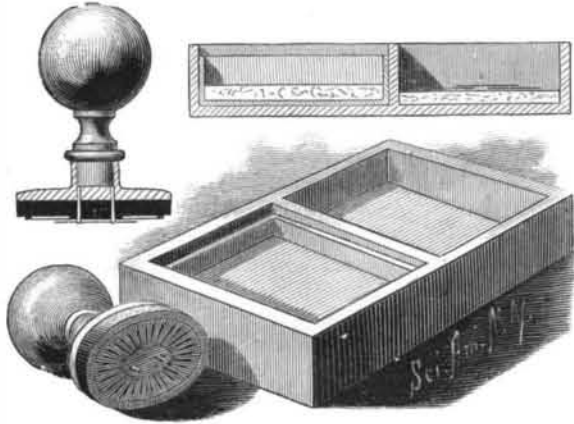


DEVICE FOR HANDLING STAMPS.

Mr. Gerard W. Schimmel, of Amsterdam, Holland, has patented a device for picking up and placing or fastening stamps or labels of various kinds having adhesive backs. The India rubber base of the stamp fastener is secured to a plate provided with an upright handle, and having projecting from its under side and penetrating the rubber base any number of strong, sharp pointed pins. The pins, in their normal position, project but slightly beyond the face of the rub-

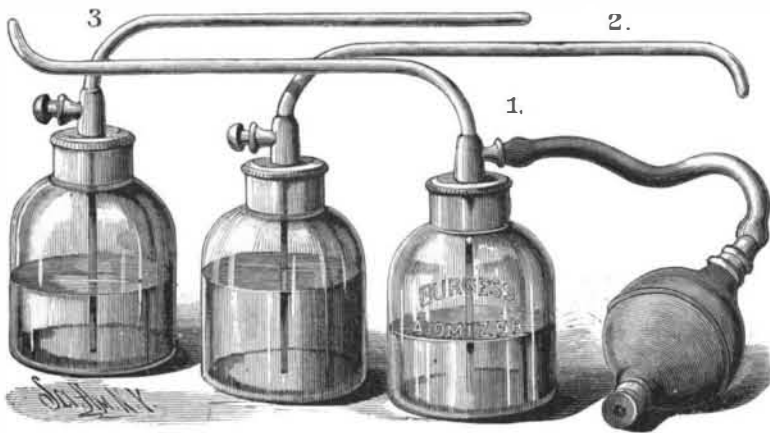


SCHIMMEL'S DEVICE FOR HANDLING STAMPS.

ber. In using the device the stamps are placed detached and dry, with their faces uppermost, in the compartment of the case, having a cushion on its bottom to prevent injury of the pins of the fastener. The fastener is then pressed down on one of the stamps, which will cause the rubber base to yield slightly and the points of the pins to penetrate the stamp, which may then be lifted and transferred by the fastener to a dampened cushion contained within a cup in the second compartment of the case. The back of the stamp is thus dampened. The fastener carrying the stamp is then pressed down on the surface designed to receive the stamp and quickly raised, leaving the stamp fastened as required. The several operations of picking up the stamps, dampening and sticking them may be done with the greatest rapidity.

BURGESS' IMPROVED ATOMIZER.

The accompanying illustration represents a new form of atomizer of extreme simplicity and superior durability. The metal cap and tube are made in one piece, and nickel plated, the former having a thread cut upon the inside, which screws down securely upon a corresponding thread blown in the neck of the bottle, the connection being made airtight by a soft rubber washer placed on the inside of the cap. The tubes are three-sixteenths of an inch in diameter and five and a half inches long, and are made in three forms to give



BURGESS' IMPROVED ATOMIZER.

either a straight, upward, and downward spray, as shown in the engraving. The bottles are round and have a capacity of three ounces. Each atomizer is accompanied by a wire by means of which the small opening in the end of the tube can easily be kept free.

The spray is produced by forcing the air partly into the bottle and partly into the upper end of the tube; the pressure of air within the vessel causes the liquid to ascend, and coming in contact with the air current is carried out of the contracted end of the tube in the form of a fine spray.

The black gum bulb used is not so easily soiled and possesses much greater durability than the white bulb usually furnished. It is made with a neck at each end, which allows the nipple and valves to be securely fastened and adjusted, thereby giving a continuous spray. For all atomizing purposes, especially for treatment of throat and nose, this spray is superior.

