

THE PREMIUM FOLDING STOOL AND CHAIR.

The object of this improved form of chair is to permit a greater spread of the legs, which renders it more steady and more firm on its foundation, and also enables it to be packed into a small space for storage or transportation. It will be noticed that the slant of the back rest and of the legs is not the same, and to provide for these different slants, the back rest and legs are made in separate pieces. It is not possible to construct the back and legs of one continuous straight piece and accomplish this. If the legs were continued



straight up to form the back, the inclination would be too great, while if the back is raised to a comfortable angle the legs would be too close together, rendering the chair uncomfortable and unsteady. This objection is sometimes overcome by curving the back and legs to an angle, but this prevents the chair from being folded into a very compact form. Since

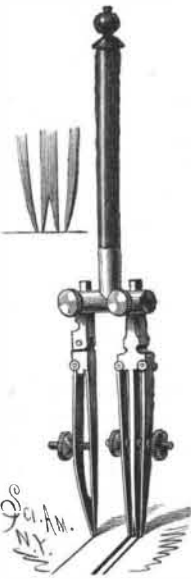
the back is independent of the slant of the forward legs, it may be adjusted to any angle desired, by simply changing the point of its pivoted connection. When folded, the chair occupies only about one inch and a half in thickness, and a space of 60 ft. will hold enough chairs for 500 people, or chairs of this design can be placed in a hall or opera house for seating 2,000 people, and yet may be stowed away under the stairs or beneath the side benches.

A very desirable feature of this chair is that the back section is made detachable, and the chair may thus be readily converted into a neat camp stool.

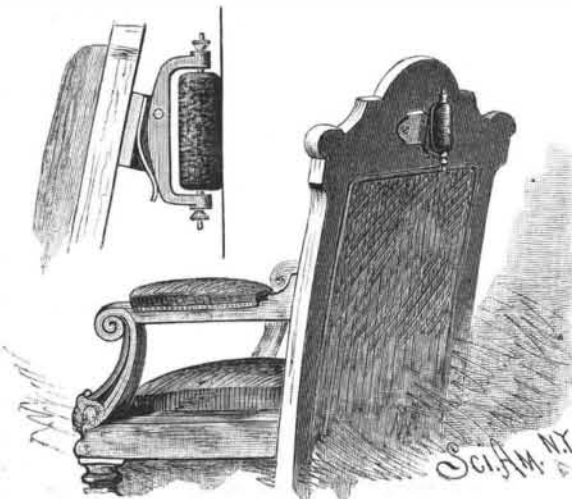
This chair is the property of Mr. Hiram F. Henry, of Gowanda, N. Y.

A PEN FOR DOUBLE AND SINGLE LINE RULING.

A ruling pen, consisting of two pens combined in convenient form for use, one of the pens capable of making two lines at a time and the other a single pen, is shown in the accompanying illustration, and forms the subject of a patent recently granted to Mr. Christian A. F. Orlob, of Salt Lake City, Utah Territory. The pens have each a square shank which fits into a corresponding aperture in a cross piece secured to the handle, and to use either pen singly one has only to turn the other in its socket at right angles to the normal position, or it can be readily removed from the socket. The center plate of the double pen is split into two prongs at the point, and the distance of the side plates therefrom is regulated in the usual way by the small nuts, according to the thickness of the line to be made, the pen, when filled with ink, making a double line without permitting the ink to run from one pen to the other. The other pen is such as used for ordinary ruling, but it has a joint to permit of swinging the lower end of the pen toward or from the double pen, decreasing or increasing the distance between the double line and the single line.



ORLOB'S RULING PEN.



BARROWS' FURNITURE ATTACHMENT.

A New Repeater.

According to the semi-official *Berlingske Tidende*, the new repeating rifle of Captain Wadsen and Lieutenant Rasmussen is to be introduced in the Danish army. In this rifle the barrel is not fixed to the stock, but is secured by a spring. In firing, the barrel is forced backward, by which motion the bottom plate of the breech is opened, the empty cartridge ejected, and a fresh cartridge pushed forward into its place, the magazine holding six cartridges. The bottom plate is then closed again, and all these movements are made automatically, so that the rifle need not be taken from the shoulder. All that is required to be done is that, as soon as the six shots are fired, the magazine is refilled. The rapidity of firing is stated to be marvelously rapid, as many as six shots having been fired in a second (?). In aiming, of course, more time is required; but if the aim is once taken, the six shots may be fired in succession.—*Broad Arrow*.

