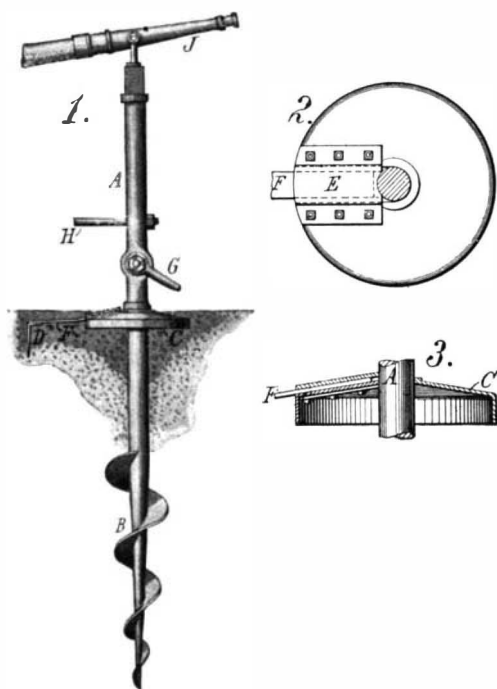


**SHORE ANCHOR.**

For temporarily holding a vessel, raft, or other floating object close to shore it is often found necessary to provide an anchor post, such as shown in the accompanying engraving.

**SHORE ANCHOR.**

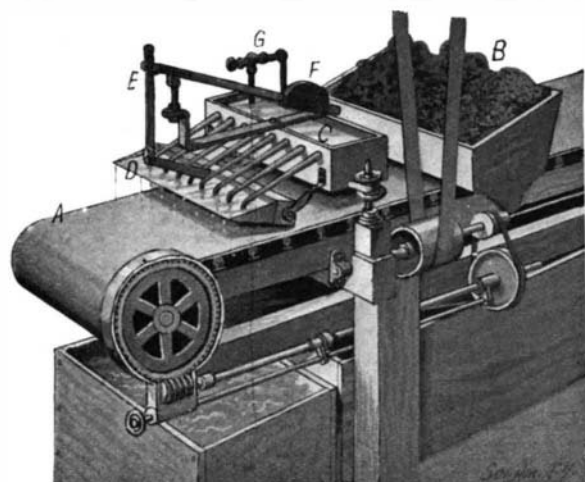
The post in the illustration embodies many improvements over the ordinary construction. The main body *A* of the post is formed with a tapered extension *B*, on which is a broad spiral thread, to enable the extension to be screwed into the ground. Mounted on the post is a circular base plate *C*, formed with a downwardly projecting peripheral flange. The plate *C* is radially slotted at one side to permit of the lateral insertion of the post therethrough to the central opening. The slot is closed by a pair of clamping plates *E*, which clamp between them an anchor plate *D*.

The upper end of the anchor post is squared to receive the wrench used in screwing it into the ground. As the post is screwed in a collar thereon bears against the plate *C*, imbedding it, with the anchor plate *D*, into the ground. A clevis *G* on the post affords means for securing a cable from the vessel. Where a number of anchor posts are used they may be braced together with a coupling bar *H*. Aside from its use for vessels, the post may be employed as a support for temporary or permanent buildings where the soil is loose and easily penetrated, also it is available in hydraulic mining or road bed grading, for which service a swivel connection is used to support a hose nozzle *J*. Mr. John J. Ryan, of 1417 Linden Avenue, Memphis, Tenn., has secured a patent on this anchor.

ORE CONCENTRATOR.

With a view of preventing the fine material from being washed away with the tailings, and thus insuring a complete saving of the concentrates, an ore concentrator has recently been invented in which the water is intermittently applied, permitting the concentrates to pass the impact line undisturbed. The water first washes the concentrates forward, then flowing back down upon the apron washes out the material contained therein.

