

The Earth-worm.

The earth-worm lives a very solitary life below ground, driving its little tunnels in all directions, and never seeing its friends except at night, when it comes cautiously to the surface and searches for company. In the evening, if the observer be furnished with a "bull's-eye" lantern, and will examine the ground with a very gentle and cautious step, he will be sure to find many worms stretching themselves out of their holes, retaining for the most part their hold of the place of repose by a ring or two left in the hole, and elongating themselves to an almost incredible extent. If, while thus employed, an earth-worm be alarmed or touched, it springs back into its hole, as if it had been a string of india-rubber that had been stretched and was suddenly released. The worms have a curious habit of searching for various leaves and dragging them into their holes, the point downwards, and are always careful to select those particular leaves which they best like. As a general rule, they dislike evergreens; and the leaf which I have found to be most in favor is that of the primrose. I have often watched the worms engaged in this curious pursuit; and in the dusk of the evening it has a very strange effect to see a leaf moving over the ground as if by magic, the dull reddish brown of the worm being quite invisible in the imperfect light. The food of the earth-worm is wholly of a vegetable nature, and consists of the roots of various plants, of leaves, and decayed vegetable substances. Many persons cherish a rooted fear of the earth-worm, fancying that it lives in church-yards and feeds upon the dead. These fears are but idle prejudice, for the worm cares no more for the confined dead than does the tiger for the full manger, or the fox for the bleeding gazelle. The corpse, when once laid in the ground, sinks into its dust by natural corruption, untouched by the imagined devourer. The so-called worms that feed upon decaying animal substances are the larvæ of various flies and beetles, which are hatched from eggs laid by the parent; so that if the maternal insect be excluded, there cannot be any possibility of the larvæ. Moreover, neither the fly nor the beetle could live at the depth in which a coffin is deposited in the earth; and if perchance one or two should happen to fall into the grave, they would be dead in half an hour, from the deprivation of air and the weight of the superincumbent soil. Let, therefore, the poor earth-worm be freed from causeless reproach; and though its form be not attractive, nor its touch agreeable, let it, at all events, be divested of the terrors with which it has hitherto been clothed.—*Routledge's Illustrated Natural History.*

Curious and Costly Books.

In the year 1572, a splendid production—the "Spanish Polyglot,"—was published, printed by Christopher Plantin. A most magnificent copy upon vellum, in the original binding, was sold in London, some twenty-five years since, for 1,000 guineas, and enormous as was this price, the copy was actually wanting three out of the ten volumes—those being in the Bibliotheque Royale. One of the scarcest books in the language—for there are, according to Dibdin, but two known copies extant—is a little black-letter tome of 1586, entitled "A Discourse of English Poetrie," &c., one of which was sold in the Duke of Roxburgh's collection for £64. We might amuse the reader by citing a few of the quaint and alliterative titles of some of the books of those times. Take the following for instance:—"A Footpath to Felicitie," "Guide to Godliness," "Swarme of Bees," "Plante of Pleasure and Grove of Graces." (1586.) These were most rife in the days of Cromwell. There were many bordering closely on the ludicrous, such as the one styled, "A Pair of Bellows to blow off the Dust cast upon John Fry;" and a Quaker whose outward man the powers thought proper to imprison, published "A Sigh of Sorrow for the Sinners of Zion, breathed out of a Hole in the Wall of an Earthen Vessel, known among Men by the name of Samuel Fish." We might multiply the numbers *ad libitum*; but must content ourselves with adding one or two more. "A Reaping Hook well-tempered for the stubborn Ears of the Coming Crop, or Biscuits baked in the Oven of Charity, carefully conserved for the Chickens of the Church, the Sparrows of the Spirit and the Sweet Swallows of Salvation." To another we have the following copious description:—"Seven

Sobs of a Sorrowful Soul for Sin or the Seven Penitential Psalms of the Princely Prophet David, whereunto are also annexed William Humuis's Handful of Honeysuckles, and divers Godly and Pithy Ditties, now newly augmented."

The "Mazarin Bible," so called on account of its having been found in Cardinal Mazarin's library, is considered to be the very first book printed with metal types. The first Bible, of 1462, is an edition which exhibits a matchless effort in the art of printing.

A few years ago a typographical wonder was exhibited in London, being a sumptuous edition of the New Testament, printed in gold on porcelain paper of most immaculate beauty, and, for the first time, on both sides. Only one hundred copies were taken off.

