THE AMERICAN LIFE SAVER OR SURF CAR.

(See page 352.)

Nothing of consequence was accomplished to lessen the loss of life occasioned by shipwreck until the year 1848, when Capt. Douglas Ottinger, of the United States Revenue Marine, presented to the world his "life car." No sooner was the invention introduced than the American Government acknowledged its fitness for the purpose intended, and ordered the life-saving stations along the Atlantic coast each to be provided with one of these cars.

Although so useful, the car is simplicity itself, and its construction such that it can easily be understood. It is made of galvanized sheet iron. In length it is about nine feet and in breadth three and a half. Outwardly it looks much as we would imagine one of our clinker-built boats to appear if it had a slightly curved cover placed upon it. Instead of having a stern and stem, the ends are alike, both terminating in a point. Nearly in the centre of the top is an air chamber, designed for the purpose of righting the car should it turn over. In shape this resembles a hemispheroid, and it is about two and a half feet in length, and ten inches in breadth. Between its end and the further extremity of the car is the entrance. Water is prevented from coming through this by means of a lid securely fastened. Around the circumference of the car a thick rubber band is placed to protect it from damage in case of contact with hard substances. Above and parallel to this is a rope. It is intended for drowning persons to grasp in order that they may be drawn ashore.

The inside of this curious life-preserver is divided into three separate apartments. Those at the end are merely air chambers and are both about one and a half feet in length. Between these is located that portion of the air designed for occupants. Although this space may seem small, in order to prove its capacity it is only necessary to state that it has accommodated a woman and six children, and that three men can get into it without any difficulty. "How can the car be sent to a vessel during a storm, and especically if it be two-thirds of a mile away?" is the question which naturally arises at this point. It has been done and in the following manner: The smallest cord capable of sustaining the force brought to bear upon it is fastened to a copper wire which is bent in form of a spring (to lessen the momentum) and attached to a twenty pound cannon ball. By firing this over a sinking vessel, those on board can grasp the cord. With this a small rope is drawn in and so on until finally the car itself reaches the vessel. In the meantime, those sending the assistance keep their hold of the car by means of another rope. In this way they can pull it back. If once successful, all further trouble is at an end, because the main difficulty lies in getting the rope to the distressed ship. When this is accomplished both parties can retain their own rope, and thus the car may be drawn back and forth without delay. By working continually, fifty lives can be saved in an hour.

Thus does the usefulness and simplicity of the car combine to make it one of the most perfect life savers yet invented. Although recently introduced it still has a record, and a glorious one, as it has already rescued over four thousand persons from inevitable death. Its celebrity, however, is not bound by two oceans. France, ever on the alert for improvements, soon seized this, and her accounts of its perfections are exceedingly flattering, and are sufficient to cause America to be justly proud that one of her sons invented the life car.—*Scientific American.*

Stretching Pictures for Framing.—Make a slight frame of wood, say ⅜ in. or ½ in. thick, to go inside the picture frame, same as gilt slip inside rosewood frames. Then thoroughly damp the picture, and paste it or glue it to the frame; when dry it will be tight as a drum. You can glue it at once on the back of the gilt slip inside any frame. The whole secret is that paper expands while wet, and contracts in drying, so if it be glued up tight when wet the contraction pulls out every wrinkle.

Bessemer's Gold Paint.—Do not mix the gold size and powder, but go over the article to be gilded with the size alone, gaving an even and moderate coating. Let it dry (which will not take long) till it is just sticky or as gilders call it "tacky." Then over a sheet of smooth writing-paper dust on the dry gold powder by means of a stout, soft, sable brush.

Recolouring Brass.—Boil the brass work in a solution of common soda to remove the grease or lacquer that may be on; rinse them quickly through nitric acid, then in clean water, dry in boxwood sawdust, heat on a metal plate until you can bear the hand on them with difficulty, then apply pale lacquer with a camel's-hair brush.

A PROPOSED METHOD OF LIGHTING CHURCHES.

