

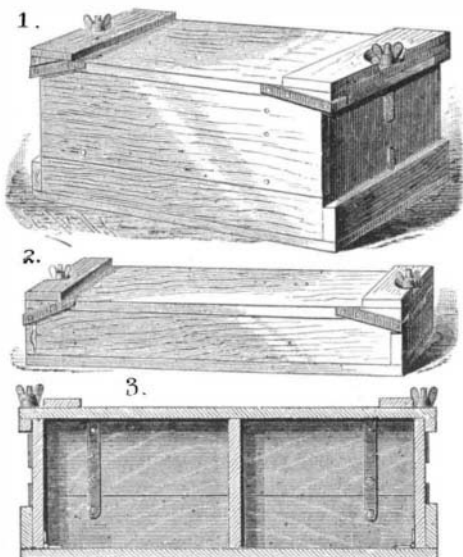
Alcohol in Glutinous Liquids.

The author puts 100 to 200 grammes of the substance into a roomy flask, fitted with a cork having two perforations. In the one is a bent tube which merely passes through the cork and is connected at the other end with a condenser and a receiver. Through the other passes a tube bent at right angles, its longer end passing down nearly to the bottom of the flask, while the other is connected with any convenient steam generator. The flask is fixed in a water bath, and by means of the current of steam all the alcohol is quickly driven out of the glutinous mass and into the receiver.—*E. Borgmann.*

FOLDING EGG CASE.

The egg case herewith illustrated is the invention of Mr. W. G. Ruge, of Washington, Mo., and can be folded very compactly so as to occupy little space while being returned to the shipper. Two side boards and two end boards are fastened to the bottom, the side boards being a little higher than the others. Ends are hinged to the bottom in such a manner that they can be folded down, and when raised their outer surfaces will rest against the inner surfaces of the end boards. Upon the upper edges of the side boards are placed sides of such a height that their upper edges will be flush with the edges of the ends. The sides are held in place by bars having hooks on their lower ends to catch on studs on the side boards. At each end of the cover is an under cleat so arranged as to project beyond the ends when the latter are raised. Secured to the ends are screw pins, which pass through the cover and receive winged nuts. Lateral displacement of the box is prevented by braces secured to the side edges of the cover, as shown in Fig. 1, which is a perspective view of the case. Fig. 3 is a longitudinal sectional elevation through the same.

When the box is to be filled the ends are swung up, the sides are held on the side boards by the bars, the cover is



RUGE'S FOLDING EGG CASE.

placed on, and the nuts screwed down. When the box is to be folded, the cover is removed, the ends are swung down, the sides are removed and placed on the folded ends, the cover is placed on the side and end boards, and the nuts turned on the screw pins projecting from the end boards. The side boards are made higher than the end boards on account of the cleats projecting below the surface of the cover. Fig. 2 shows the case folded.

Remarkable Surgery.

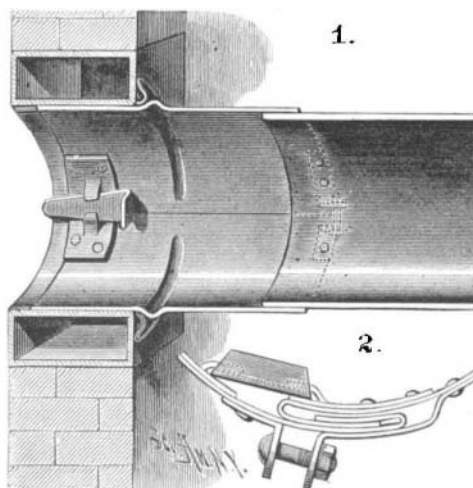
A remarkable case of recovery from what was thought to be a fatal gun shot wound brought many eminent physicians to Bellevue Hospital, this city, last week. A young German who shot himself in the head some months ago had been the subject of a number of remarkable surgical operations. The bullet entered the brain immediately above the nose and passed through the head, lodging in the base of the brain, from which it was removed by boring a hole in the skull. A drainage tube was inserted as a drain for the blood and matter from the wound. Subsequently the tube was withdrawn, the wound healed, and insanity did not result.

The operation for a new nose in plastic surgery was not long since performed in Bellevue Hospital, with more than ordinary success. The French and Italian method of building up a nose from the cheeks or the arm has little to recommend it, because, there being neither bone nor cartilage, the flesh sinks into the face, a shapeless mass. In the Bellevue Hospital case, Dr. Sabine used the middle finger of the left hand as bridge and septum, taking off three phalanges. This he covered with pieces of flesh from the cheeks.

