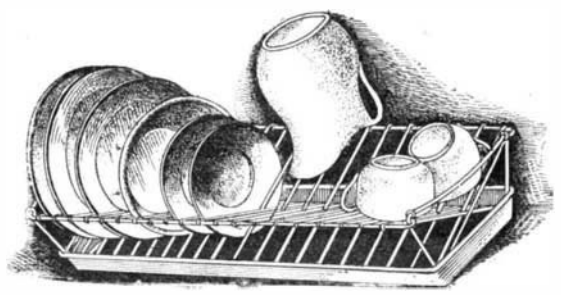
Patent Department

DISH DRAINER.

A novel utensil which should prove very useful in the household has just been invented by Mr. James P. Tibbits, of 509 Mount Hope Place, Tremont, N. Y.

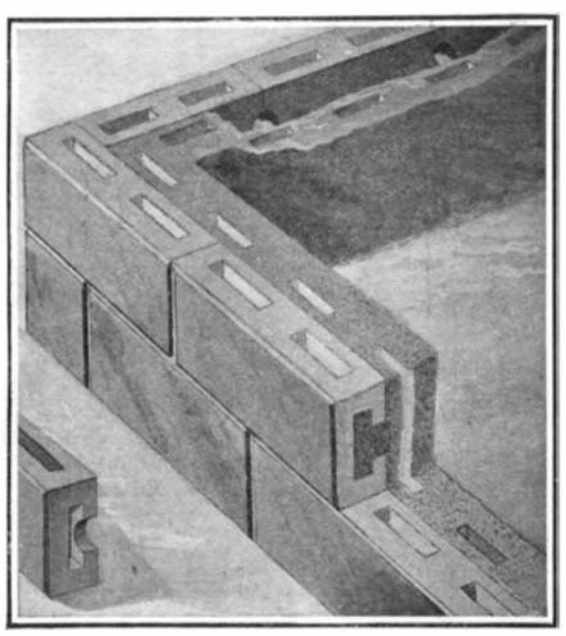


DISH DRAINER.

It is a device for holding plates, saucers, and other dishes in such position as to allow them to drain thoroughly. The utensil comprises a rack in which the dishes are supported and a pan to catch the drip. The rack is formed of two end frames of wire connected at the top and bottom by wire side members. A series of flexible span wires are run diagonally across from each upper side member to the opposite lower member. In order to keep these span wires in place, the side members are bent to a sinuous form. In use the dishes are inserted between the span wires. A considerable number of dishes can thus be accommodated in a comparatively small space. It will be noticed that the span wires touch the dishes at a comparatively small area of contact, and further, that the span wires being of metal, there is nothing to prevent the thorough cleansing of the dishes. Moreover, it will be observed that while each dish is supported at four points of contact, the extreme peripheral edge of each dish is entirely free, so that the drainage is perfect, also that each dish is, by virtue of its own weight, retained in a condition of stable equilibrium and is not easily caused to rock, if the rack be shaken or inclined. If desired, the dishes may be first washed or partially washed before being inserted in the rack, or as some prefer, they may be placed in the rack exactly as they come from the table, and then cleansed by pouring boiling water over them.

AN IMPROVED CONCRETE WALL CONSTRUCTION.

