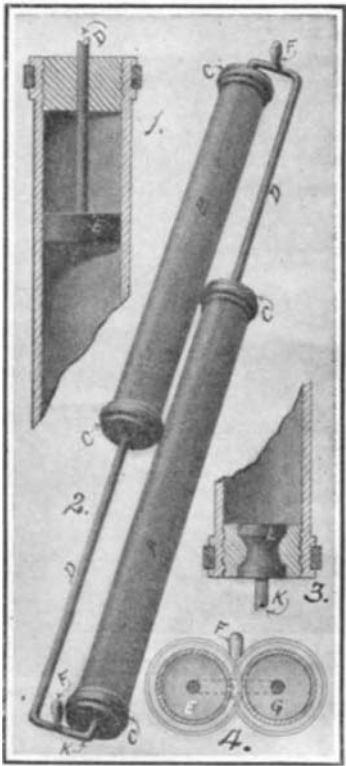


**AN IMPROVED PARALLEL RULER.**

In the accompanying engraving we illustrate an improved drafting instrument, consisting of a ruler adapted for parallel movement over the paper, thus facilitating the drawing of parallel lines. Mariners will also find the ruler useful when laying out a course on a chart, for comparing directions with the compass. The instrument is of the roller type, but is

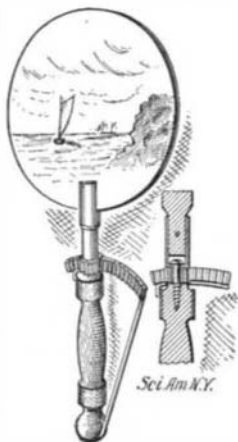
an improvement on previous inventions along this line, in that it may be extended to any desired length within wide limits, and in that it is made of transparent material, so that the lines of the map or drawing directly under the ruler will be visible. The instrument consists of two glass tubes, *A* and *B*, each provided with rubber bands *C* at opposite ends, adapted to bear against the chart when in use, to prevent slipping of the ruler. A rod *D* is secured to the outer end of the tube *A*, and enters the tube *B*, terminating in a piston *E*. Another rod *D*, secured to the tube *B*, enters the tube *A*, and terminates

**IMPROVED PARALLEL RULER.**

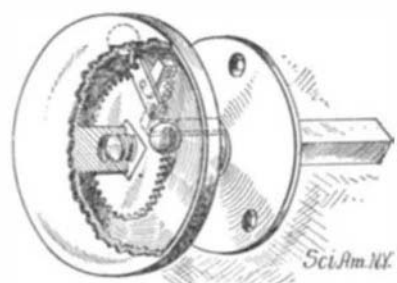
in a piston *G*. In this way the two tubes are connected, and yet are free to move axially so as to extend the ruler, and at the same time maintain the parallelism of the tubes. Two handles *F* are secured to the rods *D* to assist in moving the ruler over the paper and in extending it to the desired length. The method of securing the rod to the tubes is shown in Fig. 3. The end *K* of the rod is formed with a head that fits into a block, which is screwed into the end of the tube. The glass tubes are preferably graduated to indicate miles, kilometers, etc., and the scale can be read through the tube when the latter is rolled to position on the chart. The inventor of this improved ruler is I. Myhre Hofstad, of Ketchikan Avenue, Wrangell, Alaska.

**ODDITIES IN INVENTIONS.**

**A NOVEL FAN.**—In the accompanying illustration we show an improved fan, which may be operated by hand to rotate alternately in opposite directions. The fan is supported on a spindle carrying a pinion, which meshes with a toothed segment. The latter is secured to the end of a spring attached to the handle of the fan. When the spring is depressed the fan will be rotated in one direction, and as soon as it is released the tension of the spring will withdraw the rack, causing the fan to turn in the opposite direction. Thus a person may fan himself without the tiresome movement of his arm or hand by periodically depressing the spring with his thumb.

