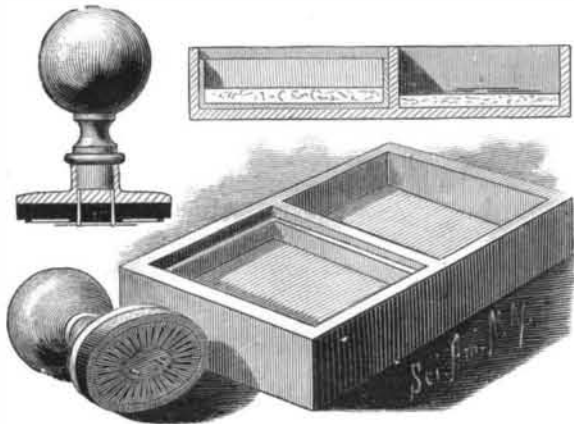


**DEVICE FOR HANDLING STAMPS.**

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-

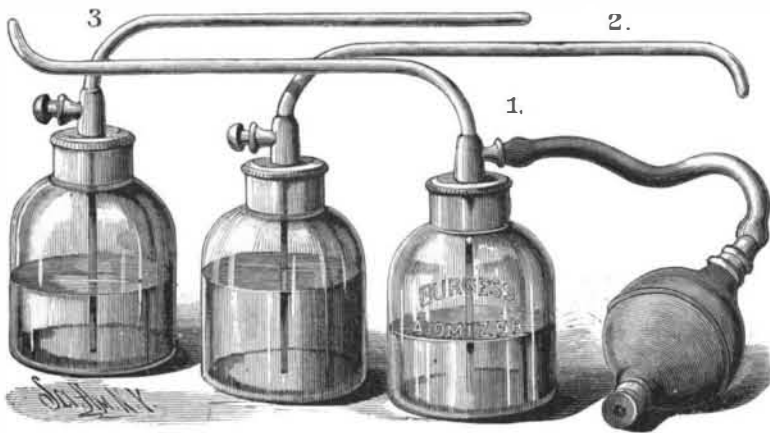


**SCHIMMEL'S DEVICE FOR HANDLING STAMPS.**

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. 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 assafœtida 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 field rifle, under similar conditions, made but a slight dent. In general, the penetration is twice the caliber.