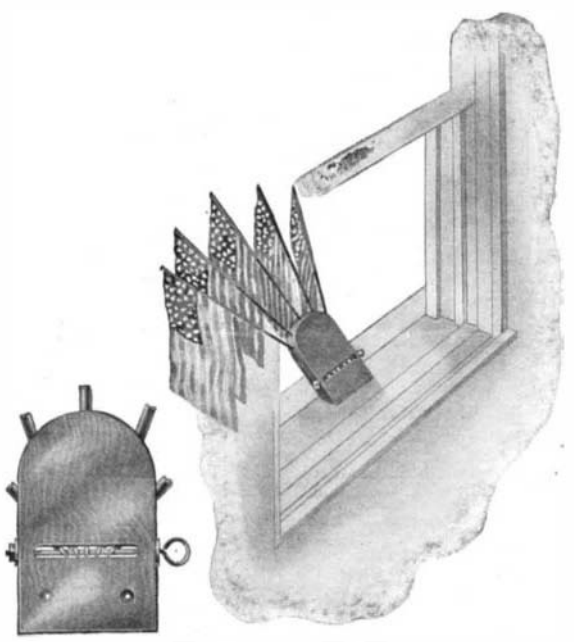
As concrete absorbs moisture as readily as brick, it is obvious that dampness will penetrate a solid concrete wall and appear as beads or sweat on the plastering. For this reason concrete building blocks are formed with air spaces. But this does not entirely remedy the defect, because certain sections of the block which divide the air spaces form a solid mass extending from the outer to the inner side of the block, permitting the moisture to percolate unobstructed to the inner surface. To overcome this, as well as other difficulties generally encountered, Mr. John G. von Hofe, of 122 Elm Street, Long Island City, N. Y., has invented a new type of hollow building block and a new form of wall construction, which we illustrate in the accompanying engraving—a veneer of hollow blocks bonded to an air-spaced monolith mass. The block is narrow, being adapted to be used as an ornamental veneer for a continuous concrete wall. A recess is molded in the end of each block with a semicircular opening in the rear wall, and when two blocks are placed end to end, the adjacent recesses form a chamber, to which access is provided at the rear through a circular port formed by the two adjacent openings. This chamber being larger than the port serves as an undercut cavity or T-shaped lock. In constructing the wall the veneer blocks are set up in courses which break joints in the usual manner, and the concrete is poured in between them and a temporary backing. The material flows into the undercut cavities, securely bonding the blocks to the concrete wall. Each block is formed with air spaces, which register with similar spaces in the courses above and below, so that continuous vertical air passages are formed throughout the wall. The concrete wall is also poured to form air passages back of each joint in the veneering, so that moisture seeping through the joint will be arrested by the air space. The invention can be applied to face brick, terra cotta, or cement blocks, and the face of the blocks can be molded to represent cut or rough stone, or any other desired pattern. The system may be employed on the tallest reinforced concrete structure, eliminating the expense of forming front panels for the face of the wall, while plain or ornamental designs can be molded at a cost only a trifle over that of the concrete displaced by the blocks.



AN IMPROVED CONCRETE WALL CONSTRUCTION.

A NOVEL FLAG HOLDER.

The accompanying engraving illustrates a novel device for displaying flags for decorative purposes. The device is of very simple design, adapted to be attached either to a window or a door casing, or to posts and pillars in halls, or it may be used on floats and wagons. It consists of a block formed with a beveled edge at one end, so as to enable the flags to extend outwardly when attached to a support. The opposite

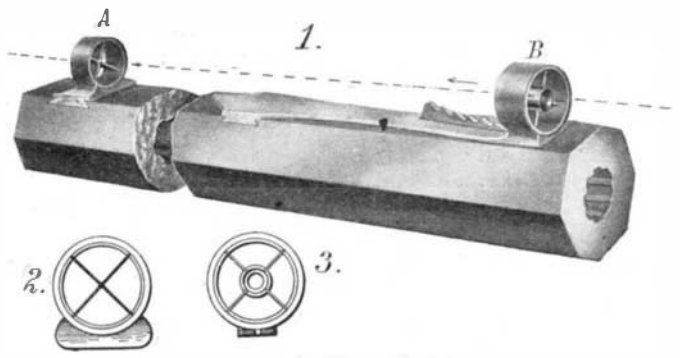


A NOVEL FLAG HOLDER.

end of the block, or standard, is rounded, and drilled into this rounded edge are a series of holes which extend to a slot formed in the face of the standard. These holes are adapted to receive the flagstaffs. In order to prevent the flag from slipping out of these sockets, a screw eye is fastened into the end of each staff, and a locking bar which extends transversely through the standard is adapted to engage these screw eyes, thus holding the flags firmly in place. It will be noted that the flag holder is exceedingly simple and inexpensive in construction, that it requires no skill to adjust it to its support, to which it may be secured by means of screws, and that when once secured in place it will remain in such position through any kind of weather without injury to the holder. Moreover, the holder dispenses with the necessity of nailing the flagstaffs to a window or casing, which would soon render the flags unfit for use, but on the contrary, with this holder the flags may be repeatedly used without injury to the flagstaffs, and without danger of their being stolen by passersby. The inventor of this novel flag holder is N. S. Makepeace, 213 East Monument Avenue, Dayton, Ohio.

