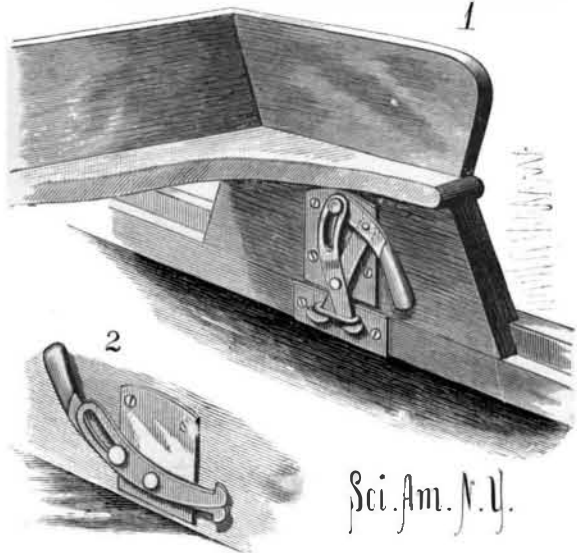


IMPROVED SEAT LOCK.

In a seat lock lately patented by Mr. Gottlieb Maibach, of Tremont, Ill., the object is to promote convenience and safety in securing seats to the bodies of buggies and other vehicles. Fig. 1 is a perspective view showing the fastening applied to the body, and Fig. 2 shows the fastening turned back, to allow the seat to stand squarely when detached. The lower edge of the seat riser may be rabbeted to rest upon the upper edge of the body and of a cleat. To the inner side of the seat is attached a plate, to which are pivoted two bars having upon their lower ends hooks project-

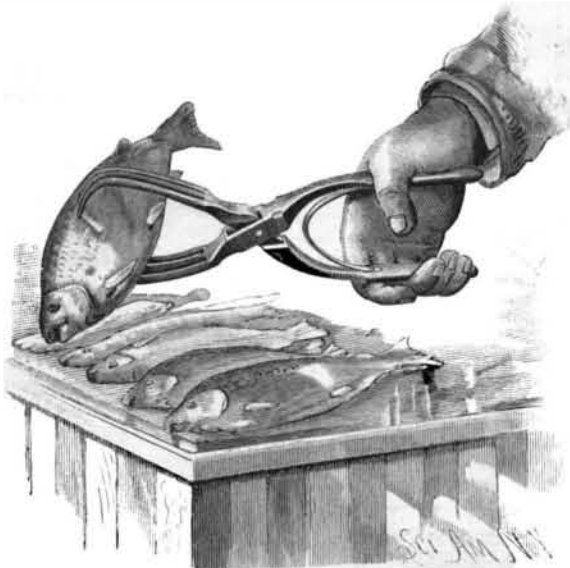


MAIBACH'S IMPROVED SEAT LOCK.

ing in opposite directions. To the upper end of one of the bars is pivoted a lever, in the forward end of which is a pin that passes through a slot formed longitudinally in the upper part of the other bar, so that the hooked ends can be forced apart or together by moving the bar. Attached to the cleat is a keeper made of such a length that the two hooks when drawn together can pass through it. When the hooks are spread apart and brought in contact with the keeper, they will draw the seat riser down snugly upon the body, thus preventing all rattling. When locked in place, the hooks are not liable to become unfastened accidentally.

DESIGN FOR SPRING CLIP OR TONGS.

Our engraving shows a convenient device for handling beef, pork, fish, etc. A spring is placed between the handle portions of the two crossing limbs of the tongs. One jaw is of a regular curvilinear shape, having a convex back and concave face, with an outer tapering edge form. This jaw has a fork-prong-like appearance, being on an open-work design. The second jaw is of like design on its face and back, and has a crooked form at its outer end portion, as shown in the engraving. The rear portions of the limbs are of a straight flat shape where they cross, terminating by easy curves in



MAYNARD'S DESIGN FOR SPRING CLIP OR TONGS.

straight extremities, which are flattened at their outer ends.

This invention has been patented by Mr. Frank M. Maynard, of Erwin Center, N. Y.

CONFECTIONER—"Remember, that all the French candy is in this case." New Clerk—"How do you get it fresh?" "Fresh! Why, why we make it, of course." "But I thought French candy was imported." "Oh! no. We make it ourselves." "But, then, why is it called French candy? Do the ingredients come from France?" "Well, I don't know, may be the plaster of Paris does."