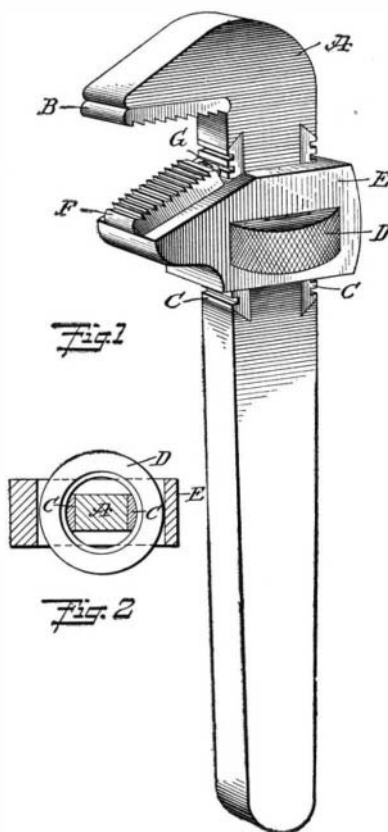
In the accompanying engraving the apron or belt which carries the material to be concentrated is indicated at *A*. The belt inclines upward in the direction of travel, that is, toward the forward end. At *B* is a hopper, which serves to distribute the material onto

**ORE CONCENTRATOR.**

the belt. In front of the distributor is a reservoir *C*, from which water is fed through a series of chutes to a trough *D*. The latter is journaled in brackets projecting from the reservoir. By means of a link *E* the trough is connected to a lever, which carries the counterweight *F*. Normally, this counterweight serves to keep the trough in position to hold the water that pours in from the reservoir, but when the trough is filled to the brim, the counterweight is overbalanced and the trough is tilted over, spilling the water in a sheet on the belt below. As stated above, such portion of the concentrates as has passed the impact line of the water during the time of filling is washed forward, and then the water flowing smoothly down the inclined apron effectively washes the onward-moving material. In the meantime the trough recovers its normal position immediately, and begins to fill for the next discharge. The inventor of this improved ore concentrator is Mr. Gilbert H. Davidson, of Morenci, Ariz.

AN IMPROVED PIPE WRENCH.

The wrench illustrated herewith is formed with a slidable jaw which enables it to grip round surfaces. No retaining pins or other detachable retaining devices are used and an efficient pipe wrench is thus provided with few loose parts. Formed on the main body *A* of the wrench is a fixed jaw *B*. Dovetailed into opposite sides of the body are a pair of detachable racks *C*, which are adapted to mesh with the thread of the nut *D*. This nut is fitted in a frame *E*, which in turn is mounted to slide along the body or shank of the wrench. The frame *E* is extended at one side, and in the inclined upper face of this extension a n undercut guide way is formed adapted to receive the slidable jaw *F*. A spring-pressed pin in the jaw bears against the shank *A*, and holds the jaw in its outermost position. In use the nut *D* is adjusted to close the jaws onto the work, and then when the wrench is operated, the sliding jaw moves inward, jamming the work against the upper jaw. Mr. Harvey N. Rothweiler, of Seattle, Wash., is the inventor of this improved pipe wrench.

**AN IMPROVED PIPE WRENCH.****Waterproof Mitts.**

The five- or ten-cent cotton mitts which are so largely bought by workmen may be waterproofed by dipping them in melted paraffine; or if a thinner coat is preferred, and only on the palm of the mitts, melted paraffine may be brushed over their surface. For handling damp bricks, for working with plaster, or cement, paraffined mitts are far superior to the original. Women will find them valuable when scrubbing floors, setting out plants, and so forth. Leather gloves, for use by farmers in hauling damp corn fodder, or any material that is wet, may be waterproofed in the same way. The coating of paraffine may be renewed as often as the surface needs it. Mitts and gloves—even boots for ditchers—treated with paraffine last longer, because the water can do them little damage. The comfort the wearer experiences by using waterproofed mitts or gloves far outweighs the bother of melting and applying the paraffine.

