(No Model.) 2 Sheets—Sheet 1.

B. F. GOODRICH.

BATH TUB.

No. 420,599. Patented Feb. 4, 1890.

Fig. 1.

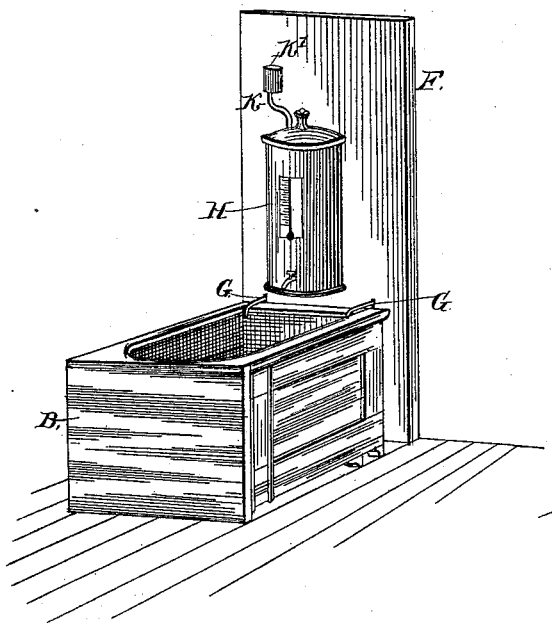


Fig. 2.

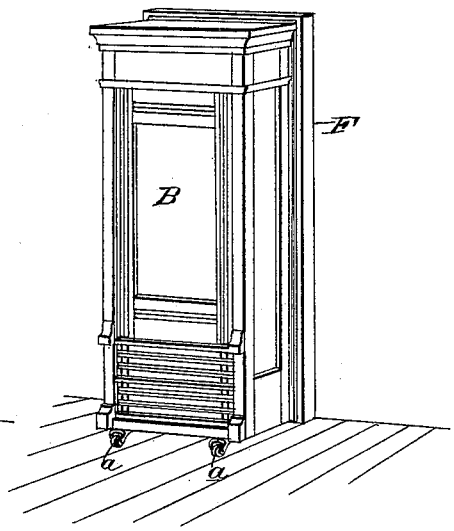
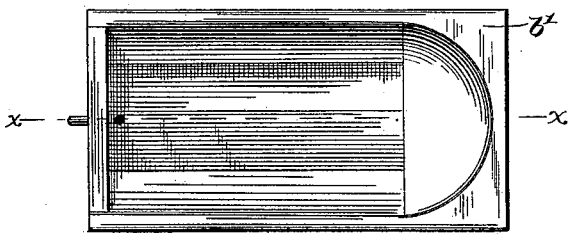


Fig. 3.



WITNESSES:

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(No Model.) 2 Sheets—Sheet 2.

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Fig. 4.

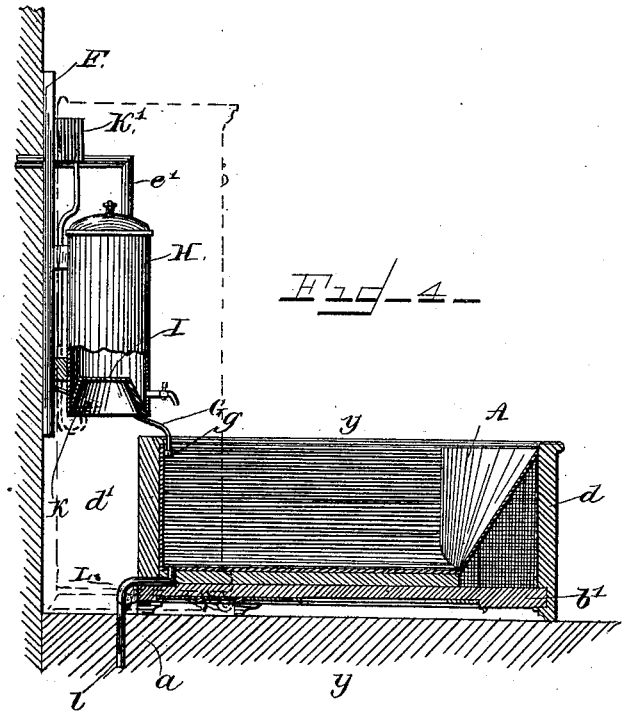


Fig. 5.

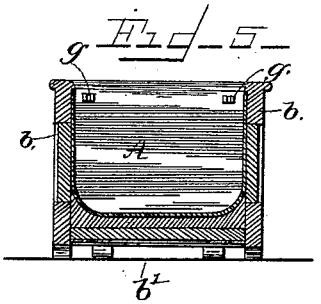


Fig. 6.

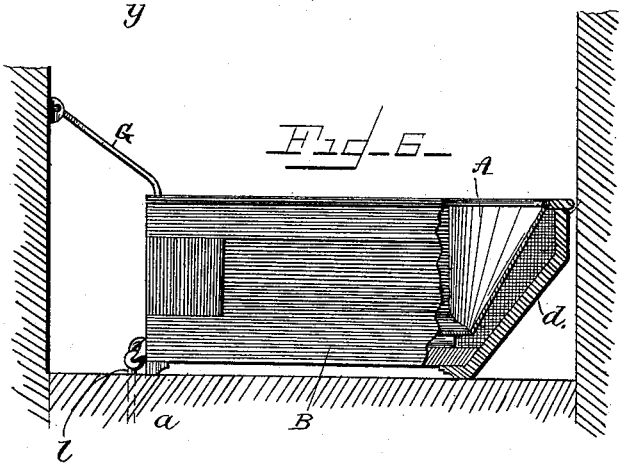
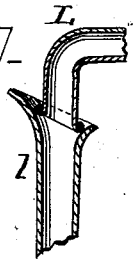


Fig. 7.



