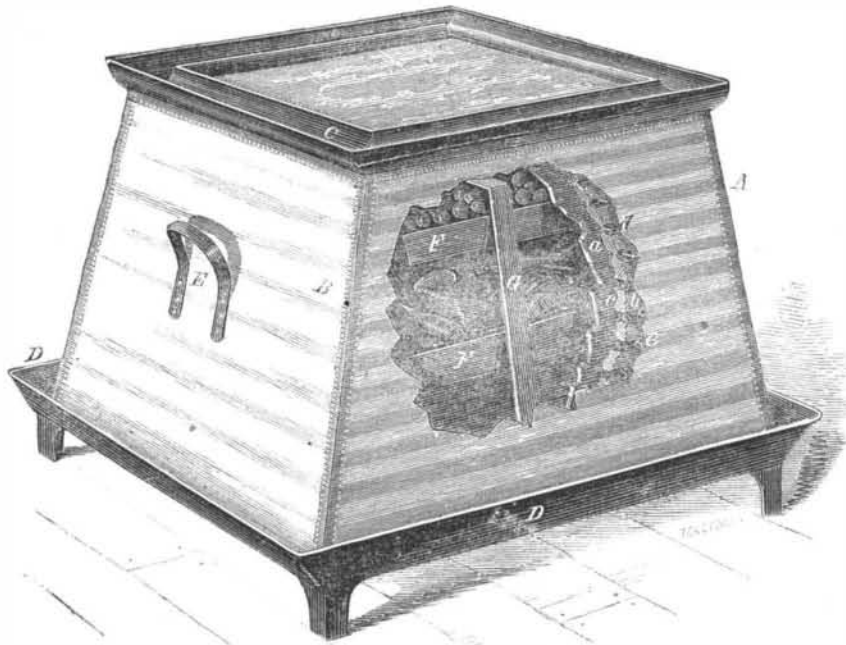


IMPROVED REFRIGERATOR.

When life, either animal or vegetable, has departed from organized beings, the elements of which they are composed are forced asunder by the action of heat, and the rapidity of the decomposition depends upon the degree of heat to which they are exposed. If placed in a furnace of burning coal, a few hours at most suffices to dissipate the elements and scatter them abroad into the atmosphere; but at a temperature below the freezing point of water, organisms may be preserved—like the frozen elephants which are found among the icebergs of



BAKER'S IMPROVED REFRIGERATOR.

Siberia—for thousands of years, and perhaps for hundreds of thousands. This general law of the rapidity of decomposition depending upon the degree of the temperature, has forced itself upon the notice of people in many of the operations of life, and hence the very general practice of retarding the decay of meats and vegetables by keeping them in a cool place. In cities, the usual mode of cooling a refrigerator is to place a piece of ice in it, but in many parts of the country this luxury is not to be had, and its place has been partially supplied by a plan of cooling by evaporation. The annexed engraving illustrates one of the latest inventions of a refrigerator of this class.

The interior surface, *a*, of the box, *A*, is made of slate or other good conducting material, surrounded by an outer wall, *b*, of wood or other slow conductor of heat, with an air space, *c*, between the two walls. The outer wall has grooves both in its exterior and interior surfaces, with holes connecting the grooves for the circulation of the air. The whole is covered with a canvas, *B*, which is kept constantly wet by water dripping upon it through holes in the reservoir, *C*; a dish, *D*, being provided to catch the waste in case the supply should be excessive. By means of the handles, *E*, the box may be lifted out of the dish, in order to obtain access to the contents which are kept on the shelves, *F F*, supported by the frame work, *G*. The canvas being kept wet and, a constant circulation of air being maintained on both its surfaces, a rapid evaporation is produced which, by the conversion of sensible into latent heat, reduces the temperature of the refrigerator.

The patent for this invention was secured through the Scientific American Patent Agency, April 3, 1860, and further information in relation to it may be obtained by addressing the inventor, W. M. Baker, at Walpole, Ind.

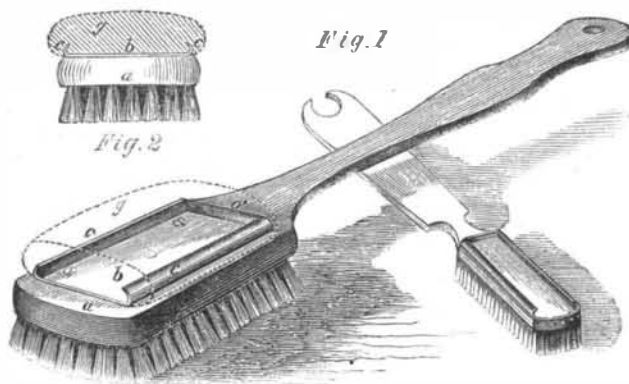
TUSCH'S SOAPING AND SCRUBBING BRUSH.

It is frequently remarked—and with much truth—that patents for simple contrivances prove, in the majority of instances, more profitable than inventions of a complicated character, where much time, labor and capital are required in introducing them. In proof of this assertion, the accompanying engravings exhibit an invention

of a strikingly-simple yet ingenious character, and one which will doubtless prove as profitable to its designer as it is useful to the public; it is a brush of peculiar construction, which will obviously recommend itself to the approbation of all lovers of cleanliness—the virtue which is said to be “next to godliness.” Brushes are divisible into three classes, according as they are used for removing dirt, polishing surfaces, or applying colors; the invention here illustrated appertains to the first of these classes, and it consists in a mode of attaching a cake of soap to the back of a brush in such a manner that, after

its attachment, the cause of its adhesion is invisible, although it (the soap) is held perfectly secure during every manipulation of the brush in all kinds of washing and scrubbing operations, until it is completely used up.

Fig. 1 is a perspective view of an ordinary long-handled flesh-brush; to its back, *a a'*, there is attached a metal plate, *b*, which is secured by rivets or any other convenient fastening; the lateral edges of this plate are turned up and over, so as to form a curved groove, as shown at *c c*; and against the sharp extremities of these edges the lower portion of one end of a cake of soap (shown by the dotted outline, *g*) is pushed in a horizontal direction, with a slight downward pressure. The soap thus becomes incorporated with the brush, as effectually as if the two articles were made of the same mate-



rial. Instead of the curved groove above shown, the edges of the plate may be abruptly turned up at an acute angle in relation to the back of the brush, so as to form an angular or dovetailed groove, which will be found equally as useful as the curved one; and instead of having one broad plate, two narrow and suitably-bent strips of metal may be applied, one at each side of the brush. Fig. 2 is an end view of the same brush, showing the depth to which the edges of the plate penetrate the soap. Beneath the brush represented in Fig. 1, there is shown a nail-brush having the described device attached to it.

The patent for this invention was secured, through the Scientific American Patent Agency, on May 22, 1860, and further information in relation to it may be obtained by addressing the inventor, Wm. Tusch, Brooklyn, N. Y.



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