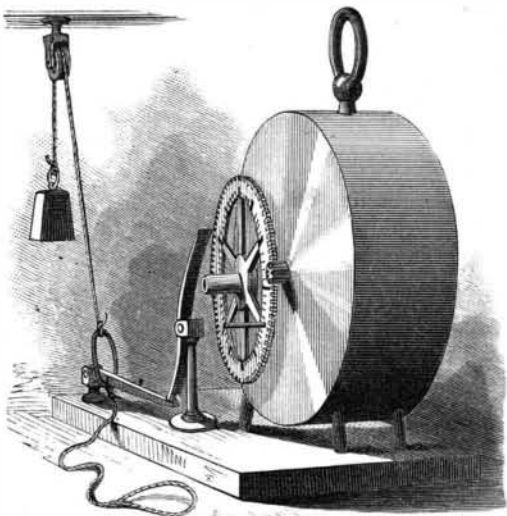


AN ALARM ATTACHMENT FOR CLOCKS.

An attachment for clocks, by which a person may be aroused without disturbing others, and which is designed not to interfere with the clock movement, is illustrated herewith, and has been patented by Messrs. James H. McGlynn and William P. Howells. A pinion on the hour spindle, which may be on the exterior of the back of the clock, engages with a spur gear that may be twelve times its size, a stud or pin on the face of the spur gear wheel, as it comes round in a given



MCGLYNN AND HOWELLS' CLOCK ALARM.

space of time, striking an approximately upright lever, liberating another lever, whereby a cord carrying a weight is released. Connection is to be made between the person to be aroused and the weight-carrying cord in such way that the fall of the weight will exert sufficient pull to effect the desired object. The spur gear and pinion are so arranged relatively to each other as to transmit the regular motion of the hour hand of the timepiece, and the spur gear is so attached that it can be readily turned back or forward to set or change the alarm.

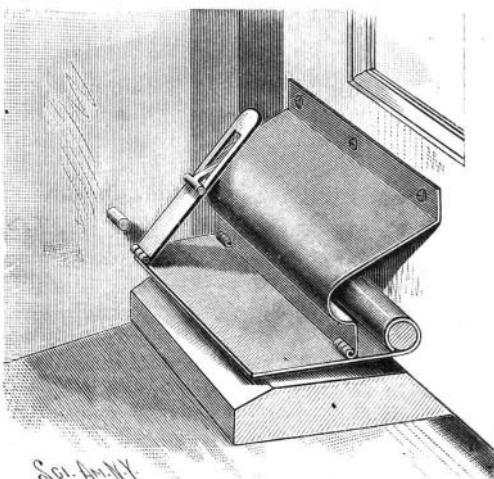
For further particulars with reference to this invention, address Mr. James H. McGlynn, No. 366 Market Street, Wilkesbarre, Pa.

Cement to Mend Iron Pots and Pans.

Take two parts of sulphur and one part, by weight, of fine black lead; put the sulphur in an old iron pan, holding it over the fire until it begins to melt, then add the lead; stir well until all is mixed and melted; then pour out on an iron plate or smooth stone. When cool, break into small pieces. A sufficient quantity of this compound being placed upon the crack of the iron pot to be mended, can be soldered by a hot iron in the same way a tinsmith solders his sheets. If there is a small hole in the pot, drive a copper rivet in it, and then solder over it with this cement.

AN IMPROVED WEATHER STRIP.

A weather strip which will be closed and in contact with the threshold only when the door is closed, thereby avoiding the friction of the weather strip upon the floor or carpet, is illustrated herewith, and has been patented by Mr. Samuel A. Rankin, of Mulberry, Bates County, Mo. An offset strip attached to the door has a semi-cylindrical recess, and hinged to the lower edge of the offset strip is a weather strip, with a counterweight upon its inner edge, adapted to be received in the recess of the outset strip as the door is closed. A slotted bar hinged to one end of the weather strip is arranged to slide on a T-shaped projection on the offset strip, a pin being inserted in the door jamb to which the door is latched, the engagement of the slotted bar with which, as the door is closed, brings the weather strip into nearly perpendicular position and into contact with the outer edge of the threshold. When the door is opened, the slotted bar is released from the pin and the weather strip is caused by its counterweight to take a horizontal position, thereby being prevented from rubbing upon the floor or carpet.



RANKIN'S WEATHER STRIP.

Hydrophane.

