cabin, and, in default of other entrance, made his way down the chimney, which was just large enough to let him pass stern foremost. When down, he required no candle to find our bed, and got into the middle, for with his nose he would root us each way, and by appearance in the morning one would think that he had done considerable rooting in the night, for we were as black as sweeps. My father and mother were first up in the morning, and when we children turned out of our bed, one after another, it was discovered that Cubby had descended the chimney during the night, and so painted us that we were not recognizable in the morning. My father now made up his mind to dispose of him; so he put a chain about his neck, and made him fast to the ox cart, and started for Montreal, where he sold him for five dollars. That put a stop to Cubby's sweeping chimneys.

A. B. BROWNSON.

Digging Wells in Wet Sandy Soil

It is almost impossible to have good water from wells dug in sandy soil. The land is full of surface water, and even post holes are hardly three feet deep before some water is often found to be coming in. This is always surface water, and is rarely wholesome, and never good. Sand will filter water well enough, and leave it bright and clear for use, but nothing short of absolute clay will entirely disinfect it of its miasmatic tendency. Surface water is always more or less aguish in its effect, and hence it is injurious. Many think that because sand water is clear that it is good. Let any one test surface sand water with pure spring water from a deep clay well; put some of each in a tumbler, and place them both on a mantlepiece for two days, in a comparatively warm place, taste them both at intervals of about four hours, and you will soon see an immense difference. The sand water will be stale in four hours, and will throw up bubbles of sulphuretted hydrogen gas in eight hours, and will be utterly undrinkable in two days; while the deep clay well will furnish water quite good after that lapse of time. Now, this fact being decided, and also the fact being pretty well allowed that there exists a very great difficulty in digging down to clay through this super-stratum of running sand, I will proceed to describe the course I took to avoid the difficulty and obtain good water in such a locality.

Sand water almost always overlies a substratum of clay—in fact always, I may say—for if the clay were not there to retain (as in a pond) the water above, it would of course all percolate through and pass away until it did meet with clay or such a retentive soil as would prevent its passage. In digging a well of this sort you must first provide a curb of say 5 feet in diameter and about 8 feet long. This is made by sawing out of inch boards circular segments about three inches wide. To lay them out, you must set your trammel to 30 inches, and having obtained boards as wide as you can conveniently get, strike a number of segments of circles one within another, not longer than one-sixth of the circumference required, or about half the diameter of your curb. There must be twenty-four such pieces cut out. Six will form a circle five feet in diameter; six more will form a second circle. Place one on the other, and "break joint" with them, so as to avoid cross-grain timber coming together in both circles; then nail these two circles together. This repeat again, and you will have two strong double inch circles. Nail narrow inch boards well jointed and about 3 or 4 inches wide all round them, placing one circle within 12 inches of the top, and one within 12 inches of the bottom. Your curb is now complete, and having sharpened or levelled the lower edge, so as more easily to cut its way into the soft quicksand, you are now ready to dig. As soon as you find the sand troublesome by caving in, drop your curb into the hole you have dug, and continue to dig inside, throwing out the sand. Your curb will settle as you dig; and if well made, and the joints pretty good, you will have very little trouble with sand running in through them, nor will much water come in either. If your curb does not settle down as fast as you dig, put some bricks or other weight on the top, and it will then descend as fast as desired. When you have reached the depth of the first curb, if your the should be deeper, place another curb on but top of the first, and proceed as before; sandyou will rarely find this to be requisite, as one curb is almost always enough When you reach the clay, you must see that your curb settles fairly down all round lightly on the surface; and you must now commence and dig another well within the first, of 3 feet 4 inches in diameter. This will leave a shelf of about 10 inches all round within the outside curb. You will now continue to dig without fear of caving in or trouble from the quick sand which you have passed. You will of course go as deep as necessary, and until you reach water. When that is obtained altogether irrespective of the surface or sand water, you will commence to brick or stone up. Bricks, of course, are much the best, and make a far better well. When you reach the shelf of clay before described, you will probably have a good deal of the surface sand water in your well, and you must now proceed to stop it out. This is effected by constructing another curb of 3 feet 4 inches diameter, or the size of the lower part of the well. You lower this curb into the well, and rest it on the edge or shelf formerly spoken of, and now begin the careful engineering of stopping out the sand or surface water. You mix on the surface a quantity of the clay you have thrown out from below; make it into soft, stiff mud, almost mortar, but firmer; and throw it into the space of about 9 or 10 inches wide that exists between the two curbs, being careful to ram it down perfectly tight, especially at the bottom. When this space is quite full you may complete the bricking up on the inside of the curb to the top of the well, and finish in the usual way, being careful to raise the bricks somewhat higher than the surrounding surface, and also to bank up to the brick with the puddle or mortar before mentioned. When completed, dip out all the surface water, and start fair with a well into which none can by any possibility get in future. The extra cost of these curbs is not much, and the benefit certain; the lower part will never decay, but, on the contrary, last forever. There will be some slight taste of pine for a while if the water from the spring should rise above the curbing, but that will soon go off. I have seen wells so prepared that were dug forty years since, and are now as good as when first finished. The upper part of the curb may decay in the course of years, but the stratum of clay will always be between the sand walls and the bricking, and equally effective without the curb as with it when once in its place.

C.

Weight of Wood.—In the Carpenters' Hand-Book, we find the following given as the weights per cubic foot, respectively, of the woods named:—Beech, 40 pounds; Birch, 45 pounds; Cedar, 28 pounds, Hickory, 52 pounds; Ebony, 83 pounds; Yellow Pine, 38 pounds; Cork, 15 pounds; White Pine, 25 pounds; Lignum-Vitæ, 83 pounds.

Paint for Shingles.—Slake stone lime, by putting it into a tub to keep in the steam. When slaked, pass through a fine sieve, and to each six quarts of it add one quart of rock salt and one gallon water; boil and skim. To each five gallons of this add pulverized alum, one pound; copperas, one-half pound; potash, one-half pound; hard-wood ashes, sifted, four pounds. Apply with whitewash brush.

Durable and Cheap Wrought Nails.—We presume every farmer understands the usual method of making cut nails flexible by heating them: but if, instead of allowing them to cool in the air, they are thrown when red hot into linseed oil, it will prevent their rusting almost as long as though they were galvanized. Those who have occasion to use cut nails instead of wrought, should not forget this simple method of preventing rust.

Moisture in Woods.—According to Dr. Harsig's experiment, woods (trees) generally contain, during the winter months, an average of 50.7 per cent. of moisture; in March and April, about 46.9 per cent.; in May, June and July, about 48 per cent.; while up to the end of November the quantity of moisture increases but little. Air-dried wood (timber) contains from 20 to 25 per cent. of water, and never less than 10 per cent. Wood which, by being artificially dried, has been deprived of all moisture, is thereby entirely altered as regards its cohesive strength—it becomes brittle, loses its elasticity and flexibility.