BOND'S IMPROVED TOURNIQUET.

Very many accidents occur from hemorrhage where surgeons are not within call, and in such cases where the bleeding is violent and dangerous, some provision must be made to check it or the sufferer will die from what appears, and really is, in the absence of



medical aid, an insignificant matter. Especially at the present time, while the war is raging, are such incidents common, and it is gratifying to know that at a small expenditure all such catastrophes can be avoided. Our engraving is a representation of an improved tourniquet which, by compressing the vein through which the blood flows, at once stops the issue. It is merely a leather pad provided with an elastic strap which is slipped over the wounded limb and, in connection with the pad, thoroughly accomplishes the end in view. The engraving very fully explains itself and renders further comment unnecessary. The main points about it are that it is so extremely light and portable that it can be carried in the vest pocket, that it is so simple in its construction that it can be afforded at a low price, and lastly and most important of all, that it arrests the flow of blood and prevents that loss of life which would otherwise ensue. A number of eminent surgeons in this city have given this tourniquet their unqualified approval. No soldier should be without one, and friends could not do their absent ones a better service than by sending one of these appliances. Application for a patent is now pending. Further information can be obtained by addressing the inventor, F. W. Bond, 89 Nassau street, New York.

CALIFORNIA FLAX.—The editor of the Los Angeles *News* has been furnished by Dr. Osborn, of that place, with a parcel of native flax, which grows wild and is said to be abundant in that section. The *News* says it is from a stock which appears to be a species of nettle; in texture there appears to be no material difference between it and common flax. It is thought that this plant might be successfully cultivated. The fiber is quite as fine and strong as a cultivated article of real flax.

VALUABLE RECEIPTS.

TO REMOVE STAINS OF INDELIBLE INK.—The nitrate of silver forms the basis of indelible ink. Linen is sometimes stained with it, and it cannot be removed by washing with soap. Such stains can be removed with a solution of the cyanide of potassium, especially if the stain is fresh, but if it is old the best way of erasing them is by the application first of the following mixture:—Spirits of wine 1 ounce, iodine 20 grains, nitric acid 20 drops, hydrochloric acid 20 drops. It is applied with a camel's hair pencil, when the dark stain will become yellow; after this apply a solution of the hyposulphite of soda, or one of the cyanide of potassium, and the stain will quickly disappear. The linen should then be washed in soft water. Stains of nitrate of silver may be removed from paper by the same method.

CARE OF HARNESS.—T. Oliver Ayres, a practical harness-maker, Kent county, Del., contributes to the *American Agriculturist* the following suggestions:—"Harness should be kept hung up on wooden pegs in a clean dry room with a plank floor, so that it may be free from dampness. When soiled, it should be washed with Castile soap suds. Harness that is in constant use needs oiling four times a year; if only occasionally brought out, as carriage harness, &c., twice a year will be sufficient, if the washing be not neglected. To oil harness, separate all the pieces, and lay them in water until thoroughly wet through. Then wash them clean and allow them to dry sufficiently. To know when they are in a good condition for oiling, bend a strap, and if the water does not ooze out it is dry enough. Train oil (whale oil) is sometimes used, but neats-foot oil is much better. Mix with it a little lamp-black, and with a brush apply it to both sides of the straps. About six hours after oiling, wash the whole with Castile soap and warm water, let them dry, rub well with a woolen cloth and buckle them together."

Whale and most vegetable oils injure leather. Neats-foot oil, with the addition of one ounce of beeswax to the pint of oil, is the best mixture that can be used for harness. Soap suds should only be used with a sponge to wipe off the dirt; the leather must not be soaked with the suds. A good method of keeping harness in good condition and appearance, is to blacken and polish it exactly like shoe leather, then apply the mixture of neats-foot oil and beeswax.

ALLOYS OF PLATINUM.—Iron and platinum in equal parts form a crystalline alloy. Platinum dissolves in fused zinc, forming a bluish white hard alloy. Equal weights of nickel and platinum form a yellow alloy; and an alloy resembling gold in color is made of 9 parts of platinum; 16 of copper, and 1 of zinc. Lead, antimony, arsenic, gold and silver form alloys with platinum. When tin-foil and platinum are wrapped together and heated by the blow-pipe, they combine with incandescence, and zinc heated in platinum foil, before the blow-pipe, burns vividly with a slight explosion.