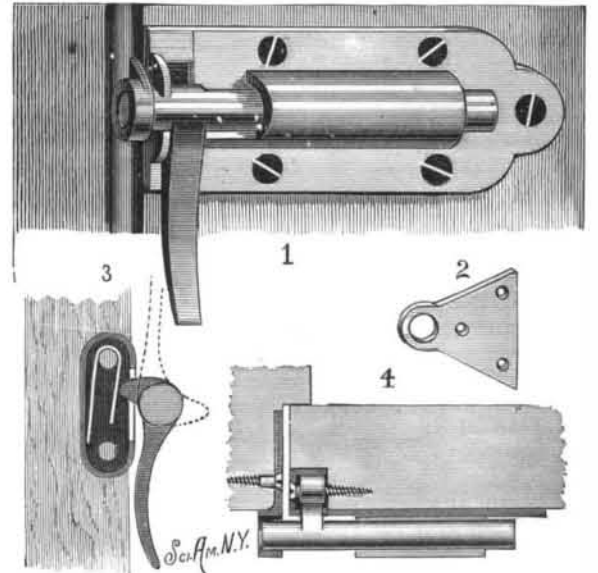
**IMPROVED DOOR BOLT.**

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

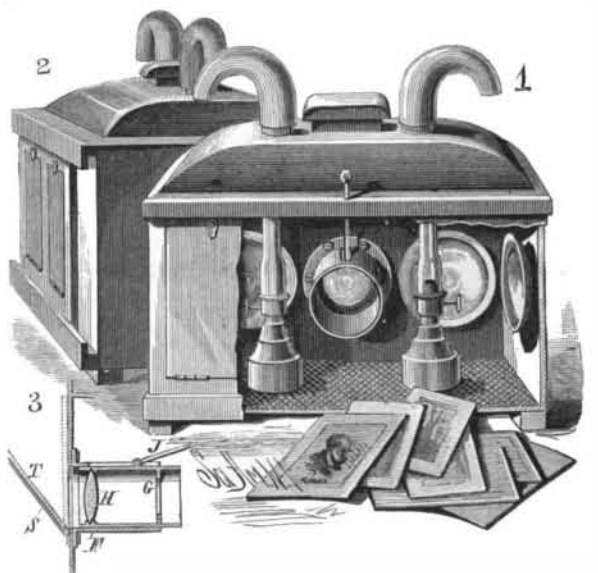


**TAYLOR'S IMPROVED DOOR BOLT.**

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.

**Hay Fever and Its Cure.**

Hay fever people will be glad to see the nature and treatment of their complaint described in simple terms, readily understood by every one who comprehends the author's meaning:

These unhappy individuals, according to Dr. Sajous, of Philadelphia, possess, "as a result of heredity or of diseases implicating markedly the nervous system, nerve centers which have become abnormally sensitive, and are therefore inordinately influenced by the external elements to which they respond."

As a result of local disease the nasal mucous membrane becomes hyperæsthetic, and transmits to the abnormally sensitive nerve centers the impressions made by the "external irritants" (pollen, etc.), which results in a paroxysm of "hay fever."

These are the three conditions necessary for a paroxysm, and when one is absent, as is the case with the external visitants a portion of the year, and all the year in certain regions, it will not take place. Hence to cure the disease is to render the hyperæsthetic nasal membrane oblivious to the annual visitation of the external cause. The writer maintains that this can be done by cauterizing the hyperæsthetic portions of the nasal membrane, which he has accomplished with pleasing and permanent results by means of the galvano-cautery or acids.

He describes these hyperæsthetic areas as consisting of three—posterior, middle, and anterior. The posterior area is implicated when reflex asthma is the most prominent symptom; the anterior, when the head symptoms alone are present; the middle is the starting point of all the symptoms combined.

He recommends that abnormal conditions of the nasal cavities, such as hypertrophies, polypi, exostoses, etc., be eradicated before using the superficial cauterization. The best results are obtained by instituting treatment six weeks at least before the onset of a paroxysm, though it may be conducted during a paroxysm, resulting sometimes in an arrest of it or a beneficial modification. Immunity depends on the thoroughness with which the treatment is conducted.

It would seem, says the *Medical Record*, from the perusal of Dr. Sajous's monograph on the subject, that the hay fever might become unknown, provided its victims would put their hyperæsthetic nasal membranes under the treatment of an adept in rhinology. The banishment of hay fever from the list of diseases would be a boon to all except the hotel keepers of those resorts where, since the "external irritant" does not lurk in the atmosphere, the cause is removed and a cure is effected.

With the mechanism of the disease still in mind there remains one other method, which will be as much superior to that advanced by Dr. Sajous as his is better than the now prevailing method of changing abode, namely, that of finding a remedy which will act directly upon the abnormally sensitive nerve centers. We commend this to investigators.

**Repairing Tin Roofs.**

A correspondent communicates to the *American Artisan* his method of finding and mending the leaky places in painted tin roofs, which seems very practical. "My way is to start at the bottom of the roof, with a piece of chalk in one hand and a thin knife in the other. I examine the seams in one tier of sheets, and if I find a place that looks as if it might leak, I try it with the knife, and if it requires soldering, I mark the place with chalk. In this way I go over each tier of sheets, and look at every inch of the seams.

Of course, it is no little labor to go over a roof in this way. It often takes considerable trouble to get on to a roof; but the workman who hesitates about doing this work thoroughly belongs to the same class as the 'other fellow' who was on the roof before and did not stop the leaks.

The tools to be used other than the regular soldering tools are a hoe shaped scraper, which can be made out of an old file, and a piece of grindstone to sharpen the scraper with, so as always to have a sharp cutting edge. After having scraped clean a number of leaks, tin the places by using ordinary soldering acid, so that every scratch made in the tin will be well tinned, and not left to rust through. Then wipe off the acid with a wet cloth. The leaky seam is now as bright and clean to solder with the use of rosin as when the roof was new.