A NEW RIFLE SIGHT.

A "bead and aperture" sighting system for firearms that possesses all the advantages of the old "peep and globe" sights without having any of their bad features has been invented by Mr. Charles G. Thunen, of Oroville, Cal. Both front and rear sights are cased in a circular cover, so that all danger of injury to the "bead" or to the "peep" is done away with. The objection that an aperture sight is a hindrance to quick shooting is removed by an ingenious bit of construction that enables one to see not only the mark, but also its surroundings, giving an aim that is quite as accurate as that obtained with the "Buckhorn," or similar type of open sporting sight, and in a much shorter time. The following is an explanation of the drawing: Fig. 1 is an elevation of the improvement as applied to the barrel of a gun. Fig. 2 is an enlarged rear elevation of the front sight. Fig. 3 is an enlarged rear elevation of the rear sight, the spring plate being shown in section. The front sight *A* and the rear sight *B* are mounted in the usual manner on the barrel of the rifle or other firearm on which the sights are used. The front sight is held in a ring having a dovetailed base fitting a correspondingly



A NEW RIFLE SIGHT.

shaped groove on the barrel, in the usual manner for fitting sights. Within the ring is fitted a tubular support carrying cross strips, of which one is provided at its center with a slot for receiving a portion of the other strip, the latter having at the intersection of the two strips a bead of aluminium or some similar metal. The outer ends of the strips are fitted into slots in the tubular support, so that the latter carries the cross strips, one of which centrally supports the bead. The strips are arranged at right angles one to the other, and are preferably placed at an angle of 45 deg. to the vertical.

The rear sight is mounted on a ring held on the shell spring-plate and has the usual notched plate for adjusting the elevation. Within the ring is fitted a tubular support carrying cross strips centrally supporting a sight-tube, the axis of which coincides with the axis of its tubular support and with the axis of the bead of the front sight. These cross strips are also arranged at right angles, one to the other, and are also preferably placed at an angle of forty-five degrees to the vertical. This arrangement gives a set of sights which allows of simple and durable construction, and is arranged to stand rough usage. It also permits an exceedingly accurate aim to be taken without the danger of blurring, owing to the settling of rain or mist in the aperture. Since the metal parts making the actual sighting system are extremely thin, there is no danger of the usual *burring*, which is so annoying with sights of heavier construction.

CARPET STRETCHER.

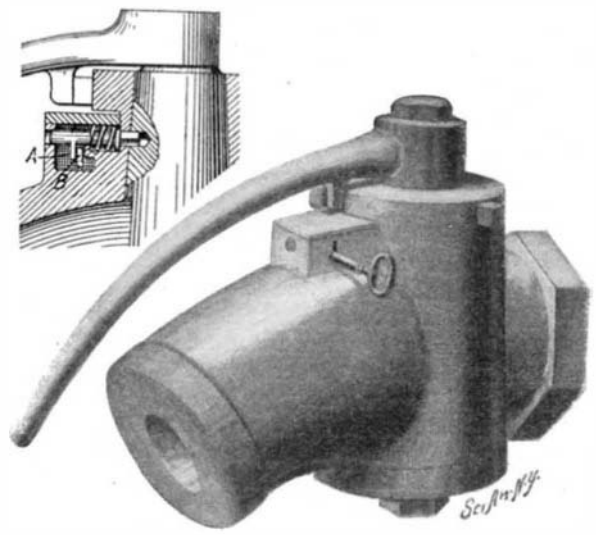
A most powerful carpet stretcher has recently been invented by Mr. John Driver, of San Leandro, Cal. The device belongs to the type adapted to be pushed forward by knee pressure, and its operation is clearly illustrated in the accompanying engraving. It comprises a handle tapered at one end to enter a socket in a claw holder, while the opposite end is secured to a plate of L shape on which the knee cushion is supported. The claw holder is provided with a forked head at its outer end, in which a pair of toothed plates are secured. These toothed plates are spaced apart by a block of wood, which wedges them into the forked head. In this position they are also held by means of screws. The L-shaped plate at the opposite end of the stretcher is arranged to extend under the knee cushion, so that when it is placed upon the floor it will raise the cushion slightly above the carpet to prevent it from wearing; and since the plate is of