CLEANING GLASS.—Mix some fine whitening in a little dilute alcohol, and smear it upon the glass with a soft rag, after which rub off with chamois leather. Looking-glasses may thus be cleaned, and fly specks, &c., removed.

ZINCING IRON.—Iron to be coated with zinc is first scoured with sand in warm dilute muriatic or sulphuric acid, washed and dried. After this it is run through a bath of melted zinc, the surface of which is covered with sal-ammoniac. If the iron is covered after being scoured, with a strong solution of the common salts of tin, and dried before being dipped into the zinc, a beautiful wavy surface of zinc is obtained. Zinced iron should be nailed with zinced tacks.

TO PROTECT ANIMALS AGAINST FLIES AND INSECTS.—Walnut leaves, 4 ounces; lobelia leaves, 4 ounces; boiling water, 1 gallon. Let the mixture stand until cool; then express the fluid through cotton cloth, and add 4 ounces of the tincture of aloes. Apply a small quantity of this compound, daily, to the surface of the body, by means of a sponge.

REMEDY FOR BITES AND STINGS.—Plantain leaves (*plantago major*), 4 ounces; lobelia leaves, 2 ounces; boiling water, 1 quart. When the mixture becomes cool, bind a quantity of the herb on the affected part, and give the animal, as a drench, four or five ounces of the remaining fluid, every four hours.

Improved Hand Truck.

In taking goods on board of steamboats or discharging the same, the wharf is much of the time either higher or lower than the deck of the vessels, and the gang-plank has to be inclined accordingly, making it very difficult, when a heavy load is upon the truck, for the workman to hold it back. It not unfrequently requires two or three persons to hold the truck when descending the plank with a heavy load. To enable the workman to control the truck easily, even when loaded heavily, the brake here illustrated has been designed, which presses upon the wheel when required and readily retards its progress. It is equally applicable to trucks used for warehousing purposes. The annexed engraving illustrates the manner of applying the brake. It is double-acting, thereby having the same effect upon the wheel, whether the truck is drawn or pushed ahead of the operator. It consists of the lever, *a*, fastened to the truck frame. This lever has two pins, *b*, one above and the other below the fulcrum which work in the slots on the crescent-shaped prolongation of the brake, *c*. There is also a spring at *d* which assists in throwing the brake-block into contact with the wheel. The apparatus is worked by the rod, *e*, on the side, the end of which may be grasped by the laborer, and operated as circumstances may require. The engraving renders the invention perfectly intelligible without further comment.

The inventor, Mr. C. L. Daboll, has disposed of the right of the patent for the city and State of New York to Mr. John Roach, of the Etna Iron Works, No. 100 Goerck street, New York, where trucks may be seen with the brake applied, and where further information may be had.

Letters relating to the invention addressed to the inventor at New London, Conn., will also receive prompt attention.

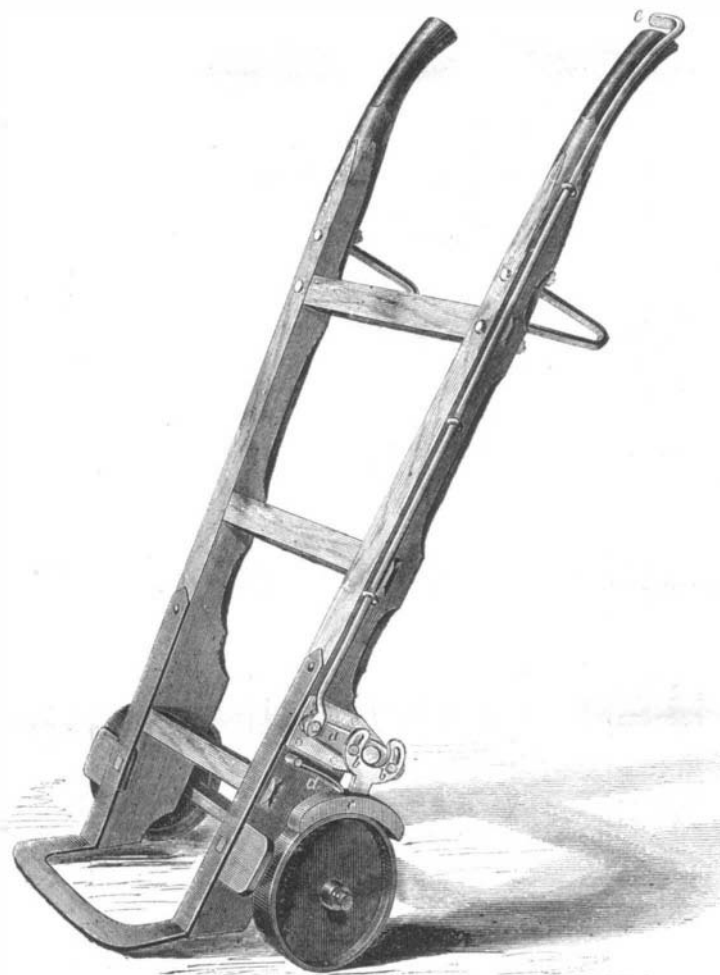
French Engines.