Gold on Alaska Islands.

Samples of ore from a new mining discovery in Alaska are on exhibition at the office of Geo. W. Sessions, in Nevada Block. The new mines are on Ounga Island, one of the Choumagin group, 100 miles west of Sitka, 200 miles east of Ounalaska, and 1,200 miles north of San Francisco. The island is near the southwestern shore of the Alaskan peninsula. It is about 14 miles long and 6 wide. Geo. C. King, who went there for the Sitka Mining and Commercial Company last summer to look for coal and copper, found the ledge in September. In December another expedition of the same company went up and made more careful investigation. The result was that early in April another expedition, with a number of miners, a five stamp mill, and supplies, landed on the island.

Active work was begun on the ledge. It has been traced for some 10,000 feet. It was found that the porphyry hanging wall on the east was 200 feet from the outcrop, the granite foot wall on the west was 800 feet from the outcrop, and the outcrop was at no point less than 100 feet in width.

To determine the value of the rock in the ledge, two crosscuts were started—one from the east side and one from the west—at a vertical depth of 50 feet. The crosscut from the west, at a distance of 20 feet, struck a body of galena ore, which was from 2 to 4 feet thick in the bottom of the cut, the day before Mr. Sessions left for home. The assays were from \$5 to \$200 in gold and silver, and the ore also carried from 70 to 80 per cent galena, which alone, at present quotations, is worth \$80 per ton.

It will be remembered that the big mine of Alaska, known as the Treadwell, is on an island—Douglass—and there are plenty more islands to prospect. This new discovery will doubtless cause a more vigorous prospecting on the islands as well as mainland of Alaska. A mining district has been formed on Ounga Island, where the big ledge has been discovered.—*Min. and Sci. Press*.

A DUSTLESS CARPET SWEEPER.

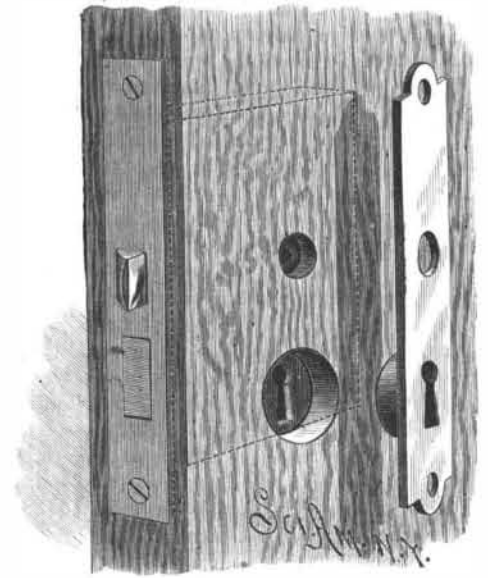
The invention herewith illustrated, which has been patented by Mr. John M. McClain, of Catlin, Col., consists of a fan wheel rotated in a sweeping box and a moistened dust catching wheel emptying into a water trough. The sweeping box has low runners on the sides, on which the device is pushed forward over the floor, and on its front is a vertically adjustable brush, one edge being provided with wire and the other with hair and jute bristles, the brush being reversible at will. As the device is pushed forward, a fan wheel in the front compartment is revolved by turning the crank, when a current of air is caused in the direction shown by the arrows, catching the dust raised by the brush and carrying it back over a dust pan and upward against a dust wheel. This dust wheel, which is set in motion by the current of air, just dips its rim in a water trough in the bottom, thus keeping it moist, and at the same time deposits the collected dust there, the heavier particles not thus carried up on the dust wheel being deposited upon the dust pan, which is situated between the water trough and the open bottom part of the sweeping box in front.

A WALL PROTECTING ATTACHMENT FOR FURNITURE.