The reason for using rosin instead of acid to solder with, is on account of the curious way solder has of acting when acid is used. With rosin the solder can be piled on very evenly, and if the scraper is only as wide as the space on which solder is required on each side of the crack in the seam, then all the soldered places will present an even and orderly appearance.

The objection to this way of repairing a roof is that the unequal expansion and contraction is apt to break open the solder. I have noticed on old roofs where the solder has been piled over a nail head, that the nail had worked up through the solder so it could be pulled out with the fingers. To overcome this difficulty, cut some pieces of tin, say three-quarters of an inch wide, and give them a slight bend in the locker, so the edges will not be apt to spring in soldering. These pieces

are to be cut to proper lengths and soldered over the cracks, and as very little solder is required they expand and contract the same as the roof, and consequently will not crack off.

Another way to repair a roof, is to cut some pieces of cloth, three-quarters of an inch wide, and run them through thick paint, which can be done by soldering a wire on the bottom of the paint dish before the paint is put in; putting the strip of cloth through the wire loop and pulling it through the paint, cutting off the desired lengths with a pair of shears. The seam in the roof should first be painted, then the strip of cloth can be made to lie down nicely by the use of a small flat paint brush. I have made at the rate of three dollars per hundred patches repairing roofs in this way."

**IMPROVED LADDER.**

The accompanying engraving represents an adjustable ladder patented by Mr. Robert Furlong, of Sausalito, Cal., for house or orchard use, and which is adapted to support a platform when desired. Two pairs of side bars are pivoted to each other in pairs a short distance above their centers. The bars of one pair are united by a series of cross bars, and the other bars by cross bars at the top and crossed braces and a cross bar near the lower ends. The bars are inclined toward each other from their lower to their upper ends, and are widest at the pivots. A strap joining the lower cross bars prevents the ladder from spreading, and serves to hold the sections at the desired inclin-

**FURLONG'S IMPROVED LADDER.**

ation. When necessary, a platform can be placed on the upper rungs, or the ladder can be used without the platform. The ladder is strong, folds up compactly, and can be quickly placed in position.

**Analgesia.**

The chief fact in connection with this subject is that almost any irritation of the larynx and upper end of the trachea is said to have the power of depriving the animal of the capacity to feel pain, the whole of the other functions of the nervous system remaining intact. The most powerful agents with which to effect the irritation are carbonic acid and chloroform. Brown-Sequard has continued his experiments on monkeys, and also on his own person. It is difficult to apply the necessary measures to the human being. Some success was obtained by getting an individual to inhale pure air during two-thirds of each inspiration, and then finishing up with chloroform or carbonic acid, which had to be immediately expelled. Sometimes an analgesic effect was produced, but the experiment had to be prolonged for many minutes. On the whole, the results did not seem to be very satisfactory. In monkeys the irritation can be effectually carried out, and then the analgesia is most marked, and lasts many days. It is said that there was insensibility to the existence of wounds for as long as ten days.—*Lancet*.

**Why the Italians Sing.**

C. H. Von Klein, M. D., gives the following in a paper read before the thirty-ninth annual session of the Ohio State Medical Society, at Dayton, June 5, 1885:

Through the kindness and under the auspices of the late Dr. Bordini, of Rome, the author had made the examination of the throats of thirty-two Italians, thirteen of whom were professional singers. The Italians appear to have natural organs of voice for music. He found the throat very roomy, the tonsils almost level with the fauces, the uvula extending only one-eighth of an inch from the soft palate, the posterior nares very large, the larynx thickly lined with a smooth mucous membrane, the trachea enormous. Another peculiarity was, the author found it very seldom necessary to use a tongue depressor. They seem to place their tongue down to the mylohyoid muscles, forming it into a concave shape. This accomplishment is necessary for a singer, and can be effected only by long and tedious training.

**DECISIONS RELATING TO PATENTS.**

**U. S. Circuit Court.—Northern District of New York.**  
GAGE v. KELLOGG *et al.*

METHOD AND APPARATUS FOR TREATING SEEDS.