The patient, a messenger in the hospital known as "Tommy," was suffering from the terrible malady called "lupus." He is now much improved in appearance, and a living example that the bridge of the nose as well as the nostrils can be replaced by a skillful hand.

STOVE PIPE CONNECTION.

In an invention patented by Mr. Godfried Laube, of Huron, Dakota, the accidental withdrawal of the pipe from the chimney or the pushing of it in too far is avoided by the tight joints made between the pipe and the thimble or chimney; the connection being made with an adjustable



LAUBE'S STOVE PIPE CONNECTION.

joint, the diameter may be adapted to pipes and thimbles of different sizes.

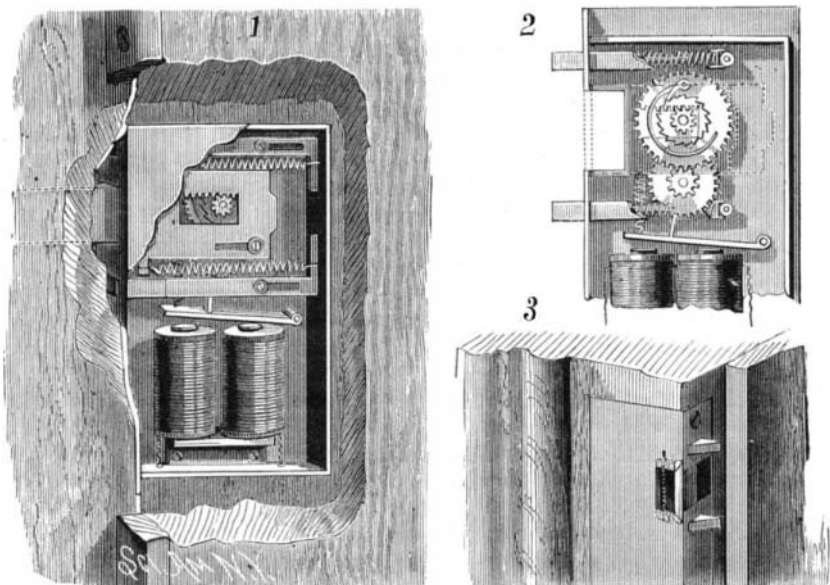
A thimble of the ordinary construction is arranged in the chimney. The joint of the connection is made by folding over two opposite edges of the iron. On the inside of the end of the connection, on each side of the joint, is a lug between which passes a wedge having a lip on the wide end, as shown in Fig. 1. By driving the wedge in tightly the connection is expanded and made to bind within the thimble. Upon the outside of the connection near its other end are two right angled lugs—one on each side of the joint—adapted to receive the bolt and nut as indicated in Fig. 2, which is a sectional view. The end of the stove pipe being placed within the connection, the joint is drawn up by screwing the nut, and the end of the pipe is held firmly. Unscrewing the nut frees the pipe, and taking out the wedge permits the withdrawal of the connection.

ELECTRIC DOOR KEEPERS.

The electric liberating door holder herewith illustrated is designed for the outside doors of buildings generally known as French flats. It has been patented by Mr. A. C. Woehrle, of 2187 Third Avenue, New York city.

The inclosing shell is secured to the door post by screws in the ordinary manner. A sliding keeper, having right angled portions, is held in the shell by a screw passing through a slot. In closing the door the lock bolt rubs against the outer part of the keeper and drops behind the edge, thus keeping the door closed. The inner part of the keeper is furnished with a slot which is formed with a rack which, in connection with the jaws, pinions, cog wheels, and ratchet (shown plainly in Fig. 2), serves to lock the keeper forward, in the position shown in Fig. 3, except when the lower pawl is drawn downward against the tension of the spring by passing a current of electricity through the electro-magnets.

Sliding bolts formed with beveled ends are placed in slots in the case, and their inner ends are held by screws passing through slots, Fig. 1. The bolts are held pressed forward by coiled springs, and are connected with the sliding keeper by coiled springs, as clearly indicated in Fig. 1. When the door is open the bolts stand in the position shown in Figs. 2



WOEHRLE'S ELECTRIC DOOR KEEPER.

