2 Sheets—Sheet 1.

W. CHALMERS & W. N. REYNOLDS.

Sad Iron and Fluter.

No. 205,473. Patented July 2, 1878.

Fig. 1.

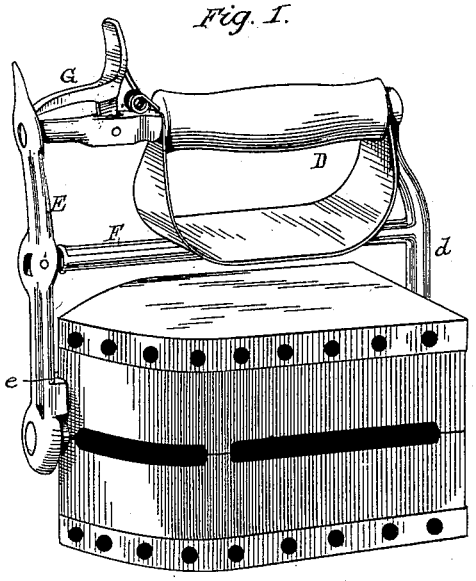

Fig. 2.

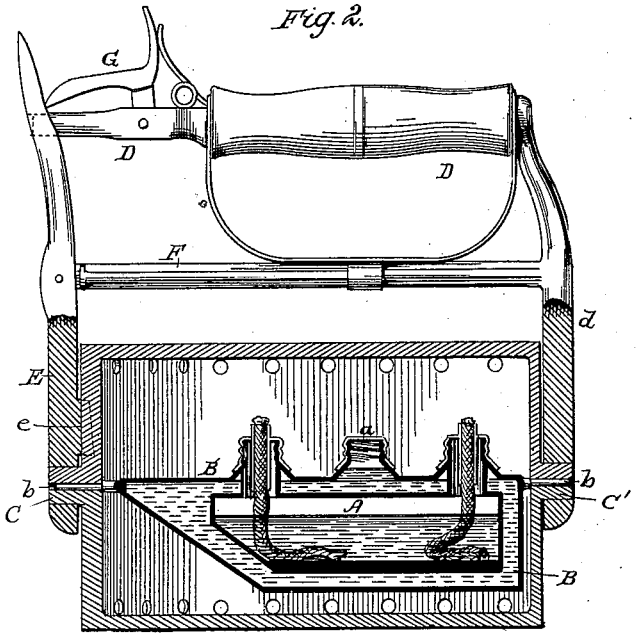

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Fig. 3.

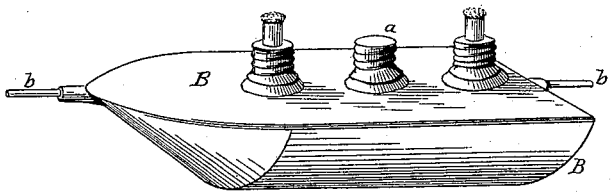


Fig. 4.

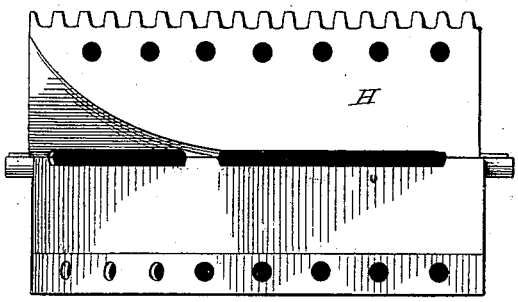


Fig. 5.

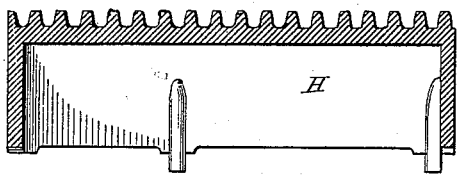
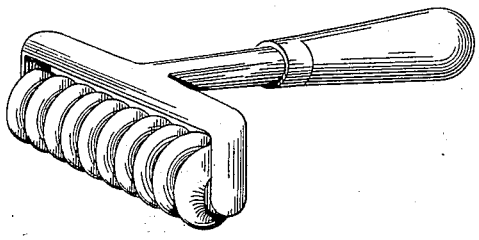


Fig. 6.



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UNITED STATES PATENT OFFICE.

WILLIAM CHALMERS AND WILLIAM N. REYNOLDS, OF DETROIT, MICHIGAN.

IMPROVEMENT IN SAD-IRON AND FLUTER.

Specification forming part of Letters Patent No. **205,473**, dated July 2, 1878; application filed April 24, 1878.

