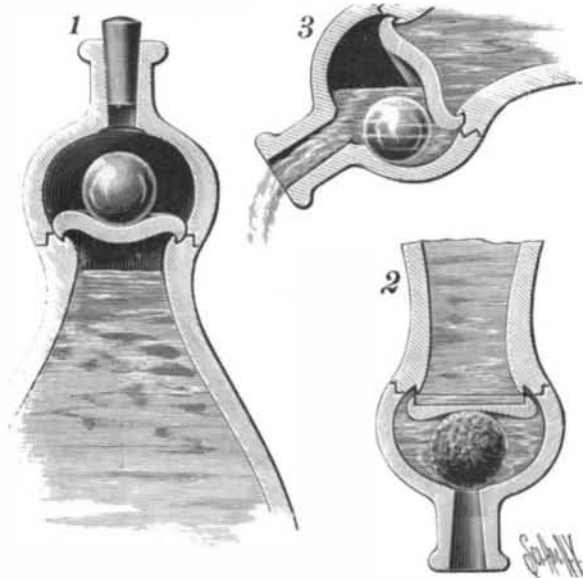


**A BOTTLE STOPPER AND MEASURING DEVICE.**

A valve stopper designed to prevent the refilling of a bottle after it has been emptied, and one with which the contents of the bottle may be discharged in measured quantities, is shown in the accompanying illustration. The improvement has been patented by Cornelius E. Wyckoff, of No. 365 State Street, Brooklyn, N. Y. Fig. 1 represents the stopper in a bottle, the latter being in upright position; Fig. 2 shows the bottle inverted, its contents then filling a measuring space, and Fig. 3 shows the position of the parts as the measured quantity is being discharged. The cap piece is secured on the bottle by cementing or in other



WYCKOFF'S BOTTLE STOPPER.

desired manner, after the bottle has been filled, the interior wall of the cap piece being substantially hemispherical, and having a contracted outlet to be fitted by a cork. About where the cap piece is fitted on the bottle is an annular groove forming a seat for an annular flange of a plate valve, on which rests a spherical body serving as a valve stopper for the inverted bottle, as shown in Fig. 2, while also allowing the plate valve to fall sufficiently away from its seat for the passage of material into the measuring device. When the bottle is tilted to the position shown in Fig. 3, the spherical body rolls to the lower side and forces the plate valve to its seat, thus preventing a further discharge of the contents of the bottle to the interior of the cap, while permitting that which is in the cap to be poured out. Where a continuous flow is desired from an inverted bottle, the spherical body is made with interstices or hemispherical depressions in its surface.

**ISAFJORD, ICELAND.**

We present an engraving, for which we are indebted to L'Illustration, of Isafjord, Iceland, which is one of the principal seats of the whalebone industry. The scenery here is magnificent, the country presenting the appearance of the fjords of Norway and Sweden. The snow remains on the mountains until the middle of summer. Tourists have had some thrilling adventures in climbing the mountains back of the little village. The bay is capable of holding the largest navy in the world. There are three whalebone fisheries near this place.

Whalebone has become very scarce and it now commands a large price. The name whalebone, under which the baleen plates of the right whale are popularly known, is a misnomer and the trade name of whale fin is equally inaccurate. Of the three kinds of whalebone which are found in commerce, that obtained from the Greenland whale, *Balaena mysticetus*, is the most valuable, and was one of the great staples of northern countries when the whale fishery was a large industry. To prepare whalebone for the market, the blades or plates are boiled for about twelve hours till the substance is quite soft. In this state it can be cut into narrow strips or into small filaments, according



ISAFJORD ICELAND.

to the use to which it is to be put. Whalebone possesses many unique properties which render it of great value. It is light, tough, flexible, and fibrous. The fibers run parallel with each other without intertwisting. The use of whalebone dates from 1808, when Samuel Crackles patented its use for brush making. Various special machines have since been devised for cutting the material into filaments. Whalebone was formerly used in the manufacture of umbrellas, but steel has now taken its place for this purpose. Whalebone is now principally used by dressmakers, milliners, and brushmakers.