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UNITED STATES PATENT OFFICE.

BENJAMIN F. GOODRICH, OF HOMER, MICHIGAN.

BATH-TUB.

SPECIFICATION forming part of Letters Patent No. 420,599, dated February 4, 1890.

Application filed December 30, 1887. Serial No. 259,428. (No model.)

To all whom it may concern:

Be it known that I, BENJAMIN F. GOODRICH, a citizen of the United States, residing at Homer, in the county of Calhoun and State of Michigan, have invented certain new and useful Improvements in Bath-Tubs; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form a part of this specification.

This invention relates to folding or cabinet bath-tubs, and has for its object to combine therewith a heating apparatus to moderate the temperature of the water before its admission to the tub by the direct action of a heating medium on a tank or reservoir in close proximity to the tub.

A further object consists in the novel construction and combination of parts, as shown, whereby the tub is hinged to the wall or its equivalent in such a manner as to move bodily therefrom when folding and when folded to inclose the reservoir and heating apparatus.

With these ends in view, and such others as appertain to the invention, it consists in certain novel features of construction and combination of parts, more fully hereinafter set forth and claimed.

In the drawings, Figure 1 is a perspective view of my improved tub unfolded and ready for use. Fig. 2 is a similar view with the tub folded. Fig. 3 is a plan view of the tub removed. Fig. 4 is a side elevation of the device in the position shown in Fig. 1, with the lower portion of the tank broken away on one side and the tub in section, taken on the line *x x* of Fig. 3. Fig. 5 is a section on the line *y y* of Fig. 4. Fig. 6 is a side elevation of a modified form, parts being broken away. Fig. 7 is a detail view of the preferred form of coupling the parts of the outlet-pipe.

The lining A of the tub is of ordinary construction and shape and inclosed by the casing B, which may have its sides *b* and bottom *b'* suitably paneled with wood or mirrors and ornamented or embellished according to the required taste.

The tub may be hinged to the wall or to a back F, rods G being provided for the purpose. These rods are pivotally attached to the back at their inner ends, and their outer ends are bent slightly downward within the tub and connected to brackets *g* by a hinged joint. These rods are so proportioned and disposed that the tub when extended has a space between its foot and the back of a less width than the height of the tub, so that when folding the tub it moves bodily away from the back a sufficient distance to allow a neat fit between it and the back, as more clearly indicated in dotted lines in Fig. 4. The lower edge of the foot of the tub is provided with casters *a* to relieve the friction incident to the bodily movement of the tub.

A reservoir or tank H is located directly above the space between the back and foot of the tub, and is designed to receive and supply the necessary amount of water. It is attached directly to the back F and has a concave bottom I. A suitable burner K is located within the compartment formed within the concave bottom, and may be supplied with gas or a suitable hydrocarbon. In the latter case a reservoir K' is provided supported on the back above the tank and connected with the burner by a pipe *k*.

In practice, the tub being extended and the burner ignited, the flame will play on the bottom of the tank and moderate the temperature of the water therein, which is supplied thereto in any desired manner, preferably through the pipe *e'*, communicating with a suitable source of supply. The end *d*, as shown in Fig. 6, may be inclined to correspond with the inclination of the head portion of the lining to make room for and permit the forward motion of the tub when folding in case the space is limited.

To permit the discharge of the water from the tub, a waste-pipe L, leading from the bottom thereof, extends through the foot *d'* and connects with a fixed drain *l*, emptying into a suitable vessel or sewer. (Not shown.) The ends of the pipes L and *l* are inclined to adapt them to be separated readily. A packing-ring may be inserted between the pipes, breaking joints to insure a close fit. The mouth of the pipe *l* is preferably flared to di-

rect the end of the pipe L therein, as shown by Fig. 7.

It will be noticed by reference to Figs. 2 and 4 that the tub when folded forms a casing for and completely hides the reservoir and heating apparatus from view.

It is manifest that instead of the burner K to heat the air a blast of hot air or steam, supplied from a suitable source, may be discharged into the compartment *j* and subserve the same purpose.

Having thus described my invention, what I claim, and desire to secure by Letters Patent, is—

1. The herein-described folding bath-tub, composed of the back F, the folding tub A, having a short discharge-pipe to connect with the waste-pipe, the rods pivotally connected with the back and having their front ends bent down and pivotally connected with the said tub, the water-tank H, having a heating-compartment in its bottom supported by the said back, the oil-reservoir secured to the back, and the burner beneath the water-tank connected with the said oil-reservoir, substantially as described.

2. The hereinbefore-described folding bath-tub, composed of the back F, the water-tank, the burner and the oil-reservoir supported on the said back, the tub B, the rods G, pivoted at their rear ends to the back and having their front ends curved down and pivoted to the tub, whereby the latter is adapted to move bodily when folding and inclose the said tank and oil-reservoir, and the rollers *a* for supporting the tub during its bodily movement on the floor, substantially as and for the purpose described.

In testimony whereof I affix my signature in presence of two witnesses.

BENJAMIN F. GOODRICH.

Witnesses:

ALBERT V. PARKS,

WELLS PRATT.