

WOOD COLLECTIONS.

An interesting and useful collection for a farmer's boy to make is one of woods. The specimens should be of convenient size and length; three or four inches long will answer; they, like lumber, are best cut in winter, and should be placed under cover to season; they should be so cut as to show the different surfaces of the wood. The end of a limb of most of our Northern trees and shrubs when cut down shows a series

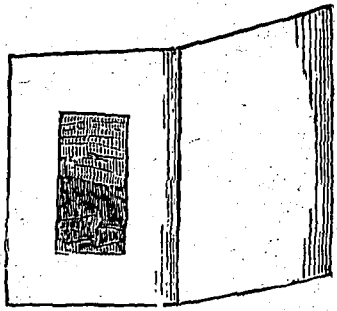


Fig. 1.

of rings, one of which is formed each year of growth. When cut lengthwise, what is called "the grain" of the wood is shown. A specimen of this kind shows the bark, and the character of the wood just beneath the bark. With a very fine and sharp saw, you can, after some practice, make cross-sections that will show the characteristic appearance of the "end of the wood," as workers in wood call it.

MOUNTING THE SECTIONS.

Sections of wood may be mounted for a collection in this method. The sections are made as thin as possible with a very fine saw. A leaf of card-board is folded in the centre, as in figure 1, and an oval opening is made in this, as in figure 2. Over this opening the section of wood is glued (figure 1), which shows on the right side, as in figure 2, upon this side a label is placed. The sheets are placed in a case to preserve them from injury and dust. With sections mounted in this manner, the structure of the wood can be readily examined with a simple microscope. Some of our shrubs have wood which, though small, is very fine-grained, and makes very pretty articles of turnery. I once saw a collection of woods in the form of "jack-straws." A gentleman of my acquaintance, skilled in whittling, made a beautiful set of jack-straws, each of a different kind of wood; he did not confine himself to native woods, and the collection was curious rather than instructive. Those of you who are old enough to work with a lathe should cut the stems of various shrubs and lay them by to season. The various Dog-woods, the Laurel (*Kalmia*), Holly, and others, make pretty material for handles to small tools and turned work.—*American Agriculturist*.

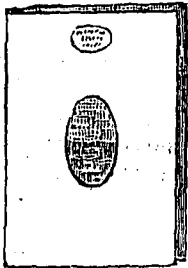


Fig. 2.

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NOVEL USES OF PAPER.

There are few things that cannot now be made out of paper. Its adaptability is astonishing, and the wildest speculations as to its future are excusable when we reflect upon the present uses of this material. As the delicate substance can be made to serve for steel or iron, it is not difficult to understand how paper is for many purposes now taking the place of wood. Paper of different thicknesses, and pasteboard made of white moss have already been shown, the latter even in sheets three-quarters of an inch thick. It is as hard as wood, and can be easily painted and polished. It has all the good qualities, but none of the defects of wood. The pasteboard can consequently be used for door and window frames, architectural ornaments, and all kinds of furniture.

Paper from strong fibres, such as linen, can, in fact, be compressed into a substance so hard that it almost cannot be scratched. As houses have been made of this novel building material, so almost everything requisite to complete and furnish a residence has since been manufactured of paper. After the Breslau fireproof chimney, it is quite possible, for instance, that cooking or heating stoves can be made of similar ma-

terials. These paper stoves are annealed—that is, painted over with a composition which becomes part of the paper, and is fireproof. It is said to be impossible to burn them out, and they are much cheaper than iron stoves. Bath-tubs and pots are made in the same manner by compressing the paper made of linen fibres, and annealing. The tubs, we are assured, will last for ever, and never leak. Placed on the fire, they will not burn up; and it is almost impossible to break or injure them. Our rooms can be floored with this wonderfully accommodating material. It may here be mentioned that cracks in floors, around the skirting-board or other parts of a room, may be neatly and permanently filled by thoroughly soaking newspapers in paste made of one pound of flour, three quarts of water, and a tablespoonful of alum thoroughly boiled and mixed. The mixture will be about as thick as putty, and may be forced into the cracks with a case-knife. It will harden like papier-mache.