(See page 352.)

It seems somewhat remarkable that, although gas has been now used for lighting our churches and public buildings for many years, no new treatment for arranging the light thus produced has been invented or discovered. We still have nothing to fall back upon except the gas chandelier, the standard, the wall bracket, or the sunlight. Now all these have disadvantages. In the first place, they all have one common disadvantage, and that is, that they ruin decoration, especially gilding. The standard is ugly, inconvenient, and bad for lighting, because it brings the light down too near the eye, makes the building hot, and ruins entirely that effect of solemnity so desirable in places of worship. Many of our modern Gothic churches when lighted up for evening services look more like a Whitechapel butcher's shop on a Saturday night than a sacred edifice. The "dim religious light" which Milton liked is done away with directly a church is lighted with gas by any of the ordinary methods, and it is clear that we wish to have in our churches a subdued and pleasant light instead of a harsh crude glare, destructive of all solemnity, poetry, or artistic effect, some new treatment of gas-lighting must be discovered. Now it has struck us that there are some of the old churches of Germany which suggest hints that might lead to a new treatment of the gas-lighting of churches.

The large hall which bisects the cloister quadrangle at Ratisbon Cathedral has for ages been used as the burial-place for the chapter of the cathedral, and is full of ancient monuments. Projecting from the porch of the curious old chapel of All Saints, and cutting into this hall, is a large old stone lantern inclosing an iron lamp and glazed with small circular panes of glass set in lead. (See fig. 1.) A very similar lantern, but of a far richer description, exists in the south tower of the church of Rothenburg, in Bavaria. (This is shown in fig. 2.) In figs. 3 and 4 we have shown how it seems to us that these large stone lanterns might be applied to the purposes of lighting churches with gas. Fig. 3 represents such a lantern placed in the spandrel of the arches of the nave, and fig. 4 is a section of the same lantern. At the base of the lantern A there would be a pierced aperture to admit a current of air. The lantern would be fitted up with a number of burners, and a kind of flue at B would take up the fumes and smoke of the gas, which would be carried up through a pipe C, into the open air. One side of the lantern would be made to open for cleaning, &c. The advantages of this system would be, firstly, the smoke and the flames of the gas would be entirely taken out of the building. Secondly, the light from the gas would be subdued, and have far more the effect of daylight, as its light would be seen through glazing and stone tracery. The glazing could be decorated with colour, and this would give a new field for the use of stained glass. Thirdly, those lanterns might be made exceedingly fine architectural features, and might be decorated with sculpture carving, tabernacle work, and even mosaic. In the chapel of Castle Transnichts, Landshut, there is a sacraments-house, which has been converted into an altar-lamp, and the effect is very picturesque. This lantern is glazed with small pains of glass similar to those represented in our sketches.

"Don't trouble yourself to stretch your mouth any wider," said a dentist to a man that was extending his jaw frightfully, "as I intend to stand *outside* of it to draw your tooth."

A Darkey left in charge of a telegraph office while the operator went to dinner, heard some one "Call over the wires," and began shouting at the instrument: "De operator isn't yer!" The noise ceased.

Pitiful Case.—A man being asked by his neighbour how his sick wife did, made this answer:—"Indeed, neighbour, the case is pitiful. My wife fears she shall die, and I fear she will not, which makes a most disconsolate house."

"My Brudders," said a waggish coloured man to a crowd, "in all infliction, in all ob your troubles, dar is one place you can always find *sympathy*."—"Whar, whar?" shouted several. "In the dictionary," he replied, rolling his eyes skyward.

An Apology.—A teacher in a fit of vexation called her pupils a set of young adders; on being reproved for her language she apologised by saying that she was speaking to those just commencing arithmetic.

A Nubian Temple.—The temple of Ypsambul, in Nubia, is cut out of a solid rock, and is of vast dimensions. In it are four colossal figures sixty-five feet high, twenty-five feet across the shoulders, with faces seven feet high, and ears about a yard long.