This atomizer is manufactured by Messrs. Shaw & Geary, 55 North 7th St., Philadelphia, Pa.

INOCULATION for yellow fever is reported to have resulted fatally with three patients who were experimented upon at Vera Cruz.

The Progress of Invention.

An exchange truthfully says that, like many other human activities, the patenting of new inventions "breaks out in spots." An example of this is found in the recent rapid issue of patents and applications for patents in a very few lines of invention. The first class to be mentioned, which, indeed, is the one that would be guessed by every intelligent reader of the newspapers of the day, is mechanism for the practical use of electricity. A new principle, such as that of converting sound waves to electrical waves on a wire, as exemplified in the telephone, brings after it numerous devices for its practical application. Every great invention is thus followed by a numerous train of subsidiary patents, usually dependent upon it, as all the varieties of the sewing machine with their many "attachments" were dependent upon the device of a needle with the eye in the point. So the telephone, with its improved transmitters, receivers, switchboards, and devices for "shunting," occupies a large share of the attention of the patent examiners. Another impulse has been given to inventive talent by one of the whims of fashionable life. Four years ago the number of recent patents on two wheeled vehicles might have been counted on one's fingers. In October, 1880, two patents of this sort were taken out, followed by others, and now the examiner in that line of conveyance is kept busy looking into the merits of new styles of village carts, with their paraphernalia. For several years past only a small number of applications for fire escapes have been received, but latterly such applications have been coming in rapidly.

It is proper to note in this connection that the Patent Office is getting its work along very well for this time of year, and to add the fact that new cases are acted upon very much sooner after the filing than they were a few months ago; but there is still too much delay in the examination of cases, and there always must be till the examining force in the Office is increased.

Homeopathic Perfumes.

The odoriferous molecule of musk must be incomprehensibly small, when we are told the particles one grain of musk had, in a radius of ninety feet, disengaged in one day. No microscopical power has yet been conceived to enable the human eye to see one of these atoms; yet the organs of smell have the sensitiveness to detect them. We cannot imagine their smallness, as it is stated that the same grain of musk undergoes absolutely no diminution in weight. A single drop of the oil of thyme, ground down with a piece of sugar and a little alcohol, will communicate its odor to twenty-five gallons of water. Haller kept for forty years papers perfumed with one grain of ambergris. After this time the odor was as strong as ever. Bordenave has evaluated a molecule of camphor sensible to the smell to 2,262,584,000th of a grain. Boyle has observed that one drachm of assafetida exposed to the open air had lost in six days the eighth part of one grain, from which Keill concludes that in one minute it had lost one 69,120th of a grain.

Accelerating Firearms.

A system of accelerating firearms has been devised by Mr. J. H. Stewart, of San Francisco, which is stated to accomplish very satisfactory results. The powder is fired in front, and becomes completely ignited only when the projectile is once in motion. Tests made at Benicia, Cal., with a rifle constructed on this principle showed, it is stated, a maximum velocity of 2,596 feet per second, and gave a penetration of three-quarters inch in rolled iron, where a Springfield rifle, under similar conditions, made but a slight dent. In general, the penetration is twice the caliber.

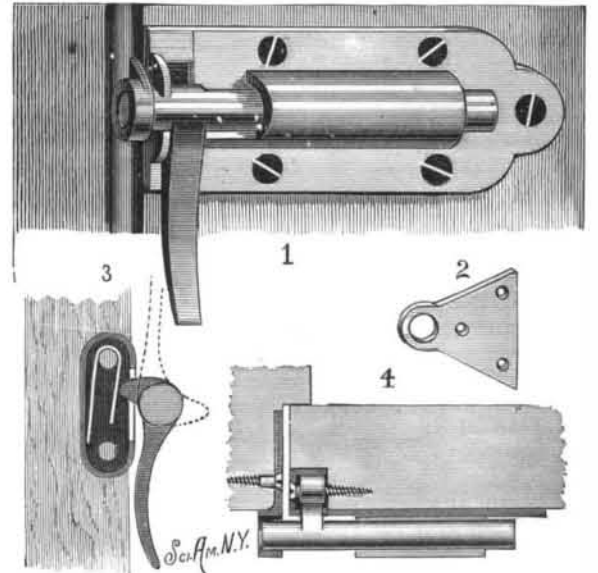
IMPROVED DOOR BOLT.