Drawing-rooms can be set off by handsome pianos manufactured from paper—a French invention. A beautiful musical instrument of this kind has lately been an object of great curiosity to the connoisseurs and musical savants of Paris. The entire case is made of compressed paper, to which is given a hard surface and a cream-white brilliant polish. The legs and sides are ornamented with arabesques and floral designs. The exterior and as much of the interior as can be seen when the instrument is open, are covered with wreaths and medallions painted in miniature by some of the leading artists of Paris. The tone of this instrument is said to be of excellent quality, though not loud. The broken, alternating character of piano music is replaced by a rich, full, continuous roll of sound, resembling somewhat that of the organ. Only two of these instruments have been made. One is still on exhibition; the other has been sold to the Duke of Devonshire.

Paper plates, introduced by an ingenious restaurateur of Berlin, can now be used. Bread and butter, cakes, and similar articles were served by him on a pretty papier-mache plate, having a border in relief, and resembling porcelain. They are cheap and light, and not liable to be broken.

Even knives and forks may now, we are told, be made of compressed paper. They can be used for any practical purpose, like steel ones. The household cutlery, it may be here mentioned, can be well preserved if wrapped up in paper prepared from ozokerit. This waxed paper is largely used in New York for wrapping hardware. Candles, fish and butter, and a score of other articles, are also thus wrapped, and saved from injury through damp.

Our household may also be supplied with the paper bottles now made on a large scale in Germany and Austria. The paper is coated on both sides with a mixture of blood-albumen, lime, and alum. After drying, the leaves are placed over each other, and then put into heated moulds. These bottles are made in two pieces, which are afterward joined. Neither water nor alcohol has any action on such bottles, and it is thought that they will prove of great value to travellers, as there is little fear of breakage.

Our sleeping apartments can be provided with paper bed-clothes, curtains and bedsteads. The latter pieces of furniture look beautiful, and are declared to be everlasting. They are made of slips of paper, instead of paper rings, as in the case of railway wheels before mentioned in this paper, which wheels can now run on rails of the same material, some new particulars of which have come to hand. These, it is stated, can be produced by an American company in Russia—at a third of the cost of steel rails; and are extremely durable. Being much lighter

than metal, these rails may be carried and laid at far less cost, and they will doubtless diminish oscillation and wear and tear of rolling-stock. They are to be made of greater lengths than ordinary rails, and therefore will have fewer joints. The success or failure of the project seems simply a question of durability.—*Exchange*.

SAGACITY OF A TERRIER.

As the steamer approached a particular place, a dog, apparently a terrier, was seen to issue from a boat used by the salmon fishermen, and wade into the water till nothing was seen but its head. It, however, immediately returned with the end of the rope, to which the net floats are fixed, which the dog carried a considerable distance upon the ground, where it left it high and dry. How valuable the dog may be made in thus helping fishermen!—*From "Country Life," by E. Jesse, Esq.*

DEFINITION OF BIBLE TERMS.

- A day's journey was about twenty-three and one-fifth miles.
- A Sabbath day's journey was about an English mile.
- Ezekiel's reed was nearly eleven feet.
- A cubit was nearly twenty-two inches.
- A hand's breadth is equal to three and five-eighths inches.
- A finger's breadth is equal to one inch.
- A shekel of silver was about fifty cents.
- A shokel of gold was \$8.
- A talent of silver was \$538.30.
- A talent of gold was \$13,809.
- A piece of silver, or a penny, was thirteen cents.
- A farthing was three cents.
- A mite was less than a quarter of a cent.
- A gerah was one cent.
- An ephah or bath contains seven gallons and five pints.
- A hin was one gallon and two pints.
- A firkin was seven pints.

A homer was six pints.
A cub was three pints.

PHRASES THE GIRLS MUST ESCHIEW.

The list of words, phrases and expressions to be avoided by young ladies of Wellesley College includes the following: "I guess so," for I suppose so, or I think so.

"Fix things," for arrange things, or prepare things.

The use of "ride" and "drive" interchangeably.

"Real good" or "real nice" for very good or really nice.

"I have studied some," for studied somewhat, or "I have not studied any," for not studied at all.

"Not as I know," for not that I know.

"Try an experiment," for make an experiment.

"Had rather," for would rather, and "had better," for would better.

"Right away," for immediately or now.

"Well posted," for well informed.