CARPET STRETCHER.

metal, it will not offer as much friction as would the knee cushion, which is provided with a leather covering. In using the invention, the teeth are set in the carpet at a requisite distance from its edge, and then with the plate at the opposite end resting on the floor, the operator forces the device forward either by a steady pressure or by a succession of blows, until the carpet is stretched to the required degree. A most powerful pressure can thus be secured. It has been found in practice that with this stretcher the operator can move a weight of over 300 pounds when placed on a loose strip of carpet, and also that the tacks may be pulled up on the opposite side of the room if the operator uses too much force. One of the important advantages of this stretcher is that it may be held with the knee, permitting the operator to use both hands to drive tacks.

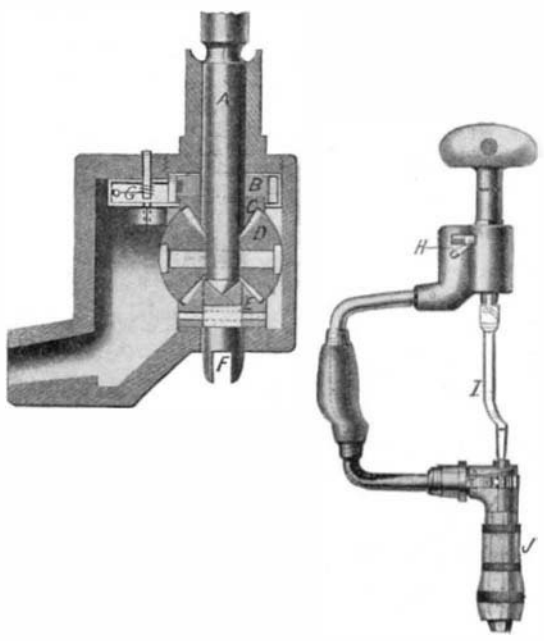
SAFETY COCK.

A patent has recently been secured by Mr. James C. Stratiff, 1322 Pennsylvania Avenue, Tyrone, Pa., on a



SAFETY COCK.

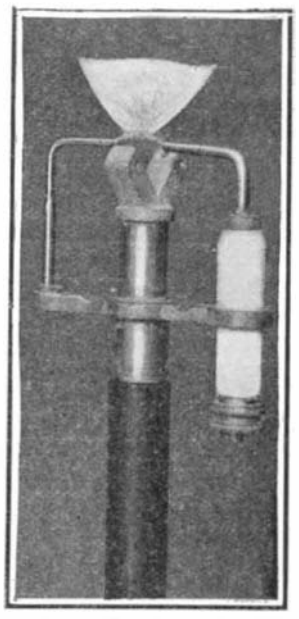
cock provided with means for locking the plug, so that it cannot be tampered with by an unauthorized person. The invention is particularly adapted for use on angle cocks, such as are commonly employed with an air-brake system. The details of the locking mechanism are clearly shown in the accompanying engraving. A chamber is formed on the body of the cock to one side of the plug. Mounted in this chamber is a locking bar or bolt, which is adapted to pass through an opening in the wall of the chamber and into a recess in the plug. In this position the bolt is held by a coiled spring. Depending from the bolt is a projection, which is adapted to be engaged by a key. The key is passed through a keyhole in one side of the chamber, and its inner end is supported in a recess in the opposite side of the casing. By turning this key the bolt may be withdrawn from engagement with the plug, and the latter may then be turned by operating the handle with which it is provided. This handle is formed with a projection which is adapted to engage a pair of stops, and thus limit the movement of the plug. When the plug is turned to close the cock, it is stopped by the stop-piece in such position that the recess therein is brought into alinement with the bolt, and the latter is thereupon forced in by the spring, engaging the plug and holding it against rotation. When in this position, it is evident that the plug cannot be turned except by a person provided with the proper key. While this invention is particularly adapted for an air-brake cock, it will be obvious that it may be applied to any cock of the plug type.