The engraving shows a simple, inexpensive, and effective bolt, which, while fastening the door, will hold it closely to its casing without regard to variations in the size of the door or casing caused by changes in temperature or weather. Fig. 1 is a perspective view of the bolt, Fig. 2 is a face view of the catch, Fig. 3 is an edge view of the door with the spring case in section, and Fig. 4 is a horizontal sectional elevation of the door, jamb, and bolt. The bar fits loosely in a bearing formed on a plate secured to the face of the door, and is formed with a lever handle projecting from near its forward end, which is adapted to enter the eye of the catch.

In a box-like chamber placed at the forward end of the plate is a U-shaped spring which presses against a cam or eccentric lug fixed to the bolt bar about at a right angle with its handle, as shown in Fig. 3. After the end of the bar has entered the eye of the catch, the pressure of this spring against the end or toe of the lug will force the door closely against the casing; the

bolt bar is locked in position by the contact point of the lug passing beyond a line through the center of the bar. The spring yields more or less to the pressure of the lug should the wood of the door or casing shrink or swell, and hence the door will always be closed tightly. To unbolt the door it is only necessary to swing the handle so as to withdraw the lug from the spring chamber, when the bar may be moved back. To better resist the strain, the catch plate is made of a dovetail shape, and is let into the side of the rabbet of the casing.

This device, patented by Mr. John F. Taylor, of

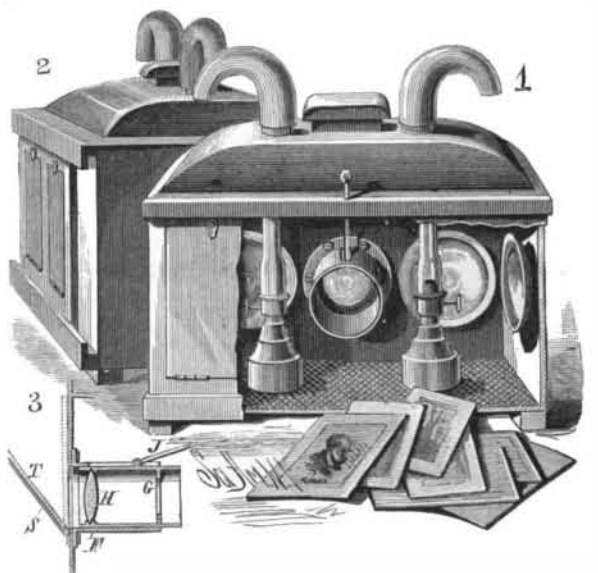


TAYLOR'S IMPROVED DOOR BOLT.

West Park, N. Y., is applicable to doors, sash, blinds, or other objects requiring a fastening such as the bolt affords.

MAGIC LANTERN.

On the inside of each end of the front, and on the inside of each end of the box, is a concave reflector; these are so placed as to concentrate the light upon the picture at the center of the back of the box. In a tube, F, projecting inward from the front, between the mirrors, is arranged a sliding tube, G, holding a convex lens, H. This tube is moved for focusing by means of a rod, J, extending up to the top of the back of the box. In the box two lamps or other lights—such as calcium or electric—are placed between the mirrors at each end as shown in Fig. 1. Above each light is placed a detachable funnel. The top of the box is curved and the under side is polished to reflect the rays of light. In the top is a ventilating opening provided with a hood to permit the hot air to escape; the supply of air is admitted through the perforated bottom. The pictures are held in a sliding apparatus moving between two longitudinal grooves (Fig. 2) secured on the outside of the back of the box, and having two apertures, which can be closed by hinged doors. The pictures are held in place by closing the doors, and can be shifted to appear in an opening in the back of the box. The light from the lamps is reflected by the mirrors upon the picture, and from the same through the lens upon a screen or wall. By means of a mirror, T, on a door, S, hinged to the front of the box below or at either side of the tube, the light can be reflected upon any desired surface. Any opaque object, such as a photograph, chromo, or drawing, can easily be reflected upon the screen in any desired size, all parts being clear and distinct. The pictures do not



DAVENPORT'S MAGIC LANTERN.

become heated sufficiently to injure them, and may remain in the apparatus for hours without being destroyed.

This invention has been patented by Messrs. Henry and George Davenport, of Somerville, 22d ward, Philadelphia, Pa.