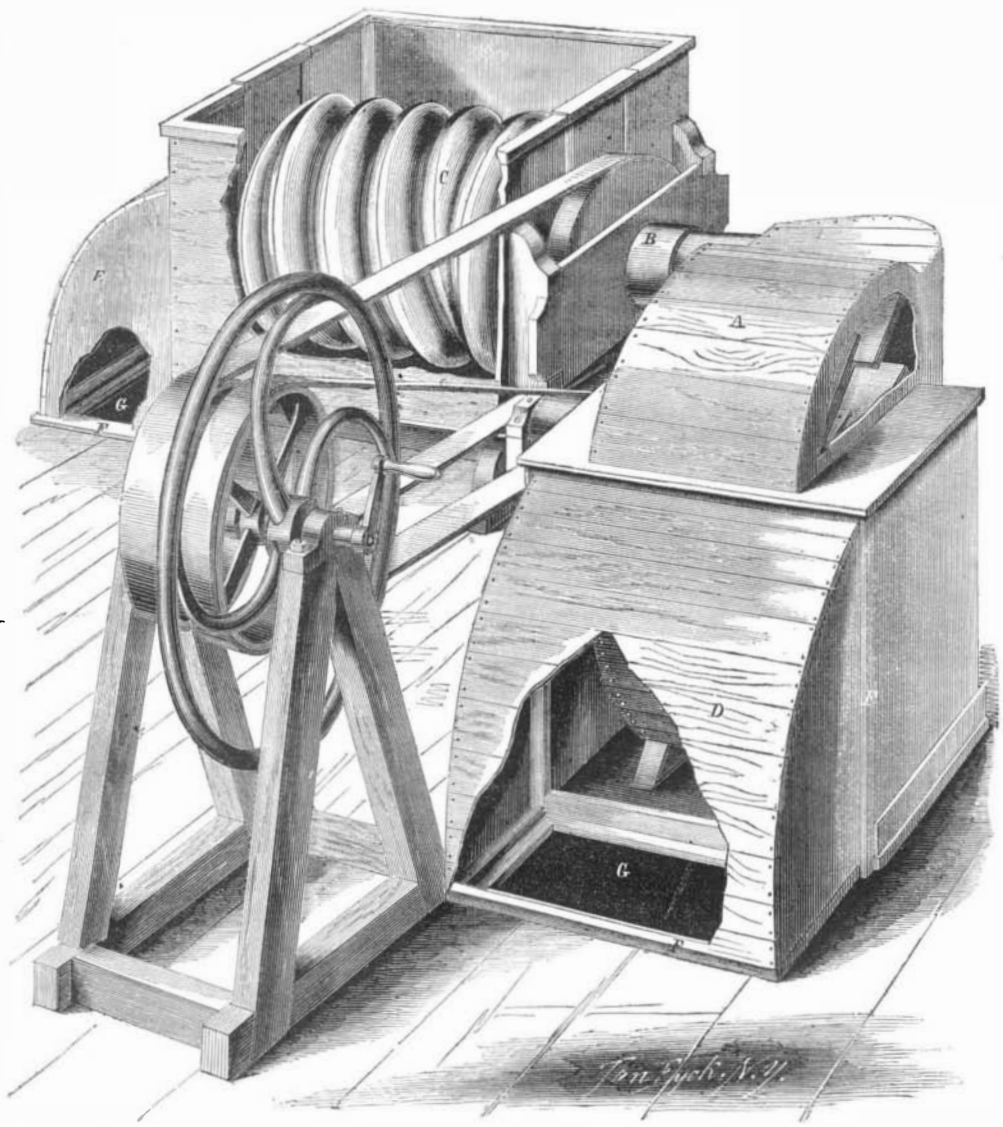
Apparatus for Ventilating Ships, Hospitals, &c.

It is quite a common practice in hot weather for the proprietors of large hotels to arrange series of fans over the tables in their dining rooms, and connecting them together so that one person at a remote part of the room, or standing just outside of it, can operate the whole by a lever or crank. The object of this is two-fold. First, to keep the guests cool, and, secondly, to rid the table of flies. It is also particularly desirable, in hospitals or sick rooms, to keep the air in the room cool and to supply each patient with a certain quantity of fresh air. But by the ordinary fan neither of these objects can be accomplished, as the warm foul air in the room is merely stirred up, when, by an equal amount of labor properly directed, a fresh and cool current might be passed constantly through the room. We have often wondered that some of our enterprising inventors did not devise a simple and efficient apparatus for this purpose, and thus render a valuable service to the community, and at the same time derive a pecuniary benefit themselves. We have at length the satisfaction of illustrating such an apparatus, represented in the accompanying engraving.

A fan running in the box, A, drives a current of air through the shaft, B, spiral channel, C, around this shaft, and into the room to be ventilated. The worm, C, runs in an ice box, and is surrounded by pounded ice to cool the air in its passage; the channel being made in spiral form to secure a long passage for the air amid the cooling material. The worm is kept constantly turning in order to stir the cooling mixture and constantly change the points of contact.



PETELER'S VENTILATING APPARATUS FOR SHIPS, HOSPITALS, DINING ROOMS, &C.

