Inventions and Appliances

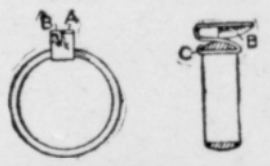
WOODMAN'S SAW GUIDE.

THIS saw guide, the invention of a lumberman of the Northwest, enables one man to do the work for which two have been required. The big "two-man saw" which is ordinarily used has its limitations. It will go through an ordinary tree trunk much more rapidly than an ax, but on account of the position of the tree it is difficult to guide the saw

through the wood in making a level cut. The guide shown here assists in holding the saw in a level position. It rests on a step which is cut out of the trunk with a few chops of the ax, and then it is very readily adjusted for work. The handle on the business end of the saw is turned at an angle with the blade, so that its manipulation is further facilitated.

STRING-CUTTING FINGER RING.

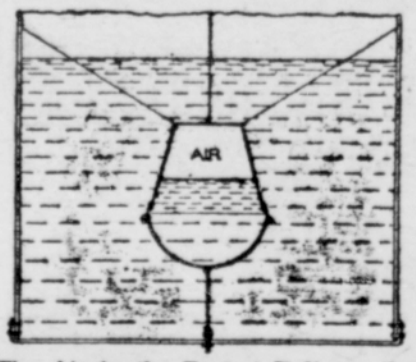
THIS attachment can be easily made and will pay for the trouble of making in the time it saves the clerk or wrapper. The knife and holder is cut from a strip of sheet steel, about ¼ inch wide, its length depending on the width of the ring. The steel is cut almost half-



way through, as shown at A, then fastened in a vise and bent down and sharpened to form the blade. The other part of the steel is bent as shown and attached to the ring with the end C, or it may be soldered, as desired. The corners and edges should be rounded with a file to prevent chafing the finger.

PROTECTING TANKS FROM FREEZING WATER.

A GREAT MANY water tanks are ruined each year by the expansion of the water when freezing in severe weather. A simple device to prevent this is to procure a good-sized copped bucket and suspend it in the water in an inverted position, allowing air to remain in the bucket. When the water freezes the extra pressure that would otherwise be exerted on the walls of the



The Air in the Bucket Relieves the Pressure Caused by the Freezing Water.

tank, instead acts on the air in the bucket which is compressed, and thus the tank is relieved. An iron or tin bucket would soon rust out in the water and for this reason it is best to use a copper bucket.

NEW INVENTIONS.

Pan for Draining Dishes—This pan is designed to be set up in a sink or on a table in such a way that the dishes will drain into the dish pan, to which the device is readily attached. The open end has a wire clip which fits over the edge of the dish pan.

Diving apparatus—An elaborate diving apparatus is designed mainly for sponge fishing. It has three bay windows provided with glass-covered portholes through which the bottom of the sea may be examined, and a water-tight chamber through which the diver leaves and enters the main casing. By means of a rubber hand-and-arm casing projecting downward from each bay window, sponges may be gathered and placed in a small receptacle below the main floor while the diver remains within the casing. This apparatus is tilted from side to side by the occupant by means of weights movable on a circular track.

Holder for shaving soap—This device, designed for convenience in shaving, provides a handle, which is easily attached to a cylindrical cake of soap. The cap or pan into which the soap fits is provided with a pair of perforations on one side. The handle consists of a loop of wire, and the sharp ends of the wire are inserted through the perforations and into the soap.

Hatpin with safety point—The body of this hatpin consists of a tube, in one end of which is a sliding wire tipped with a sharp point. The wire is made as a spring, and when drawn out, takes the position shown, with the point folded back against the tubular portion. When the hatpin is to be removed, the wire is easily straightened with the fingers.

Telephone outfit for the deaf—This telephone outfit, when not in use, has the appearance of an ordinary hand bag. In one of the pockets is a battery and telephone transmitter, the latter having its receiving face attached to the perforated wall of the bag so that sounds will be received through the perforations.