To preserve walls from being broken and furniture from being marred or scratched, Mr. Frederick Barrows, of Haverhill, Mass., has devised and patented an attachment, such as shown in the accompanying illustration. It consists of a roller of wood, rubber, or other suitable material, mounted to turn loosely on its axle, the latter being held in the upper and lower ends of a bowed supporting arm, which is pivoted between lugs upon a bracket secured to the back of the sofa or other article of furniture. A plate spring is also employed to exert a slight outward pressure against the back of the bowed supporting arm below its pivot. It is intended that two of these rollers shall be attached to the back of a sofa, bedstead, or other large article of furniture, while one will be sufficient for chairs and similar small pieces.

AN IMPROVED KEY HOLE GUIDE AND ESCUTCHEON.

The practice of cutting a slot in the wood, where a mortise lock is used, to guide the key to the key hole, and covering this slot with the ordinary key hole escutcheon, is often carried out in so unworkmanlike a way as to make it difficult to insert the key in the lock. The register of the slot with the aperture in the lock is generally only approximate, and it is usually roughly cut and a good deal too large. To overcome

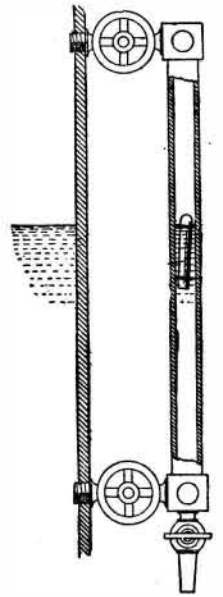


PATTERSON'S KEY HOLE GUIDE AND ESCUTCHEON.

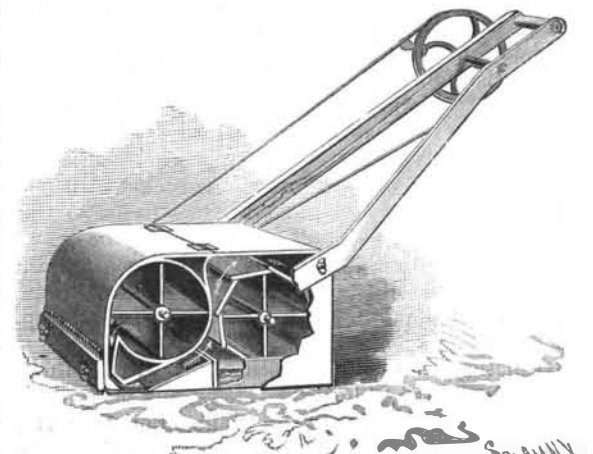
this difficulty, Mr. Samuel S. Patterson, of 233 South Street, Wilkesbarre, Pa., has patented the combined key hole guide and escutcheon shown in the accompanying illustration. A circular recess is cut in the framing over and leading to the key hole, and therein is fitted a cylindrical boss, formed integrally with the escutcheon, but having a key hole slot which continues and exactly registers with that in the escutcheon, and also registers with the key hole of the lock. The escutcheon may be secured to the framing by screws in the usual way.

AN IMPROVED WATER GAUGE FLOAT.

The accompanying illustration represents a glass water gauge attached to a boiler, and within the gauge a float of novel design, which has recently been patented by Mr. Loudon Campbell, of Alexandria, Va. The float is made of dark blue glass, highly tempered to prevent its breaking, and is provided near each end with encircling rings forming projecting flanges. These rings serve as scrapers within the tube of the water gauge, during periods of ebullition and under the normal action of the boiler, scraping the froth and scum from the inner surface of the tube, and keeping it always in a bright and cleanly condition. The float thus indicates the height of water in the boiler in so plain a manner that it cannot fail to be observed by a casual glance, while it can be easily seen from a considerable distance. A spiral spring, not shown in the illustration, is placed in each end of the gauge tube to prevent breakage of the float when the tube is blown out and the float goes to the bottom.



This improvement is applicable to all classes of steam boilers, being especially desirable in gauges where the water used is muddy or impure. It is now being used by steamers on the Potomac River and by several manufacturing concerns.



McCLAIN'S CARPET SWEEPER.