Coxe, J.:

There cannot be in the same patent a claim for a machine and a claim for the process of using that machine.

Reissued letters patent No. 8,615, dated March 1, 1879, and granted to William B. Fisher for an improvement in seed steaming apparatus, expands the claims in the original patent, and is void.

**U. S. Circuit Court.—Southern District of New York.**  
TOMKINSON v. WILLETS MANUFACTURING COMPANY.  
DESIGN PATENT FOR A VEGETABLE DISH.

Coxe, J.:

When a decree has been entered by consent in a prior suit declaring a patent valid, and that complainant is the sole owner thereof, such decree will be considered binding, as to all questions determined thereby, in a second suit between the same parties.

It is not necessary that a design patent should be copied in every particular to constitute an infringement. It is sufficient if the resemblance is such that an ordinary purchaser would be deceived, although the infringer has deviated slightly in details or has omitted something which an expert could discover.

**U. S. Circuit Court.—Southern District of New York.**  
HOLMES ELECTRIC PROTECTIVE COMPANY v. METROPOLITAN BURGLAR ALARM COMPANY.

Wheeler, J.:

It is only a patent for an invention that has been previously actually patented in a foreign country that is limited by the foreign patent. The description of the invention in the foreign patent might affect the validity of the domestic one, and might not, but would not limit it. (Rev. Stat., sec. 4,887.)

**Light and Heat.—New Experiments.**

A remarkable observation of M. Felix Lucas upon the radiation of incandescent carbon has been communicated to the Academie des Sciences. The author begins by recounting how with inoxidizable metals heated in air the radiations, at first obscure, become more and more luminous as the temperature is raised. Thus, according to M. Pouillet, a temperature of 525° C. corresponds to a just visible red; and that of 1,500° C. to brilliant white. An analogous phenomenon is observed if carbon is heated, being previously placed in a vacuum to prevent combustion. When sufficiently heated, the carbon becomes a veritable lamp, thus showing the existence of a relationship between the temperature and the brightness of the radiations from the body.

With a view to determine this relationship in precise terms, M. Lucas prepared an arrangement of apparatus whereby he could heat *in vacuo* (by the current from a De Meritens machine) some specimens of ordinary arc-lamp carbon, 5 mm. in diameter, manufactured by M. Carre. He obtained formulæ by which he was able to calculate the temperature of the carbon corresponding to any observed intensity of current and illuminating value. By this means he was able to trace how the illuminating power increased with the heat from the first visible glow at 1,000° C., valued at only 3 carcels, rapidly up to over 300 carcels, and then slower, until, at a temperature of 4,500° C., the luminous radiations were equal to 413 carcels. Up to this point, therefore, although the heat had been only increased in the ratio 1:4.5, the luminous intensity was increased in the ratio 3:413. Now, however, a curious phenomenon appeared. An increase of temperature from 4,500° to 4,750° C. only increased the light from 413 to 420 carcels; and a further increase of temperature to 5,000° C. actually had the effect of lowering the light to 413 carcels, or the same intensity as that produced at a temperature 500° lower. It is noteworthy, as contrasted with this, that the increase of temperature from 3,125° to 3,520°, or only 395°, doubled the light emitted from the carbon. Thus, after a certain point, increase of temperature has a lessened effect in developing light, until, beyond the maximum of 4,750°, heat ceases to provoke more luminous radiations, and even reduces their visual value. Consequently, in stating this most striking conclusion, M. Lucas expresses the opinion that it is probable that calorific radiations, at first obscure, then successively luminous from red up to white, finish by passing beyond the violet end of the spectrum, and thus cease to be visible. Heat may, therefore, be invisible because of its intensity as because of its feebleness.

**A Locomotive Museum.**

The Chicago division of the Brotherhood of Locomotive Engineers is making a collection of railway appliances and historical works pertaining to locomotive management, to be placed on exhibition in Scientific Hall, for the purpose of more fully instructing members in the working and management of locomotive engines. The hall will be fitted up with proper appliances for showing the working of each article on exhibition.