**A NOVEL FAN.**

**COMBINED DOOR KNOB AND BELL.**—A Western inventor has recently introduced a combination door knob and door bell, which serves to give warning of the entrance of any one, and thus minimizes the danger from sneak thieves. The door knob is hollow and is

**COMBINED DOOR KNOB AND BELL.**

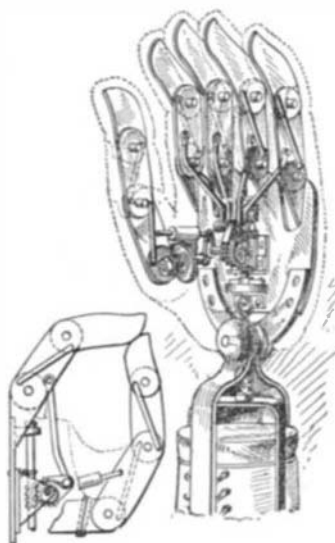
ever the spindle is turned, thus giving the alarm. The main advantages of the invention are that it does not detract from the appearance of the door as

would a bell connected up in the usual manner, and that it is in a measure concealed, so that it will act as a trap for any one bent on mischief.

**A COMBINED PEPPER AND SALT SHAKER.**—In the salt shaker here illustrated, the salt is prevented from caking and is kept loosened without having to be dried or heated and without requiring the addition of foreign materials, such, for example, as corn starch. This result is obtained by using a combination pepper and salt holder, the former being provided with a socket or recess, into which the upper part of the salt shaker fits. In this manner the perforated top of the salt shaker is kept closed, and moisture is prevented from entering. When it is desired to use salt the pepper holder must be removed, but when it is desired to use pepper the pepper and salt holders may be used together. A washer is fitted into the socket of the pepper shaker, and this fits snugly over the mouth of the salt shaker, to prevent the salt from shaking out when the two shakers are used together.

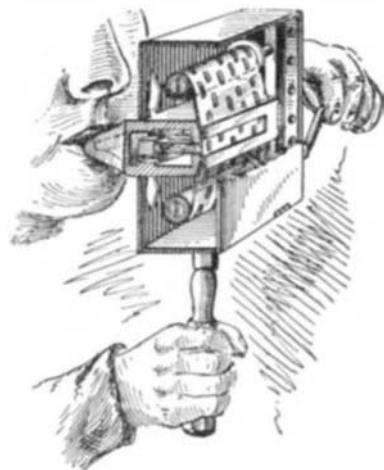
**COMBINED PEPPER AND SALT SHAKER.**

**AN ARTIFICIAL HAND.**—A recent invention provides a hand fitted with jointed fingers and thumbs, which are connected by rods to a mechanism in the center of the hand. This mechanism may be operated by turning the forearm, to draw the fingers into closed position. The mechanism is carried in a bracket supported by a sleeve laced to the arm above the elbow, while the operating shaft of the mechanism is connected with a sleeve laced to the forearm, so that by moving the forearm relative to the upper part of the arm the mechanism is operated. The object of the invention is to provide a mechanical hand that will be able to hold an ax or other implement as tightly as would the

**AN ARTIFICIAL HAND.**

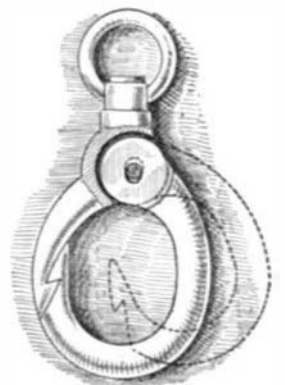
natural hand, so that it can be used for chopping wood or for other manual labor. The fingers are made of aluminium or wood, so that they will be light and yet very strong. The mechanism is simple, and yet provides a powerful grip.