To all whom it may concern:

Be it known that we, WILLIAM CHALMERS and WILLIAM N. REYNOLDS, of Detroit, in the State of Michigan, have invented a new and useful Improvement in Sad-Iron and Fluter, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, making a part of this specification, in which—

Figure 1 represents a perspective view of a sad-iron with our improvements attached. Fig. 2 is a longitudinal vertical section of the same. Fig. 3 is a detached view of the lamp. Fig. 4 shows the fluting-iron attached to be heated. Fig. 5 is a longitudinal section of fluting attachment. Fig. 6 is a perspective view of the fluting-roller.

Our invention relates to that class of sad-irons which are made hollow and in two halves or sections, with a suspended lamp within for heating the same; and it consists, first, in surrounding the interior lamp with a water-jacket; secondly, in devices for locking and unlocking the iron by means of the thumb; and, thirdly, in a fluting attachment to the iron, all as hereinafter described and claimed.

To enable others skilled in the art to make and use our invention, we will proceed to describe the exact manner in which we have carried it out.

In sad-irons made in halves the interior lamp has been suspended by loose rings on a rod passing through the center of the iron, by which the iron itself is turned from one position to another, and has been surrounded by a perforated air-chamber for the purpose of keeping the lamp cool. The result of this construction is to keep the lamp surrounded by a body of air, which must soon become heated in the iron, and remain heated, and in a measure shut off the cool air, which, entering the cavity through the openings in the body of the iron, would have a tendency to keep the lamp cool, thus defeating the object sought to be accomplished.

To overcome this difficulty is the object of the first part of our invention; and we surround our lamp A with a water-tight jacket, B, which is readily filled and emptied through the opening *a*, which is provided with any desired cap or stopper. This jacket is kept filled with water, which, when it becomes heated, is quickly emptied and the jacket again filled with cold water, thus securing the lamp against the danger of overheating, and possible explosion, to which it is exposed when thus confined within the heated iron.

We are aware that it is common in lamps and lamp-stoves to inclose the oil-reservoir within water-jackets, and therefore we do not claim this broadly as our invention.

The lamp is suspended on the trunnions *b b*, having their bearings within the main trunnions C C′ of the sad-iron, as shown in Fig. 2. The center of gravity being below the center of rotation of the sad-iron, the latter is allowed to revolve while the lamp retains its position within.

To the handle D is attached the fixed arm *d*, with an eye at its lower end, fitting snugly over the trunnion C′, the opposite trunnion C being held by the lever E, pivoted to the longitudinal bar F. This lever is provided at its lower end with an eye fitting loosely over the trunnion, and a V-shaped groove, *e*, fitting the forward end of the sad-iron, for a purpose hereinafter explained. The upper end of the lever has a circular opening sufficiently large to receive the forward end of the handle, and through which it loosely plays.

On the handle we place the spring-dog G, for locking or releasing the lever. When the dog is forced forward by the spring, the V-shaped notch or groove in the lower part of the lever E catches the iron and prevents its turning on the trunnions, thus holding the iron steadily to its position.

The operation of our invention is as follows: The sad-iron is ready for operation when in a position as shown in Fig. 1. The water-jacket is supposed to be filled with cold water and the lamps lighted. When the lower face of the iron has become too cool for use, and requires reheating, the iron is laid on the side, the dog G is drawn back by the thumb, the upper part of the pivoted lever E falls back, and the lower part swings forward by gravitation, releasing the iron from the V-shaped notch. The handle is then turned completely

over to the opposite side, the spring-dog again released, and the opposite iron is secured in position for work.

The fluting attachment H is constructed to correspond in size to one section of the sad-iron, so as to be interchangeable therewith, and is made hollow, like the sections of the iron, so as to form the heating-chamber when the fluter is in use.

When the ironing is nearly completed the upper section of the iron is removed and the fluting attachment H substituted in its place, and becomes heated while the ironing is being finished up. When properly heated the fluting-roller is applied in the usual way.

Having thus explained our invention, what we claim as new, and desire to secure by Letters Patent, is—

1. In combination with a hollow sad-iron, the automatically-adjusting lamp A, provided with the water-jacket B, and suspended on its trunnions *b b*, substantially as and for the purpose set forth.

2. In combination with a sad-iron provided with a handle, D, the pivoted lever E, bar F, and spring-dog G, all constructed and arranged to operate substantially as and for the purpose set forth.

3. In combination with a sectional sad-iron provided with an internal heating device, the hollow and interchangeable fluting attachment H, substantially as and for the purpose set forth.

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