For a long period the French people were chiefly distinguished as mechanics for constructing fine small machinery, such as clocks, &c., and it was thought by many persons that they had not the capacity for constructing large machines, such as steam engines. Of late years, however, they have shown equal ability with Americans and Englishmen in constructing locomotives. In Paris there are large establishments in which engines are turned out which vie with those of any other country. Twenty new locomotives are now being constructed in Paris for a railway in Spain, and twelve have recently been built for a Russian railway.

Eating Habits.

The most common way to a premature grave and one of the shortest cuts to that destination is down a man's throat. There is a multitude which no man can number, daily eating immoderately, thus sapping the constitution and laying the foundation for innumerable ills and a too early grave. The wise man does it, and the fool; the virtuous and the abandoned; the kind and the cross, of all climes, are among the errorists. But there are some who are wise as to this point, and the number is increasing; the number of those who are men and women of force; who think for themselves, observe for themselves; who have vigor of intellect enough to compare causes and effects, antecedents and consequents. There is constantly coming to us the knowledge of mothers, who, by the teachings of this *Journal*, have been led to regulate their households rationally, and are reaping a rich reward in the shape of health for themselves, and what is dearer still, increasing health for their children.

The first point in the philosophy of eating is to perform that very necessary business with the greatest regularity. A young Scotch trapper, Thomas Glendy, told us thirty years ago, that the Indians, with whom he had been hunting, ate but once a day, and that was in the early evening; that then, a single individual would consume several pounds of meat, smoke his pipe, lie down to sleep, get up by the dawn, hunt all day, eating nothing until the night again. An old beau of Washington city took it into his head that eating was a trouble, and that he would perform that process but once a day. On occasions of his being invited out in the evening, he felt compelled to take something, although he had eaten his regular dinner; but then he would eat nothing at all next day. These irregularities were

**DABOLL'S BRAKE FOR HAND TRUCKS.**

very rare; he died when nearly eighty years of age, a sprightly and gallant old beau to the last. On the other hand, persons who are regularly irregular seem to live a good while. Captain Hall lately stated to the Historical Society, in this city, the case of some Esquimaux, who, being carried to sea on a cake of ice, ate absolutely nothing for the space of thirty days, when each man swallowed about thirty pounds of meat and oil, and neither burst up nor died. But observation has shown that, both as to man and beast, regularity in the hours of eating is indispensable to a healthful, thriving condition. Most articles of food require several hours to be placed in a condition to be passed out of the stomach; and if a new supply of food is introduced before this process of digestion, of conversion, is completed, the former food is not passed out until the latter has been brought to its own condition; the result of its being kept warm so long is, that it begins to decay, gas is generated, and the whole mass is corrupted. Those who eat often, who eat between meals, always have wind on the stomach and other places; but if it cannot escape, it causes a feeling of weight or oppression, and this is dyspepsia, that horrid hag which has a thousand ails in her train. Half "the girls" have dyspepsia before they are seventeen, in consequence of their everlasting nibbling at every thing eatable in the house. The most natural and healthful times for eating would seem to be at daylight, noon and sundown; the last meal being very light indeed. —*Hall's Journal of Health.*

Changing Clothing.

