

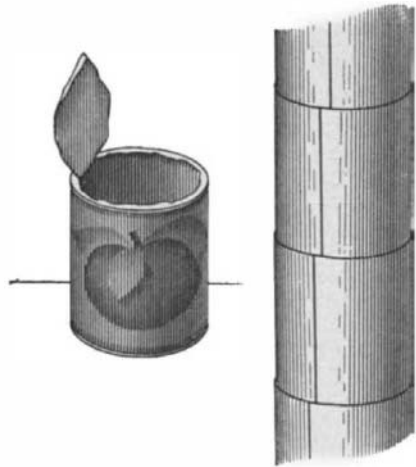
taken and slipped on the nails, and arranged as shown in Fig. 2, the long slats forming a cross and the short slats arranged horizontally. After the slats have been assembled, the point of the nail can be riveted, holding the slats together, and producing an article of rigid construction, as shown in the photograph.

The same can be stained or painted at a small cost. While the slats are fairly well planed, the appearance of the article can be improved by planing the slats a trifle more before assembling them.

A TIN CAN LEADER.

BY WILLIAM C. M'KENZIE.

A friend of mine who hates to see anything go to waste has found an excellent use for old tin cans. The rain pipes or leaders of his house are all home made, and built up of tomato cans. He claims that



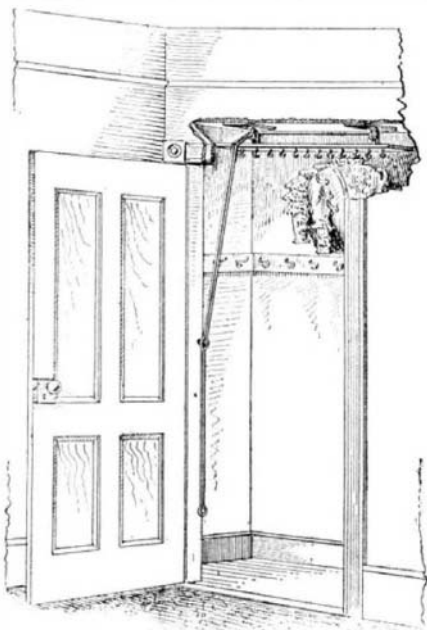
A LEADER MADE OF OLD TIN CANS.

they are much more satisfactory than the ordinary galvanized iron leader, for the reason that they were thickly coated with paint on the inside as they were built up can by can. The first step in the operation was to remove the top and bottom of each can. The solder was melted off by placing the cans on a hot stove. After the tops and bottoms dropped off, one end of each can was expanded slightly so as to receive the end of the next can, which was fitted in, to a depth of about a quarter of an inch. Then they were soldered together and, as an extra precaution, the longitudinal seam of each was re-soldered so as to close any leak that may have been sprung during the process of removing the top and bottom of the can. To increase the strength of the leader the cans were so arranged that the longitudinal seams of the successive sections were staggered as shown in the illustration so as to form a symmetrical and regular spiral running around the leader. Each can as it was soldered to the leader was painted on the inside wall with a thick coat of paint, special attention being given to the joints. After the leader was completed the outside also was protected with several coats of paint.

CONVENIENT HANGER FOR THE CLOTHES CLOSET.

BY MRS. T. G. HOSIER.

The accompanying illustration shows a hanger, for shirtwaists and other garments, located in the upper part of a clothes closet to utilize space that is usually



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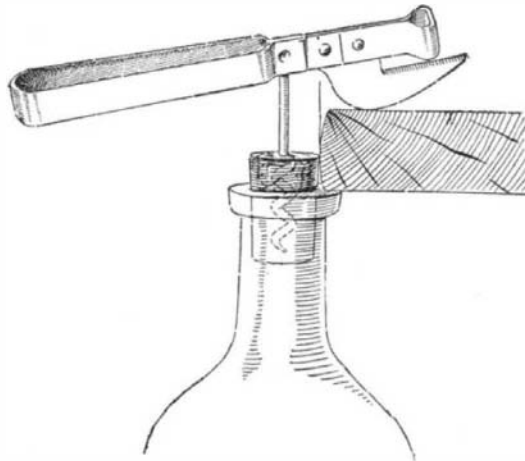
wasted. The hanger is so placed that garments hung thereon will not interfere with clothing that is hung on the usual hooks. But it may be lowered wherever desired so as to provide access to the garments thereon.