Combined bed and cabinet—In city apartments, where adequate closet room is often lacking, a bed in which the head is made in the form of a cabinet, should prove a great convenience. The cabinet portion has two compartments, the lower being reached through a side door, and the upper through an opening at the top, which is closed by a lid operating on sliding standards.

Health and Sanitation

OLD SOL—FAMILY PHYSICIAN.

THERE has been a very general belief since ancient times in the curative power of sunshine. But until recently this was rather a vague impression than a fact that could be demonstrated practically, and could not be explained theoretically. At the present time, however, the sun's curative power is being demonstrated every day, and this power can now be explained on theoretical grounds. Certain forms of tuberculosis, running sores, and "even the hunchback characteristic of Pott's disease" frequently yield to the sun-ray treatment—properly applied. For, curiously enough, there is a proper dosage of sunshine just as there is with remedies that come in pasteboard boxes or bottles.

The specific element responsible for the curative effect is the ultra-violet ray, which is a relative of the X-ray, and one of the younger members of the prolific ray family. This ray may be manufactured expensively with man-made machinery, but is supplied free by the sun's direct radiations.

The Swiss scientist, Dr. Rollier, has recently reported 951 complete cures out of 1,100 cases of surgical tuberculosis treated at Leysin, Switzerland; and still more recently Dr. Louis Camous has recorded a large number of cures by heliotherapy on the Mediterranean coast. And experiments that are being carried on at the present time demonstrate that this form of treatment may be used anywhere, regardless of altitude or climate.

An example of the kinds of conditions treated, and the method of treating them, is shown by a report of one of M. Corneloup's cases of tubercular peritonitis, which is a condition peculiarly resistant to ordinary therapeutic measures. The patient in this instance was a girl of 20 in such an advanced stage of disease that she was incapable of the slightest exertion. The treatment consisted in placing her in a reclining chair for one hour in the morning and again in the afternoon with the abdomen exposed, the other parts of the body and the face being protected from the sunlight by clothing and a screen. Improvement in her condition was apparent at once, and in four months' time she was completely cured. Yet hitherto her disease had resisted all treatment.

In giving these sun-ray treatments it is found that many patients are unable to bear more than ten-minute exposures at first; and in such cases it is necessary to increase the dose gradually until the full dosage of perhaps half an hour, or an hour, is tolerated. The time limit of tolerance is indicated by profuse sweating and a painful, burning sensation of the exposed part.

One of the most interesting methods of applying heliotherapy is that used in cases of Pott's disease, the tuberculous curvature of the spine which results in permanent hunchback deformity. In treating this condition the pressure on the diseased bones is relieved by a plaster jacket made to envelop the body and neck, but having the plaster cut away over the spine and abdomen so that the sun's rays may be brought into direct contact with the parts. This is found advantageous because in the children the vertebrae are almost as near the front as the back, so that treatment may be administered through the abdomen as well as along the spine.

NO USE FOR RADIUM.

INFORMATION comes from Berlin that the great German specialists have abandoned the use of radium for the treatment of cancer. So another of the announced "cures" is laid aside after a long period of experiment upon human beings. How many hopes have been blasted, how many lives sacrificed since radium was announced as the cure for this obscure disease no one can estimate. It has in some cases seemed to effect a cure, but these cases have been external and in the early stage of the disease, when the same end could have been accomplished by a surgical operation. How permanent such cures are it is too early to say, but it is to be hoped that the disease has been baffled in every such case. The German surgeons say that such apparent cures are more apparent than real, as in many cases the disease makes its appearance again in some other part of the body. The conclusion would be, therefore, that cancer is a blood disease and must be fought through the blood. The German surgeons have turned from radium back to the use of Roentgen rays, and believe they have better results from this treatment. These rays have a deeper penetration and a disintegrating effect upon the tissues of the body. After this disintegration the healing properties of the blood effect the cure. This would seem to be another proof that the cure must be ultimately sought through the blood.