It has come within the observation of many a reader that serious and severe illness has been induced, and even fatal sickness caused, by a change of clothing. Injury never comes, perhaps, by putting on more or warmer clothing, but by diminishing the amount inconsiderately. The first great general rule, and always the safest, is to make the change when you first dress in the morning; if you wait until you are uncomfortably warm during the day, it is most likely to be in the early part of the afternoon. In making the change, then, there are two or three causes of disease in operation; the fact of undressing endangers a check of perspiration; the garments about to be put on may not be perfectly dry, there may be no opportunity, even if they are dry,

to warm them up to the heat of the body; and further, just about the time you have changed, the cool and damps of the afternoon and evening begin to come on, increasing until dark, while having been thrown off your guard by the warmth of the morning, you may not feel the necessity of a fire, and by tea-time you are surprised with a disagreeable chilliness running over you; then the cold has been taken, to settle in the eyes, causing weakness and watering; or in the throat, creating a raw or burning sensation at the little hollow at the bottom of the neck and top of the breast-bone; or on the covering of the lungs, to give the painful pleurisy; or in the lungs themselves, in the shape of a troublesome bronchitis or a dangerous pneumonia; or in the bowels, causing weakening diarrhea; or on the covering of the bowels, inducing peritoneal inflammation, to end probably in death in few days.

It is very unsafe to lessen the amount of clothing sooner than the first of May, and then not in quality, but in less thickness of the same material; from yarn socks to worsted; from a thick, knitted flannel shirt to one of common woolen flannel; then about the first of June, to a gauze flannel; if this is oppressive to some, then employ canton flannel. But it is certainly a great mistake for any body to wear any

thing else next the skin, even in the hottest summer weather, than woolen flannel. Silk shirts next the skin cannot be advocated on any tangible grounds; the moment a man begins to twaddle with you about "electrical influences," turn your heel upon him and set him down as a presumptive and impudent ignoramus. —*Hall's Journal of Health.*

MANUFACTURE OF PLATE GLASS.—The Lenox (Mass.) Plate-glass Works is the only manufactory of the kind in the country. The works were destroyed by fire in the summer of 1862, but were speedily re-built and in full operation again in November. What is known as "rough-plate glass," used for sky-lights, floors, &c., is manufactured here. There are used at the establishment, per month, 60 tons of sand, 300 cords of wood and 300 bushels of lime, and there are made about 5,280 feet of glass each week, averaging one half inch in thickness. All the materials for the glass are found in the neighborhood.

Up to the 13th of last April no less than 7,402,339 gallons of petroleum had been shipped from New York to foreign ports. London and Liverpool are the two great receiving ports of American petroleum—over 1,000,000 of gallons having been sent to each of these places at the date stated. In addition to the above, 3,353,608 gallons have been shipped from Portland, Boston, Philadelphia and Baltimore, making a total of 10,755,947 gallons. Our petroleum trade with foreign nations has already attained to gigantic proportions.

Improved Patent Window-sash Stop.

Nearly every traveler or tourist, when passing through a country unfamiliar to him, naturally desires to observe its general features and impress their character upon his memory. So all lovers of nature, even though the very rocks, streams and hillsides are as familiar to them as their own homesteads, yet experience delight on beholding the beauties which nature spreads before them. These pleasures are often interfered with by the miserable, shackling annoyances in the shape of fastenings on the car windows, which will neither keep the window or blind up nor down, so that the latter is continually falling and obstructing the view and also preventing the free ventilation of the car. All these disagreeable things are remedied by the adoption of the window-sash stop herewith illustrated. It consists of the metallic shoe, A, provided with a spiral spring, *a*, slipped over the stem on the shoe itself. This shoe slides in a groove, B, worked in the window rail, and moves up and down with the sash. The spring throws the shoe into forcible contact with the wood and effectually keeps the sash at any desired point. The sash works so easy, withal, that any lady may raise it as she desires. Fig. 2 is an end view of the shoe, and Fig. 3 an elevation of the shoe removed. The blind-sash is provided with the same attachments and works similarly in every situation, and will be found extremely useful. This arrangement can be applied to all windows. This invention was patented on Nov. 5, 1861, by E. G. Hildreth, and further information may be obtained by addressing him at the corner of Twenty-first and Hamilton streets, Philadelphia, Pa.

tion of this body, and Dr. Odling has recently demonstrated that two of the constituents of coal gas, light carbureted hydrogen and carbonic oxide, which are useless for lighting purposes, may, by means of the strong ignition of the two gases, be made to form this acetylene, and thus become luminiferous agents. This quite revolutionizes our ideas of the manufacture of gas. We have generally considered it important to preserve a moderate degree of heat in gasmaking in order to prevent the destruction of the other luminiferous agents; but the discovery of the formation of acetylene will render it necessary to investigate how far the production of this substance can be carried on upon a large scale and rendered

American Steamers in China.