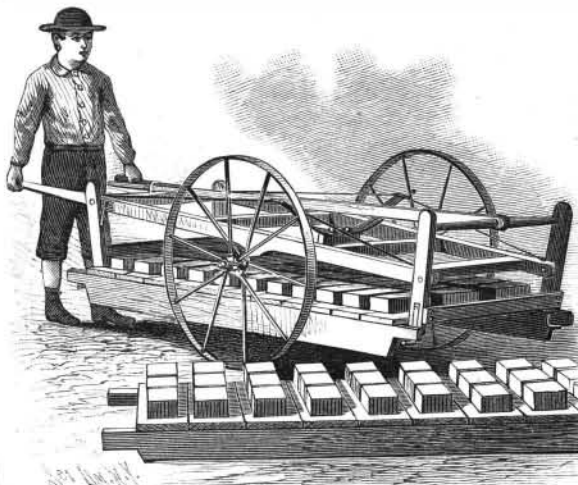
Mr. G. F. Kunz, in the *American Journal*, describes a white opaque variety of hydrophane, in rounded lumps, from 5 mm. to 25 mm. in diameter, with a white, chalky, or glazed coating somewhat resembling the cacholong from Washington County, Georgia, that has recently been brought from some Colorado locality. For its power of absorbing liquid it is quite remarkable. When water is allowed to slowly drop on it, it first becomes very white and chalky, and then gradually, perfectly transparent. This property is developed so strikingly that the finder has proposed the name "magic stone" for it, and has suggested its use in rings, lockets, charms, etc., to conceal photographs, hair or other objects which the wearer wishes to reveal only when his caprice dictates. The specific gravity of several specimens was taken, with the following results: Nos. 1-3 were slabs 2 mm. thick, No. 4 was a natural lump with glazed coating.

	Dry. Grms.	Wet. Grms.	Water abs.	Weight (in water). Spec. grav.
1.	0.880	1.342	0.588	0.463 2.110
2.	0.644	0.934	0.416	0.3885 2.091
3.	0.730	1.109	0.379	0.382 2.097
4.	1.8745		1.0595	0.864 2.191

The weight was taken both dry and wet, and it will readily be seen that this hydrophane absorbs more than an equal volume of water.

IMPROVED APPARATUS FOR HANDLING BRICK.

An apparatus whereby the number of brick handled by a single workman may be greatly increased without increase of work is illustrated herewith, and has been patented by Mr. Edgar Aber, of Troup, Texas. The main frame is made up of side strips connected by proper cross braces, and mounted upon an axle with two wheels, which are preferably about thirty inches in diameter. Between the forward ends of the strips is pivotally mounted a frame, to the upper cross bar of which is connected a manipulating rod, formed with notches at its other end adapted to engage the cross



ABER'S APPARATUS FOR HANDLING BRICK.

bar nearest the handles. A second swinging frame is pivotally connected to the side strips near the handles. After a pallet has been filled from the moulds, the dally, or mounted frame, is wheeled over the pallet, the handles slightly raised, and, by the manipulating bar, projections from the forward swinging frame are brought under the forward handles of the pallet. Then the handled end of the dally is depressed, and projections from the swinging frame at this end are brought under the rear handles of the pallet, when, by bringing the main frame of the dally to about a horizontal plane, the pallet will be raised, and may be conveniently transported as desired.

Completion of Another Railway Line to the City of Mexico.

The Mexican International Railway was completed on January 7, 1888, to Lerdo, on the Mexican Central line, thus closing the gap between Lerdo and Eagle Pass, the American terminus of the International road. This completes the second all-rail route to the city of Mexico, and shortens the distance from the Texas border over 200 miles, as against the El Paso route, while the total shortening of the distance from the interior of Mexico to New York and the East is about 700 miles. The International line is part of the Southern Pacific system, and gives San Antonio direct connection with the city of Mexico. The distance is 1,190 miles.

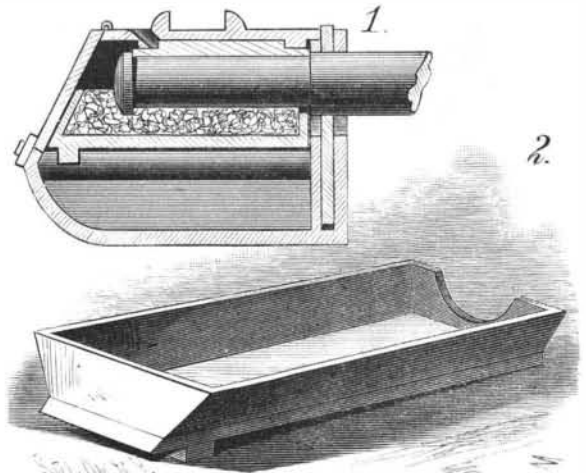
The New Thirty-six Pounder Guns.