**NOVEL REED INSTRUMENT.**—By a recent improvement, an inventor of Newark, N. J., provides a reed instrument of the mouth-harmonica type, which is easily worked by a little wind power and a slight call on manual effort. It is operated on the same principle as a hand organ using a music roll to select the notes, but wind power is furnished by the mouth instead of by bellows. This musical instrument is mounted in a box, and held in playing position before the lips by means of a vertical handle, while a crank handle on the left side turns the drums, or rollers, upon which the music sheets are wound. During the turning, the player blows into and draws from a wind chest, the latter being fitted with valves which provide a continuous exhaust. As the note sheet having the usual perforations passes over the tracker-board, whenever a perforation of this sheet registers with an opening of the board, then a corresponding note is sounded, whether the operator

**NOVEL REED INSTRUMENT.**

is blowing or sucking air. When the piece has been played, the operator can rewind the note sheet on one of the rollers.

**A SELF-LOCKING HOOK.**—The device shown by the accompanying illustration is particularly capable of lifting and hoisting heavy loads under conditions where quick and easy handling is required for fastening and unclasp ing a self-locking hook. It comprises two pivoted members, one having a swivel; the other, or hook proper, has an eye larger than the pivot on which the member swings, so that the latter may be lightly shifted on the pivot in addition to the swinging. The swinging hook and the relatively fixed member have lugs at their meeting ends for interlocking with each other, the necessary relative movements of these parts being permitted by the enlarged eye in the hook proper. To disengage the lugs the hook proper is slightly lifted, and it may then swing on its pivot. The hook presents a perfectly smooth exterior surface, so that the parts offer no projections to catch anything that would cause a load to lose its balance.

**A SELF-LOCKING HOOK.****Brief Notes Concerning Patents.**

David O. Paige, an inventor who has left a very efficient mark especially on the safe industry of this country, recently died in the city of Detroit. He was very active as an organizer and manufacturer, and while his enterprises called him to widely separated fields, the main body of his work was confined to Michigan. Besides manufacturing safes and vaults, he was interested in the production of glass-lined steel tanks, and designed the machinery for their construction. This inventor, a native of New Hampshire, was born at Weare in 1833. He was the holder of scores of patents, many of enduring importance. One alone, the celebrated "steel flange" fireproof and burglar-proof safe, placed him in the class that has made the best improvements in the safeguarding of personal property.

A cornet with two bells has been recently invented by Z. Albert Meredith, of Tahlequah, Indian Territory. This innovation is said to improve the quality of the tone and overcome the difficulty of playing instruments of this class. In the usual construction of cornets and similar valved instruments, such as, for instance, tenor, alto, and baritone horns, it is common to provide what is known as a second slide in connection with the second valve casing, which second slide is introduced when the second valve is depressed for the purpose of providing the additional length of tubing required to secure the lowering of the tone. The second slide is necessarily short and involves sharp bends, which increase the difficulty of playing and affect the quality of the tone. In Mr. Meredith's instrument all open tones, and tones produced by the depression of the first and third valves either singly or jointly, are emitted through the first bell. On the other hand, all tones produced when the second valve is depressed, whether alone or in conjunction with the first and third valves, are emitted through the second valve. This permits of a design which dispenses with all sharp or abrupt turns in the tubing of the instrument.

An amusement apparatus creates a great additional interest, where a means of exercising skill is introduced. This combination may be found in an invention made by Mr. E. F. Porter, of Boston, by which a baseball is mechanically pitched for a batter to strike. The player stands upon a platform, and in striking the ball causes it to hit a target, and through the mechanism connected with the latter, a dummy figure, preferably of a man, is caused to travel around the four bases of a base-ball diamond represented on the face of an indicator plate. The dummy speeds to a greater or less extent in conformity to the impact of the ball against the target, moving from the home base to the first, to the second, to the third, or making a home run. The element of skill enters largely into the game, as it is difficult for the batter to hit the ball, pitched in a constantly changed position. Again, if the sphere is not struck in a manner to make a drive directly to the target's center, the distance to which the dummy will move will vary according to the distance from the center at which the ball strikes. Failure to reach the target through striking the side walls of the chamber of this base-ball batting and registering device, constitutes a "foul." Aside from providing amusement for base-ball players, this invention should prove of service in training batters during those seasons of the year when weather conditions do not permit of outdoor practice.