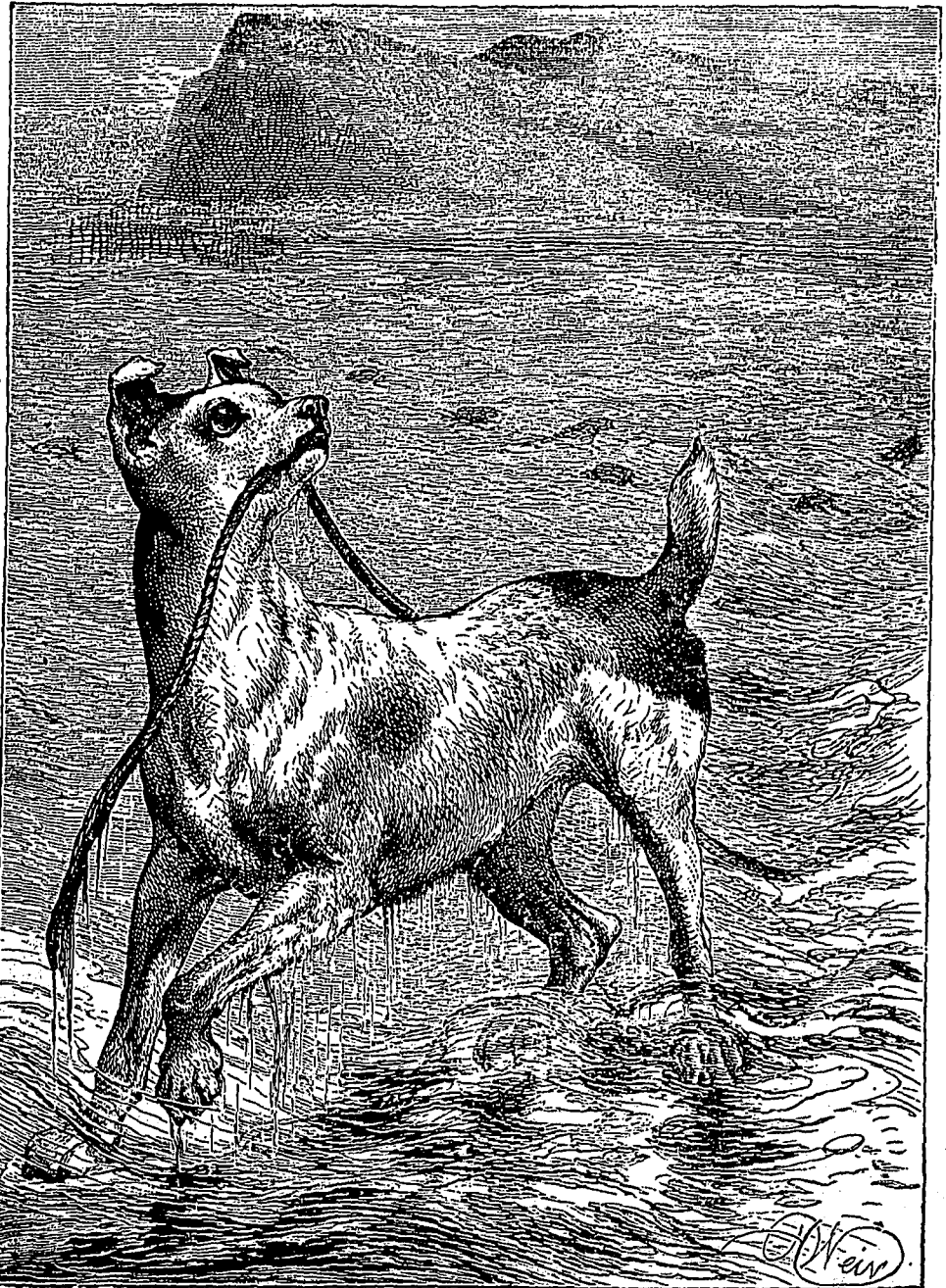
"Try and do," for try to do, or "try and go," for try to go.

"It looks good enough," for it looks well enough, or "does it look good enough?" for does it look well enough?

"Somebody else's" for somebody's else. —*Philadelphia Times*.

"THE LONGER I LIVE, the more I am certain that the great difference between men, between the feeble and the powerful, the great and the insignificant, is energy—invincible determination, a purpose once fixed, and then death or victory."—*Sir Powell Buxton*.

EVERY SORROW, every smart
That the eternal Father's heart
Hath appointed me of yore,
Or hath yet for me in store
As my life flows on, I'll take
Calmly, gladly, for his sake.



A SAGACIOUS TERRIER.