White Bronze.

Experiments are being made, according to the *Polytechnische Notizblatt*, in Paris, with a new alloy having a white color, yet containing no nickel. It is said to be very strong and malleable. It is made of copper and ferro-manganese, the proportions being varied according to the purpose for which the alloy is to be employed.

An alloy of forty parts of copper and sixty parts of ferro-manganese, with a suitable quantity of some appropriate flux, produces a metal of such tenacity that it surpasses the best steel armor plates. The melted mixture is cast in blocks, and is perfectly malleable. To obtain a white metal that can be rolled out in sheets, the above alloy is melted again, and twenty or twenty-five per cent of zinc or white metal added, which imparts to it the desired quality.

A plate of the first named alloy two inches thick was found by experiment to offer more resistance to a cannon ball than a steel armor plate of the same thickness.

This new kind of "white bronze" is not to be confounded with the alloy used in this country under the same name for gravestones and monuments, and which consists principally of zinc.

CHECK BILLIARD MARKER.

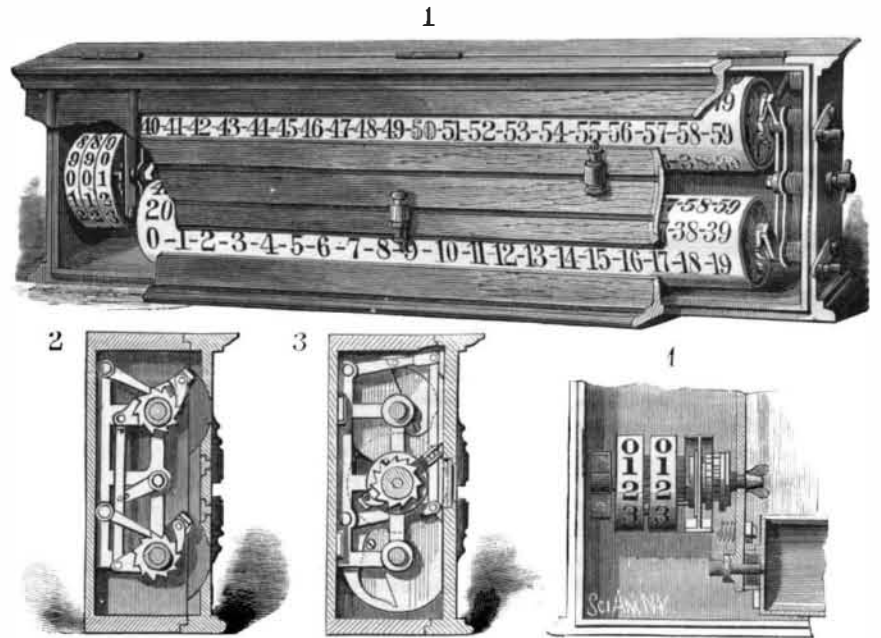
The engraving shows a device for marking in the games of billiards and keeping a register of the number of games played. The front of the box is provided with a door or cover formed with two longitudinal slots, in which move the two pointers, which project over the upper and lower edges of wider slots. At one end of the cover is a solid part formed with a slot, through which the register marking the number of games can be seen. Beneath each of the long wide slots is journaled a roller marked with five rows of numerals from 0 to 99. In the middle of the third row is the numeral 50 which is of a different color from the rest, so that it can be easily distinguished. In the outer ends of the rollers are short shafts, journaled in a frame projecting from the back of the box, and provided at their outer ends with crank handles; they are also surrounded by springs (shown in Fig. 1), for throwing them back after they have been turned by the handles. On each shaft is an arm carrying a pawl which is pressed against a ratchet wheel mounted on the end of the roller, whereby the latter will be turned the distance of one tooth by turning the corresponding shaft. (This construction is shown in Fig. 2. Figs. 3 and 4 are views at the other end of the rollers.) When the player has made a certain number of points, he moves one of the pointers to the corresponding number. Every time twenty points have been made, the roller is turned to expose a new line of figures in one of the slots. After a game has been played and all the points counted, it is necessary to throw the rollers back to their first position. This is accomplished by means of springs held on the opposite ends (Fig. 4) of the rollers. To permit the springs to act, the pawls are raised clear of the ratchet wheels by the center handle, which is prevented from swinging back too far by suitable stop pins. The mechanism by which this is performed is shown in Fig. 2. The games are automatically registered by three rollers or disks (Fig. 4) so arranged that the first disk registers up to 9, the first and second up to 99, and all three up to 999. One of the special features of the machine is that as soon as one of the shafts (provided with a crank handle, is turned, the first disk is moved the distance of one number, thus making it impossible for a person to play more than 20 points without registering a game. Of course it will be understood that the numbers on the rollers can be arranged in different ways, according to the customary manner of playing and marking.