**Carpet Moths and Beetles.**

In last week's SCIENTIFIC AMERICAN directions were given for preserving clothing and furs from the depredation of moths. We now copy from the Carpet and Upholstery Trade Review directions for protecting carpets and upholstery from moths and beetles. In the good old days, when camphor was sold at a reasonable price, it was the first resource of most housekeepers in their struggles against these villainous vermin, but in view of the extremely high cost of camphor nowadays and the ridiculously low price of carpets, it seems advisable to select some less precious article as a protection against those insects whose appetites work such havoc among woolen floor coverings. Moreover, camphor, however liberally used, is not regarded as a certain protection. Among the substitutes for camphor, which are less expensive and more efficacious, are: Benzine, corrosive sublimate, kerosene oil and carbolic acid. It is said that corrosive sublimate is the only sure defense against the buffalo carpet beetle. In utilizing this drug, take a wide mouthed earthen jar, pour into it two quarts of boiling water and dissolve in this one teaspoonful of corrosive sublimate. As the solution is poisonous, the jar should be plainly labeled and kept carefully covered. When possible it should be used out of doors, and applied with a small whisk brush kept for this purpose only. Gloves should be worn in using it, and care taken to prevent any of it touching the face or eyes. In applying it to rugs or carpets the best method is to hang them over a line, then dip the whisk into the liquid, shaking it nearly all off against the inside of the jar; then carefully brush the rug over both the right and wrong sides, without using enough of the solution to make the fabric wet. It is sufficient to slightly dampen the outside. The liquid will not injure any textile fabric, however delicate.

Benzine or kerosene oil will always kill the insects, if it can be brought into contact with them, and the mere odor of the benzine will kill the larvæ. When it is evident that a house has become infested, the carpets should be taken up and all the cracks and crevices in the floor and under the baseboard filled with benzine, a hand atomizer being used for the purpose. The carpets should also be beaten and then lightly sprayed with benzine. The cracks should then be filled with a mixture of plaster of Paris and water, which will soon set and form a hard substance which the insects cannot enter. In the case of a stock of carpets the benzine spray alone is generally sufficient to kill the insects. The benzine evaporates quickly and leaves no odor, but one should remember that it is very

inflammable and that no light should be brought near it.

**A NEW BICYCLE BELL.**

The illustration represents a bell for use with bicycles, the bell being rung with a continuous electric alarm effect by simply pressing on a lever on the handle bar. The improvement has been patented by Harry B. Breckwedel, of No. 315 West Forty-eighth Street, New York City. In clamps which may be readily secured to the rear braces of any bicycle is journaled a spring-pressed shaft carrying a swinging bell frame, the springs normally holding the outer end



BRECKWEDEL'S BICYCLE BELL.

of the bell frame up from the tire, as indicated by the dotted lines. The bell frame carries, at its outer end, rubberfaced rollers adapted to engage the tire, and on the shaft to which the rollers are secured is a stud adapted to be engaged at each revolution of the rollers, by an arm projecting forward from the hammer, as shown in the small figure, a spring holding the hammer normally out of operative position. From the other end of the bell frame a fine steel wire extends through guides to a lever pivoted on the handle bar, where it may be conveniently engaged by the hand of the user. By pressing with the thumb upon this lever, the hands being in the ordinary position on the handle bar, the outer end of the bell frame is depressed and its wheels are consequently rotated by the tire of the bicycle, each revolution of the small wheels causing a blow to be struck upon the bell and the ringing being automatic as long as the pressure is continued.

**Lantern Slides.**

A method of making slides for the lantern other than in the ordinary way is described by Dwight Lathrop Elmendorf, who says that, finding the lantern slide was a very useful piece of apparatus in teaching, he cast about for some method of quickly and inexpensively making a slide. Making a transfer one day, the idea was suggested that it might be used on glass.

So he placed on a suitable glass a piece of black carbon transfer paper, a drawing being placed on the top and traced upon the glass. When thrown upon the screen the effect was like a charcoal drawing, and answered fully the experimenter's hopes. Unless it is desired to specially preserve the slide, no cover glasses are necessary. He points out that old plates—ordinary or for slides—may be fixed, then washed, and the designs drawn upon them for colored subjects. The method is so handy that it may be practiced before a class.—Photography.

OBSERVATIONS made on the pendulum of the Paris Observatory, which is kept ninety feet under ground, with a temperature that varies one-hundredth part of a degree at most during the year, show that it is not quite proof against the variations of atmospheric pressure. It makes an error of one-third of an oscillation in twelve million, and it is proposed to remedy this error.