dark, quiet place, and awaited the result.

On inspection, at the end of twenty-four hours, I found he had scarcely more than touched the wood. I returned the box, leaving the rat to his cogitations, which horn of the dilemma to choose.

At the end of forty-eight hours, I made him another visit. He had evidently come to the conclu-