AN IMPROVED BIT BRACE.

ELECTRIC GAS-LIGHTER FOR ACETYLENE AUTOMOBILE LAMPS.

A simple and ingenious little appliance for making it possible to light the gas lamps of an automobile by working a switch on the dashboard is illustrated herewith. This attachment consists of a horizontal arm which fits tightly upon the slightly tapered pipe of the burner and which supports, at each end, a right-angled wire sparking point as shown. The points face each other above the burner, one of them being supported in a porcelain insulator which is securely fastened and held from turning. Both points, however, can be turned to one side if at any time it is necessary to remove the lava tip, and they can also be adjusted slightly in height by turning them around. The insulated sparking point is connected by a wire to one side of a two-point switch on the dashboard, the other side being connected to one of the spark plugs and the movable arm of the switch being connected to a secondary terminal of the spark coil. When it is desired to light the gas, by changing the switch, the spark is diverted from the plug to the gas-lighter. This does not interfere with the running of the engine, as it is only done momentarily, and as soon as the gas is lighted, the switch is turned back. The high-tension current, after jumping the gap at the burner, returns to the ground terminal of the spark coil, since the other point of the gas-lighter is grounded. If it is desired to light two gas lamps at the front of the car, a three-point switch is used, and the second lighter is connected to one of the points of the switch in a similar manner to that just described. As the wires of the lighter are rather large and are not pointed at their ends, a series of arch-shaped sparks are obtained, which readily light the gas although the points are below the bottom of the flame and hence are not subjected to its intense heat.



ELECTRIC GAS-LIGHTER FOR ACETYLENE AUTOMOBILE LAMPS.

The inventors of this new device are Messrs. Kapp and Alviset, of Portchester, N. Y.

AN IMPROVED BIT BRACE.

With the ordinary ratchet bit brace, when operating in a corner, or in a place where the sweep must be oscillated back and forth, instead of making a full turn, only the forward stroke is effective in driving the bit into the wood, the return stroke being used to move the pawl to a new hold on the ratchet. When beginning to bore the hole, the operator must hold the bit with one hand until it is sufficiently imbedded in the wood to overcome the friction of the pawl upon the ratchet during the return stroke. This is not necessary with the new bit brace which is here illustrated; for it operates to drive the bit continuously both on the forward and the return strokes. The construction of this bit brace is similar to that of the ordinary brace, except for a ratchet attachment at the upper end of the sweep. This improvement is shown clearly in the cross-sectional view. The head of the brace is secured to a shaft *A* on which is mounted a ratchet *B* and a bevel gear *C*. The latter are keyed to each other, but are adapted to move freely on the shaft. Engaging the bevel gear *C* are a pair of bevel gears *D* securely fastened to the shaft *A*, and these in turn mesh with a fourth bevel gear *E*, which is secured to a short shaft *F*. The latter projects through the casing in which the gears are contained, and is formed with a forked head. The ratchet *B* is engaged on opposite sides by pawls *G*, which may be thrown into or out of engagement by means of a swivel catch *H*. The casing which contains this gearing is secured to the upper end of the sweep. The lower end of the brace is of standard construction, except that the spindle is provided with a slotted upper end. In use when it is possible to give a full turn to the sweep, the brace operates the same as the standard ratchet brace; but when working in a corner, a connecting rod *I* is fitted between the forked shaft *F* and the slot in the spindle. This is shown in outline in our engraving, indicating that the rod is removable. Then one or other of the pawls *G* is thrown into engagement with the ratchet *B*, according as to whether the bit is to be turned to the right or the left. Now, on oscillating the sweep back and forth, the pawl of the lower ratchet will first act to turn the spindle in the usual manner, and then the pawl *G*, operating through the medium of the connecting rod *I*, will serve to continue this movement while the first pawl is reset. Thus the operation will continue with the upper and lower ratchets alternately driving the bit. A patent on this bit brace has been secured by Messrs. Karlson & Gran, 134 Oak Street, Chicago, Ill.