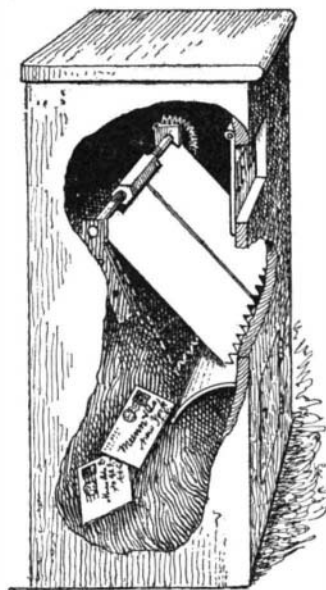
Lamp Globes for Darning.

A burnt-out electric light globe makes a fine accessory, as a darning tool, to my lady's sewing basket, if the vacuum is first destroyed. To overcome the vacuum, a hole must be made through the base. This can easily be accomplished by a small drill, or even by a stiff wire, or hat-pin. Letting air into the bulb will not prevent its breaking, but does remove all possibility of the unpleasant, if not dangerous effect that might attend the equalization of air pressures should a bulb with a vacuum break in a woman's hands. If the plaster in the base be taken out, a hole sufficiently large is obtained for the insertion of big

needles. The bulb thus becomes a convenient receptacle. A mixture of plaster of Paris and fine sawdust may be poured into the bulb if there is no objection to the extra weight. The mixture may be colored; on a pleasing variety can be gotten by sawdusts of dark and light woods intermingled. But this sacrifices the lightness of the bulb, which, when used for darning hose, is highly appreciated by the seamstress.

ATTACHMENT FOR LETTER BOXES.

The accompanying engraving illustrates a simple attachment, which may be placed in a letter box to prevent the letters from being removed through the letter slot. It is particularly adapted for boxes that are secured to the doors of rooms or apartments, or in the walls of vestibules. Such boxes are not provided with any safeguards against sneak thieves, and it is an easy matter to rob the boxes by means of long pins or nippers. The attachment consists of a plate mounted within the box, and journaled in brackets secured to the sides of the box. The plate, which for convenience is formed of two leaves, one slidable upon the other, so that it may be lengthened or reduced at will, is inclined forward and downward, and its forward serrated edge normally rests against the front wall of the box below the letter slot. A light spring serves to hold the plate in this position. When a letter is introduced into the box the plate yields before it, and the letter drops onto a deflector plate, immediately below. This serves to throw the letter toward the rear of the box, out of reach from the slot. The play of the swinging plate is limited by a stop pin, so that it can only move far enough to admit the letters. The attachment is the invention of Mr. Eugene A. Cassot, of 503 West 146th Street, New York city.

**ATTACHMENT FOR LETTER BOXES.****A SIMPLE PACKAGE TIE.**

Pictured in the accompanying engraving is a simple device adapted to facilitate the tying and untying of packages. Although more particularly designed for the use of postmen in tying up packages of letters, its value is not limited to this use alone. The tie is composed of a strip of spring metal which is bent upon itself at one end to form a tongue. Fitted between this tongue and the body of the strip is an intermediate tongue. A rivet passed through the strip and the two tongues serves to hold the latter in place and prevent them from unduly separating. At the opposite end of the strip is an aperture, and an aperture is also formed close to the tongues. A cord is made fast to the tie by knotting it through these apertures. When tying up a package the free ends are respectively carried transversely and longitudinally thereabout, and are caught beneath the tongues. The transverse cord is preferably secured under the upper tongue, and the longitudinal cord is then passed over the other cord and under the intermediate tongue. Thus a binding action is secured which renders remote the possibility of the cords slipping. If desired the cords may be crossed at the underside of the package. When untying the package, both free ends of the cord are simultaneously pulled from under the tongues, freeing the package as easily and quickly as if the cord were cut with scissors. A patent on this improved tie has been secured by Dr. E. L. Sharpe, of Pleasanton, Tex.

**A SIMPLE PACKAGE TIE.**