The lucrative nature of trade in Chinese waters has induced a large number of our merchants to fit out steamships for that portion of the globe, and at this date some of the very finest vessels that ever left our ship-yards, propelled by the most economical and powerful engines our machine-shops are capable of producing, are now running there. These vessels generally entirely outstrip the English steamers in speed and far surpass them in economical working. We have received a letter from China, written by an engineer well-known in this city; and the following extracts contain items of information (relative to the practical operations of the steamers) which will be found interesting to the mercantile community:—

"The *Kiangse* is doing first-rate and making lots of money; on our last voyage, which took about thirteen days, we grossed \$20,000. The *Hu-Quang* is still on shore, and they will not be able to get her off before next high water, in April ensuing. The water has fallen 38 feet, so you can judgewhat a strong current we have to contend with—about six knots per hour. The *Fire Cracker* is also doing first-rate; she carries an immense cargo; on her last passage from Han-Kow she brought down 1,680 tons, but it has made her very crooked. Captain W. Johnson will shortly leave here for New York (by the vessel which carries this letter) to build another boat. Bob Robinson leaves for home in about a month, and I understand John Thomas takes his place. . . . About one-eighth of the foreign population of Shanghai died last summer; it was the most sickly summer they have ever had in China. Capt. Dearborn's boat (the one that Colyer is building) is only now in frame; she arrived six weeks ago, and it will take ten months to finish her. . . . The *Sunsho* has not arrived yet." [This letter was dated January 22, 1863.]

The *Kiangse* is fitted with H. Winter's rotary cut-off, and the engineer declares that he would not remove it for any other he knows of. Capt. W. Johnson, who took the *Fire Cracker* out to China, has arrived safely in New York, and is about consummating a contract for building a vessel of nearly double the

tonnage of the *Fire Cracker*.

OLD-FASHIONED HONESTY.—A gentleman states that, when a boy, he was one day in the office of his grandfather, who held a position under the Federal Government, and wishing to write, he was about taking a sheet of letter-paper from the desk. "What are you about there?" said the old gentleman. "Getting a sheet of paper," said the boy. "Put it back, sir, put it back!" exclaimed the strictly honest official, "that paper belongs to the Government of the United States!"

[It would be truly refreshing to be able to record such an instance as the above at the present time. —Eds.]

SOME ingenious German has invented a paper cup which will completely hold a draught of the hottest liquid, and can be bought for a *pfenning*. By means of this invention the good people of Berlin take up and drink at their ease, as they go along the railroad, the cups of coffee which the comfort-loving Englishmen find it impossible to swallow without scalding their throats.

A TRANSPORT vessel on a new plan has just been completed at Cherbourg, France. Thirty-six others are nearly finished on the same plan, and they are to be increased to fifty. Each vessel is capable of accommodating 1,000 men, so that, in case of necessity the flotilla at Cherbourg might transport an army of 60,000 men.

Fig. 1.

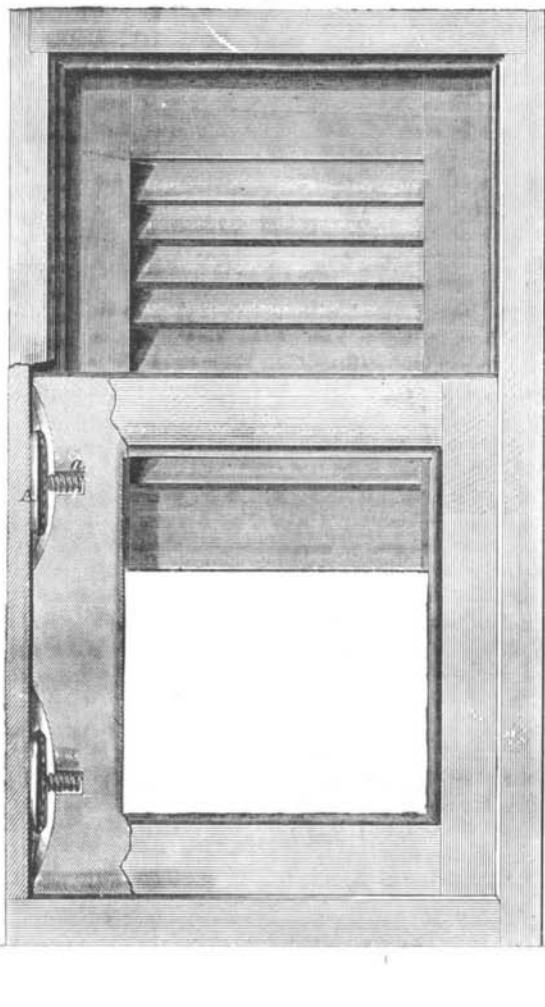
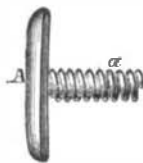