The boards are fastened to the ceiling of the closet and are provided with pulleys one of which is a double pulley to receive its own cord and the cord running

over the other pulley as well. The cords are secured at one end by means of screw eyes to the top of a board hanger which is provided on the under side with a row of hooks properly spaced to support the shirtwaists or other garments, one alongside the other, without crumpling them. The cords are fastened together at the opposite end and are provided with two loops for engagement with a hook fastened to the side of the door casing. One loop when caught on the hook holds the hanger in its highest position, as illustrated, while the other is used when the hanger is lowered for the purpose of hanging or removing a garment. The hanger may be raised or lowered at will by operating the cords.

SIMPLE METHOD OF PULLING A CORK.

If you own a corkscrew of the kind illustrated, you



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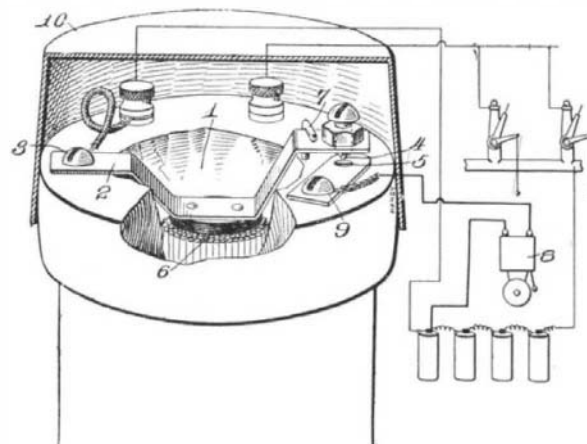
can easily remove the tightest cork without fear of soiling your clothes. After turning the screw well into the cork, place the lip of the bottle under the edge of a table or shelf, then with the upper surface of the table as a rest, lift up on the handle of the implement, and the cork will follow smoothly.

ALARM FOR BATTERIES OF ELECTRIC GAS LIGHTERS.

BY L. G. HANDY.

My home is equipped with electric sparking devices for lighting the gas jets. The system as I found it had one serious drawback, namely, that in some mysterious way the current would become short circuited and exhaust and ruin the battery. Upon investigation, I found that a device could be bought which would give an alarm in time to correct the short circuit before the battery was affected, but that the device was attached to and made a part of a spark coil. I proceeded to construct one on the spark coil which formed part of the lighting system. It is an extremely simple arrangement and can be made in a few minutes.

Cut away the wood of the end of the spark coil as shown at 1 in the illustration, so as to get to the ends of the core wires. Bend a piece of thin sheet spring brass $\frac{3}{8}$ inch wide into the shape shown at 2. Fasten one end with a screw 3 to the end of the coil. Fix a platinum contact point to the under side of the opposite end at 4. Under this contact place the co-working contact 5. The contacts taken from an old bell will be found satisfactory. To the under side of the bent portion of the piece 2 secure a small disk of soft iron 6. Care must be taken to bend the piece 2 so as to bring the iron against the core at the same



ALARM FOR THE BATTERY OF AN ELECTRIC GAS LIGHTER.