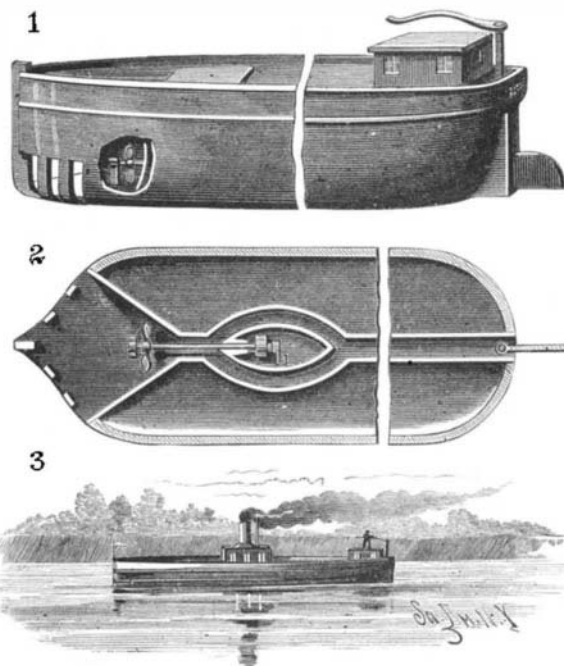
and 3, with the beveled ends protruding from the slots in the shell; but when the door is closed the bolts will be forced inward, thereby compressing the springs shown in Fig. 2, and distending those in Fig. 1, and the latter, when the lower pawl is drawn down by the magnets to free the

cog wheel, serve to draw the keeper within the shell and away from the front of the bolt, thus liberating the door so that it may be forced open by the action of the spring attached to it in the ordinary way. The parts then assume their original position. When closed, the door cannot be opened except by operating the bolt directly, by door knob or key, or by passing a current of electricity to the magnets. Circuit wires connect the magnets with the poles of a battery and with buttons situated in the different stories of the building.

CANAL BOAT.

A tunnel is formed in the bottom of the boat from front to rear, the ends being open. At the bow of the boat the tunnel terminates in a lateral enlargement, and a grating or screen is formed to prevent floating objects from entering. Near the front end the tunnel has two curved branches—one on each side—between which a compartment is formed as shown in the plan view, Fig. 2. A shaft is journaled in a standard in the compartment, and a standard in the enlargement. On the front end of the shaft is mounted a propeller wheel, and on the inner end is a crank on which are coupled means for revolving the shaft.

Water, drawn in at the bow by the screw, passes through the tunnel, and being discharged at the stern, assists in propelling the boat. It is claimed that as the water is drawn in at the front of the boat, the bow need not force the water to one side, and thus no billows are formed to wash out the banks of the canal. As the boat advances, the discharged water fills the space just vacated by the boat.



MCDONALD'S CANAL BOAT.

This invention has been patented by Mr. Angus McDonald, P. O. Box 17, Au Sable, Mich.

Krakatoa.

The size of Krakatoa was formerly 33½ square kilometers; of that 23 square kilometers have subsided, and 10½ square kilometers remain extant. But on the south and southwest side the island has been increased by a large ring of volcanic products, so that the size of New Krakatoa is now, according to the survey, 15½ square kilometers. The size of Long Island was formerly 2.9 and is now 3.2 square kilometers.

Verlaten Island has become much larger; it was formerly 3.7 and is now 11.8 square kilometers in size. Of the Poolsche Hoedje nothing remains.

In the place where the fallen part of Krakatoa once stood there is now everywhere deep sea, generally 200, in some places even more than 300 meters deep. It is remarkable that in the midst of this deep sea a rock has remained which rises about 5 meters above its surface. Close to this rock, which is certainly not larger than 10 meters square, the sea is more than 200 meters deep. It is like a gigantic club, which Krakatoa lifts defiantly out of the sea.

HOUSEKEEPERS are frequently annoyed by oil marks on papered walls against which thoughtless persons have laid their heads. These unsightly spots may be removed by making a paste of cold water and pipe clay or fuller's earth, and laying it on the surface without rubbing it on, else the pattern of the paper will then likely be injured. Leave the paste on all night. In the morning it can be brushed off and the spot will have disappeared, but a renewal of the operation may be necessary if the oil mark is old. The experiment will be likely to result most satisfactorily on plain papers, or that with the least number of colored figures.