Further particulars regarding this invention may be obtained by addressing the patentee, Mr. Thomas C. Jenkins, P. O. Box 56, Wellington, New Zealand.

Temporary Repairs of Ships.

We have received, says *Engineering*, from a correspondent an account of a method of effecting temporary repairs of iron ships that are damaged at or below the water line, which in his hands has proved very effective, and has enabled vessels which have received injuries in places where no shipbuilding establishments exist to make safe and successful voyages home. He has already put his plan into execution on two occasions,

with capital results; one vessel reshipped her cargo and delivered it in Liverpool in good condition; the other, after a repair at the Cape of Good Hope, steamed to Liverpool without a cargo, there being none available at the time. The method by which the restoration is effected will be best understood by an account of the two cases just referred to. The first was a vessel of 2,000 tons returning to England from India with a full cargo. She was run into by a steamer which attempted to cross her bows. The force of the collision broke the stem of the cargo ship a little under the hawse hole, down to within 12 inches of the forefoot, carrying both it and the bow plating for some 5 feet aft right away. The collision bulkhead kept the ship afloat, and she was brought into Gibraltar Bay. There she was trimmed till her forefoot came above water, and a temporary stem of pitch pine (4 inches by 9 inches) was worked in from the forefoot to an undamaged part of the plating at the upper portion of the fracture, and from the stem to the uninjured bow plates, planks of 3 inches thick were secured, forming when complete a wooden bow of symmetrical appearance. The collision chamber was then filled with good cement concrete, as high as the chain pipes, and when this was complete the ship was trimmed back to her deep draught, and was found to be perfectly tight in the repaired section. She then steamed to Liverpool, where the cargo was discharged in good condition. The second case is that of a well known steamship of about 3,000 tons. On an outward voyage, full of troops, she struck on a rock near the Cape of Good Hope, and was so much damaged that she was unable to proceed on her voyage to Natal. The force of the collision broke the stem about 2 feet abaft the forefoot, and the collision chamber was laid open from that point up to the eleven foot mark, the stem and the fractured plates being forced bodily over to



JENKINS' CHECK BILLIARD MARKER.

one side of the ship. To effect this repair the stem was cut away a little below the eleven foot mark, and holes for $1\frac{1}{4}$ inch bolts were drilled through the broken plates, from side to side, and bolts put through across the opening to prevent extension of the fracture. Inside the ship, and resting on the bolts, a stout wooden bottom was laid and made fairly tight; on this a filling of concrete was placed, and carried up to above the partial bulkheads, in the chamber, or nearly 2 feet above the highest fractured portion. This work was all carried out under water, a diver mechanic being employed to cut away the stem and drill the bolt holes. The ship was perfectly water tight after the repair, and was by surveyors pronounced to be fit to carry cargo to any part of the world. Drawings of a coffer dam to be built round the ship's bows were sent by the owners to the Cape, and it was estimated that its construction alone would have cost more than the entire expense of the repair by the method described, and no more than a temporary repair made. It will be seen that in each case the essential feature was the use of cement concrete to make tight the temporary work, and to fill the spaces which had been laid open to the sea. Of course the above examples were favorable opportunities for the exercise of this method of repair, and did not present nearly as great difficulties as would be found if the injury were to some other part of the ship. But still there are many other situations to which, by the aid of a little ingenuity, it might be applied, and where it would give equally satisfactory results. We have pleasure in publishing the account, as some of our readers may some day be placed in a situation where they may be glad to carry out further trials of this novel experiment.

ONE of the women said to have been lately cured of her malady through the prayers of a miracle worker proves to be a kleptomaniac.