In some accounts which have recently appeared in the press of the new 36 pounder guns and mountings manufactured by the Armstrong firm at Elswick, the rate of fire reached has been stated as ten rounds in one minute and 35 seconds. This was, however, when the guns were being fired at an object at a considerable distance, where careful and deliberate aiming was necessary. A truer idea of the real capabilities of the guns in regard to rapidity of fire may be gathered from the practice made at an object at a comparatively

short distance, where the man aiming could keep the gun trained on the object without altering the elevation. In these circumstances, at various trials, eight rounds were fired in 32 seconds, 10 rounds in 47½ seconds, 15 rounds in one minute, and 20 rounds in 1 minute and 32 seconds. The fastest rate actually obtained in the experimental firing before the Admiralty officials was 10 rounds in 40 seconds.—*Newcastle Jour.*

AN IMPROVED CAR-AXLE BOX.

A journal box which is designed to effect a constant application of the lubricant under all conditions, and



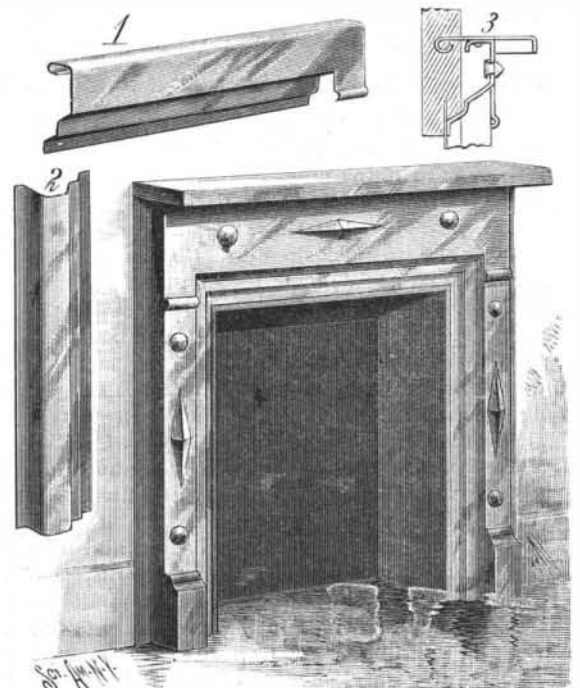
STINARD'S CAR-AXLE BOX.

at the same time save packing, has been patented by Mr. Stephen R. Stinard, of Pompton Junction, N. J., and is illustrated herewith, Fig. 1 being a central longitudinal sectional elevation, and Fig. 2 showing the oil waste tray. A tray having inclined or sloping side walls is fitted into the axle-box below the axle-journal, so that, while the setting oiled waste will be forced or crowded against the axle-journal, the lubricant will be retained in the tray. The tray bottom has a transverse rib which enters notches made in flanges on opposite sides of the axle-box chamber. The bottom of the cup being nearest the axle, the settling of the packing by the shake and jar of the box during the movement of the car tends to keep the lubricant constantly in most effectual application.

AN IMPROVED SHEET METAL MANTEL.

A mantel that is struck up or formed of sheet metal, and built in sections, has been patented by Mr. William J. Turl, and is illustrated herewith, Fig. 1 representing a portion of the frieze, Fig. 3 a vertical section at the top of the mantel, and Fig. 2 a portion of one of the pilasters. The frieze is in one piece, stamped up to shape in dies, to form end wall plates, an upper inner rolled-over flange or support for the mantel shelf, and opposite end portions arranged to stand out in line with the pilasters, the latter being each made in one piece, and having side facings and wall plates, and being arranged to fit under and be overlapped by the end portions of the frieze, to which they are united by rivets or solder. The shelf is a separate piece, rolled over on its inner longitudinal margin where it enters and engages with the wall, its remaining margins being bent down to give finish and strength. Ornaments of glass, porcelain, or other suitable material may be readily inserted and easily made fast in either the frieze or pilasters, in perforations made therefor.

For further information relative to this invention address Messrs. John Turl & Sons, No. 534 West Twenty-eighth Street, New York City.



TURL'S SHEET METAL MANTEL.