Brief Notes Concerning Inventions.

A new method of preserving milk in closed vessels for an indefinite period has been perfected by an inventor of London. The process consists in eliminating the air and replacing it by carbonic acid gas. Prof. Macfayden, the bacteriologist, has asserted that if all the micro-organisms could be excluded, milk would never go sour, and by aeration this claim has been substantiated. Carbonic-acid gas possesses decided antiseptic qualities, and is harmless when consumed with food. In this manner milk can be stored in bottles or other similarly sealed vessels for a prolonged period without souring, as experiments have demonstrated. Similarly, owing to the antiseptic properties of the gas, aeration completes sterilization carried out by the dairyman. In the case of those who do not like the flavor of aerated drinks, the milk can be easily stilled by pouring it into an open vessel such as a glass or jug and leaving it exposed to the air for a short time.

A new toy brought out for the holiday trade is a gas cannon. It is alleged to be entirely safe and is intended to amuse the small boy. The cannon is mounted on a box and the latter contains a small acetylene gas generator. It is supplied with a safety device rendering accidents and injury to the tiny operators quite impossible. The gas is led to the cannon through a tube and when it is loaded with a small ball of wood, the discharge is effected by an electric spark.

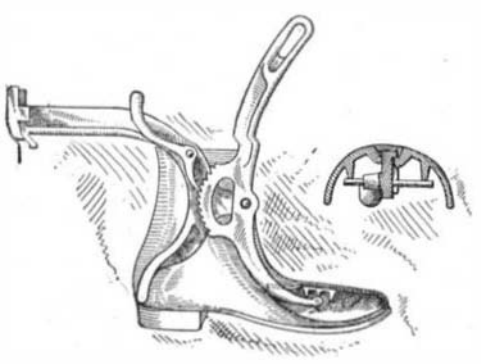
ODDITIES IN INVENTIONS.

Fountain Blacking Brush.—A novel blacking brush has recently been invented, which is provided with a reservoir for water and a means for conveying this water to the bristles of the brush at the will of the operator. The reservoir, which is shown in section in the accompanying engraving, is placed directly over the brush proper, and at its lower end is provided with an outlet normally closed by a valve. The valve is

FOUNTAIN BLACKING BRUSH.

connected to a thumb-piece situated in the handle of the brush, and is normally kept in closed position by a spring. In use, when the operator desires to admit some of the water to the brush, he depresses the thumb-piece, opening the valve, and permitting the water to flow into a chamber directly above the bristles. Extending through the bottom of this chamber are a series of small ducts, which distribute the water to the bristles.

Shoe Holder.—A resident of Chicago has invented a simple holder for shoes, which may be readily adjusted to different sizes of shoes, and which will automatically regulate itself to right and left shoes. The device will exert a uniform pressure upon the entire toe and instep of the shoe, supporting and stretching these parts while the shoe is being shined or polished. The construction of the holder is clearly indicated in the accompanying engraving. The toe piece is detachable, permitting the substitution of different sizes of toe pieces to fit men's, ladies', and children's shoes. In order that the toe piece may have free movement to conform to the shape of the front portion of the toe of every shoe, it is made capable of a partial rotary movement in a horizontal plane, that is on a vertical axis.



SHOE HOLDER.