

through, leaving the fiber on the meshes. This first drying is usually hastened by various devices and the moist web is carried between rolls which are covered with woolen felt and then taken from the wire cloth on endless woolen felts which pass it between rolls and then to dryers. These are large metal cylinders heated by steam. The paper has now acquired considerable strength. The water has been evaporated and the heated cylinders complete the drying process. The paper is then given a smooth surface by the calender rolls, which are smooth-faced, heavy metal rollers. Finally the finished paper is reeled off in rolls and cut into sheets of the desired size. A large paper mill will make 250 tons of finished paper a day. The most modern machinery turns out a continuous web of finished paper at the rate of 500 feet a minute. The raw material of wood pulp is spruce, poplar, and in smaller quantities various other woods are employed. Wood pulp has to a great extent superseded the use of rags, and entirely so in the manufacture of news paper. The blocks of wood are pressed hydraulically against the edge of a rapidly revolving grindstone, and by attrition reduced to a mushy consistency.

There is also a chemical process of making wood pulp which is largely used. The merchantable shape of the fiber differs somewhat. Ground wood pulp is ordinarily sold in folded sheets only partially dry, and is, therefore, under common conditions, only suitable for use near the locality of its manufacture, its weight being so increased by the water as to preclude the profitable transportation of such a low-priced product. There are 763 paper-making plants in the United States and the total capital is \$167,507,713, giving employment to 64,186 persons. The total cost of the materials used was \$70,530,236, in 1900. The total value of the products was \$127,326,162, and the total power required for running the plants was 764,847 horse power.—From the Scientific American's Special Number on "Modern Aids to Printing."

The Right Way.

Dr. Norman Macleod lost his way as he was going to a place called Daffin, to christen an infant, when he met a herd boy and the following conversation took place:

"There's gaun to be a fine shine at the Daffin th' meet."

"Aye, what's going to be up at the Daffin?"

"The meenister's cumin' to baptise the wean. I've got the cookies i' th' bag."

Norman did not tell the lad that he himself was "the meenister" in question, but said, "Noo, how d' ye get a livin'?"

"Oh, I'm just a herd laddie. I split the wood, and carry the water, and bring the kye hame, and do just what I'm telt."

There was a moment's silence. Then the boy, turning to Norman, said, with a mark of interrogation in each eye, "Hoo d' ye get a livin'?"

"Well, that's a fair question; I asked ye how ye got a livin', and ye telt me; now I'll telt ye how I get a livin'." I get a livin' by tellin' auld folk, and young folk, and little folk like ye the way to heaven."

That little boy stood still and simply screamed with laughter. His laughter was uncontrollable. He was doubled up with laughter. When the tumult of merriment was over, he said to Norman, "That's a good 'un." Another burst of laughter, and then this profound inquiry, "Hoo can ye tell the way t' hiven whee ye dinna ken th' way t' th' Daffin?"

Take Time to Read.

Pause, O youth or maiden, before you accustom your lips to this fatal formula: "I have no time to read." You have all the time which, for you, exists, and it is abundant. What are you doing with it—with your leisure? Mainly gossiping. Our modern malady is gregariousness. We must be in company chattering.

We are becoming in this matter very like the Athenians, but worse. Asked if he read a book, a man usually says, "No, I have no time for books, but I have read a review of it in The Literary Ragbag?" It is not criticism. It contains a photograph of the author, a description of his 'early struggles,' an estimate of his income, an account of his home, wife, dogs and cats, and a comment on his favorite amusements. Why has every one time to read all these futilities about the writers of books, while not one person in a thousand has time to read the books of the writers?

No more time is needed to read masterpieces than to read the last new novel. It is not time, but "the mind to it," that is lacking. Do not dawdle and put off, but begin upon something good at once. I may freely admit that the study of Bacon and Mill requires seclusion and earnest application, but many good books, say Boswell's "Life of Johnson," or the Doctor's own "Lives of the Poets," are at least as easy reading as the new novel, and much more diverting than most new novels. You make acquaintance with such wits and charming characters as you do not, unless you are very fortunate meet every day.—Andrew Lang.

An Insect Thermometer.

On an autumn evening, when the crickets are out enjoying life too, it is very interesting to be able to tell the temperature of the air by the number of chirps the cricket makes per minute.

It seems that the rate of chirps is affected by the temperature, and the exact relation of the temperature to the number of chirps has been estimated. With a little care in counting, one soon becomes expert enough to tell the temperature within one or two degrees Fahrenheit.

One meets with many discouragements at first as he tries hard to count every chirp; the cricket stops before the minute is up; other insects' notes drown out the crickets; the noise of passing vehicles, etc., are very apt to interrupt at the critical moment of counting. But a little patience will easily overcome such difficulties.

When one has the average number of chirps per minute, take one-fourth of that number, and add forty to that; the result will be the temperature within a degree or two of the actual temperature as read from a thermometer hung out of doors.

Another experiment is to capture a cricket and take him into the house, and see how much faster he chirps when he is warm.

To count the chirps per minute, taking one-fourth of that number and adding forty to it may seem a little complicated, but it really is very simple, and is like the game, "Think of a number and double it," put to an interesting purpose.—St. Nicholas.

A Spider's Instinct.

A correspondent sends us a remarkable instance of adaptation of instinct in a trapdoor spider. Says the writer: "A friend of mine noticed near his camp a trapdoor spider run in front of him and pop into his hole,

HEALTH FOR BABY IN WINTER.

Winter is coming on when baby will of necessity be confined to the house a great deal. Unless his constitution is rugged the close confinement will soon tell on his health. An occasional dose of Baby's Own Tablets will act as a safeguard during the winter months. If begun before the winter arrives mothers can be reasonably certain that their little ones will retain good health during the months of indoor confinement. Baby's Own Tablets cure indigestion, sweeten the stomach, break up colds, prevent croup, regulate the bowels and keep baby healthy and happy. Concerning the Tablets, Mrs. G. G. Sawyer, Clarenceville, Que., says: "I have used Baby's Own Tablets for my little girl and find that they are the very best medicine that I can give her."

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pulling the 'lid' down as it disappeared. The lid seemed so neat and perfect a circle that the man stopped to examine it, and found, to his astonishment, that it was a sixpence. There was nothing but silk thread covering the top of the coin, but underneath mud and silk thread were coated on and shaped convex (as usual). The coin had probably been swept out of the tent with rubbish."

Commenting on this, a contributor to Nature says: "As is well known, the doors of trapdoor spiders' burrows are typically made of flattened pellets of earth, stuck together with silk or other adhesive material. The unique behavior of the spider in question showed no little discrimination on her part touching the suitability as to size, shape and weight of the object selected to fulfill the purpose for which the sixpence was used."—Sydney Bulletin.

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