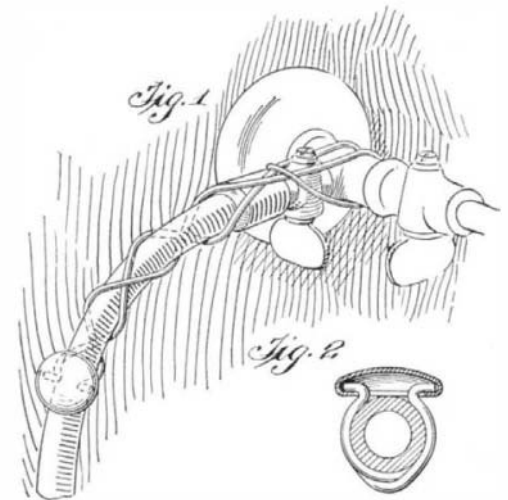
time that the contact is made at the platinum points. Arrange a small stop 7 to prevent the iron rising too far from the core. The movement at the contact points should not be more than $\frac{1}{16}$ inch, and the spring of the piece 2 should be very light. Place a small bell or buzzer 8 at any convenient point to give the alarm. This should be connected to the device as shown; one of the posts on the coil is connected by insulated wire to one of the contacts as at 3, the opposite contact 9 is connected to one side of the bell. The return wire is connected to the battery so as to

place only a single cell in the alarm circuit. A cap 10 of pasteboard or other material must be used to keep out the dust.

This device has been in use upward of three years, and has saved the battery on several occasions.

GAS-TUBE SUPPORT.

To prevent your gas tube from breaking where it hangs from the fixture, use a piece of spring-brass wire, 16 gage, 18 inches long. Fold this double, and wrap about the fixture as illustrated. Bend the free ends outward, and set into the under side of a large paper-tack head or similar article as in Fig. 2. This arrangement, if neatly executed, will support the tube



GAS-TUBE SUPPORT.

in a graceful curve. It is extremely simple, and will not prevent removal of the tube.

SUBSTITUTE FOR ROD THREADER.

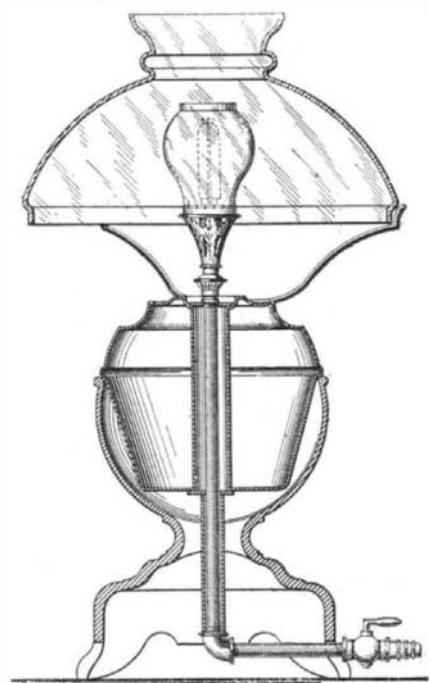
Not long ago the writer hit upon the following idea for a rod threader for quick and accurate work on rods from $\frac{1}{16}$ to $\frac{3}{8}$ inch in diameter. All one needs is a bench or blacksmith's drill, with a three-jawed chuck. Clamp the rod to be threaded in the chuck of the drill. Place the die in the holder as usual, hold the die against the end of the rod to be threaded, and turn the drill at slow speed. Those trying this method will find it a much quicker and better way than threading by hand in the usual manner.

DROP LIGHT MADE FROM AN OIL LAMP.

BY B. A. JOHNS.

Since gas has supplanted kerosene for illuminating purposes many quaint and highly prized oil lamps have been put out of commission. These lamps may be changed into attractive drop-lamps in the manner illustrated herewith.

A center-draft lamp is best adapted for the purpose, but any kind will answer. The hole on top of the oil reservoir is first soldered up, and through the central draft tube a small gas pipe is placed, with a threaded end on top, to receive the burner. Any mantled burner may be used. Under the burner is placed a washer, resting on top of the oil reservoir, which keeps the burner in place. At the lower end



DROP LIGHT MADE FROM AN OIL LAMP.

of the gas-pipe an elbow is screwed on. Between this elbow and the bottom of the oil reservoir is placed a short piece of pipe, so that, when the elbow is screwed up, the tube will be tight, thereby holding burner secure to the oil reservoir. From the elbow, a short piece of gas pipe is screwed in, with the ordinary stop-cock and attachment for the gas hose.