Fig. 2.



Fig. 3.



HILDRETH'S PATENT WINDOW-SASH STOP.

Discoveries in Gas Illumination.

Improvements in artificial illumination are like beacons set on the highways of civilization. The following extracts are taken from a lecture lately delivered by E. Frankland, F.R.S., before the Royal Institution of London, and copied from the *London Journal of Gas Lighting*:—

"One improvement lately made in purifying gas is the invention of the Rev. Mr. Bowditch, of Wakefield, England, the object of which is the removal of sulphur. All gas that is purified in the common way contains certain quantities of sulphur in the form of bisulphide of carbon, and probably also in that of sulphur-organic compounds. The gas may be passed in the usual manner over lime or the peroxide of iron; but, this operation does not, in the slightest degree, affect the sulphur compounds in question. During the combustion of the gas, however, the sulphur is converted into sulphurous acid, which diffuses itself in the apartment in which it is burned, and a great deal of the discomfort of which many complain in the use of gas is due to this cause. Mr. Bowditch discovered that though cold hydrate of lime will not remove these impurities, they are, to a great extent, got rid of by heating the hydrate of lime to a temperature varying from the boiling point of water up to 400° or 500° Fah.; a temperature of 400° being probably the most convenient for the development of the effects of his process. This process has been found by repeated experiments to remove all but about 2 or 3 grains of sulphur per 100 cubic feet of gas, the quantity of sulphur originally contained in the gas varying from 5 or 6 grains up to as much as 40 or 50 grains per 100 feet.

"Another new fact in connection with gas requires to be noticed, in passing, and that is the discovery of a new illuminating constituent in coal gas, recently made by M. Berthelot. This illuminating agent is a gaseous substance, called acetylene, which is produced under very peculiar circumstances. Unlike all other hydro-carbons with which we were formerly acquainted, an intense heat is favorable to the produc-

tion of this body, and Dr. Odling has recently demonstrated that two of the constituents of coal gas, light carbureted hydrogen and carbonic oxide, which are useless for lighting purposes, may, by means of the strong ignition of the two gases, be made to form this acetylene, and thus become luminiferous agents. This quite revolutionizes our ideas of the manufacture of gas. We have generally considered it important to preserve a moderate degree of heat in gasmaking in order to prevent the destruction of the other luminiferous agents; but the discovery of the formation of acetylene will render it necessary to investigate how far the production of this substance can be carried on upon a large scale and rendered

valuable for increasing the illuminating power of gas. The subject is yet in embryo; but it has an important bearing upon the future progress of gas-lighting. By passing gas through an ammoniacal solution of sub-chloride of copper, we have a red precipitate formed, which is a compound of this acetylene with copper. By adding some dilute hydro-chloric acid there is a considerable evolution of gas, which burns with a most intensely luminous flame. Acetylene and olefant gas contain in equal volumes the same amount of carbon, but the former contains only half as much hydrogen as the latter; consequently, the illuminating power of acetylene is probably at least double that of olefant gas.

"The compound of acetylene with copper is a body which is readily decomposed with explosion both by heat and friction as well as by percussion. When it attains a certain heat it explodes with considerable violence, and the same effect may be produced by friction. It has been demonstrated recently that this acetylde of copper can be produced by the passage of ordinary coal-gas, containing, as it does, a trace of ammonia, through copper or brass tubes; and explosions which have taken place through cleaning out such tubes, resulting in serious injury to workmen, have been doubtless due to the presence of this acetylde of copper."