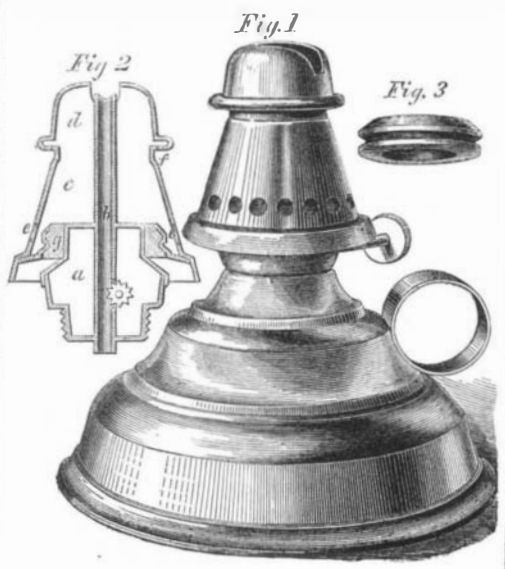
The apparatus is represented in the engraving as designed for ventilating infected ships, especially those infected with yellow fever. It is well known that the virus—whatever it may be—that causes the yellow fever is instantly and completely destroyed by frost or by a reduction of the temperature below the freezing point. Consequently, to eradicate yellow fever from a ship it is only necessary to reduce the temperature of the interior below 32°. It would be impossible to do this by drawing out the air from the hold and supplying its place from the warm atmosphere surrounding the vessel; but the air must be confined and passed repeatedly through the apparatus until it is sufficiently cool. Therefore the boxes, D and E, are placed over hatchways on the deck, and the joints are made air tight by the interposition of the india rubber plates, F F, between the lower edges of the boxes and the deck. The boxes are represented as broken away to show the openings, G G, through the deck. The apparatus being thus arranged, the air is drawn up through one hatchway, passed through the cooling worm, and driven down through the other hatchway; the current being continued till the temperature is sufficiently reduced. The machine may be placed upon a scow or pier and connected with the vessel by means of large tubes. Thus, for the purification of a ship, there is no necessity for any person to even enter the hold or go below the deck to operate the apparatus.

For cooling vessels below the freezing point the box should be filled with ice, or, better still, with a freezing mixture of pounded ice and salt, but for cooling the rooms of hotels a mixture of ice and water is quite sufficient.

The principal ingenuity in this machine is shown in the construction of the spiral channel, C, the difficulty being to form a worm so that it would run easily in the ice box without crowding the ice into one end of the box and packing it so as to obstruct the working of the machine.

The patent for this invention was granted through the Scientific American Patent Agency, April 9, 1861, and further information in relation to it may be obtained by addressing the inventor, Alois Peteler, proprietor of "Peteler's Hotel," at New Brighton, Staten Island, N. Y.

TRITTIN'S COAL OIL LAMP.



Ever since the introduction of coal oil it has been perceived that a lamp which would burn the new illuminating material without smoke or offensive odor, and without the inconvenience of a chimney must be a great desideratum, and many devices to accomplish the result have been tried, and many patents granted, as the columns of our paper testify. Emil Trittin, of Philadelphia, claims to have attained complete success in this effort, and his lamp is illustrated in the accompanying engraving.

The relative position of the tube and deflector is made adjustable, and the heating of the oil is prevented by the interposition of a slow conductor of heat between the wick tube and the deflector.

Fig. 1 is a perspective view of the finished lamp, and Fig. 2 is a vertical section of the burner. The block, *a*, is screwed firmly into the top of the lamp, and has the wick tube, *b*, passing through it so loosely that it may be slipped up or down, and yet sufficiently tight to retain its position. The tube is surrounded by the usual conical case, *c*, which is surrounded by the dome-shaped deflector, *d*; the case, *c*, being perforated with holes, *e e*, and the base of the deflector being also perforated at *f f*. Between the case, *c*, and the block, *a*, is interposed the block, *g*, of wood or other slow conductor of heat, as fully shown in Fig. 3.

As the lighter and more volatile coal oils require more oxygen for their combustion than the heavier grades, when the former are used the wick tube is lowered to admit a thick current of air to impinge against the sides of the flame; but when the heavier oils are burned the tube is raised so that its upper end may be in closer proximity to the walls of the deflector. The block, *g*, prevents the wick tube from becoming heated, and conducting caloric down into the oil, and thus increasing the evaporation. The inventor says this also diminishes the danger of explosion. "In addition to its cheapness and safety as a portable lamp, its great economy of consumption further recommends it to the attention of housekeepers, hotel proprietors, railroad conductors, for lanterns, and for lighting passenger cars. It will burn without sensible diminution of flame so long as there is any oil in the lamp. Half a pint of oil, with the large size ($\frac{5}{8}$-inch wick) at full head, lasting 14 hours, or about equivalent to a cost of one-quarter of a cent per hour; and the flame being regulated by a ratchet, for night or chamber lamp, the amount consumed may be very inconsiderable, by placing it at its minimum capacity."

The patent for this invention was granted through the Scientific American Patent Agency, Dec. 3, 1861, and further information in relation to it may be obtained by addressing the manufacturer, Francis Lightfoot, at No. 127 Walnut street, Philadelphia. See advertisement on another page.

NEW LOCOMOTIVE.—M. Baldwin & Co. of Philadelphia continue to employ a large number of men in the construction of locomotives. A number now building are for the Philadelphia, Wilmington and Baltimore Railroad, Pennsylvania, and Northern Central Railroad Companies. This firm have completed an eight-wheeled locomotive for the Guantenamo Railroad, in the southern part of Cuba. It is beautifully finished, and has been called the "Jaibo." A passenger locomotive is also under way, for Cuba.