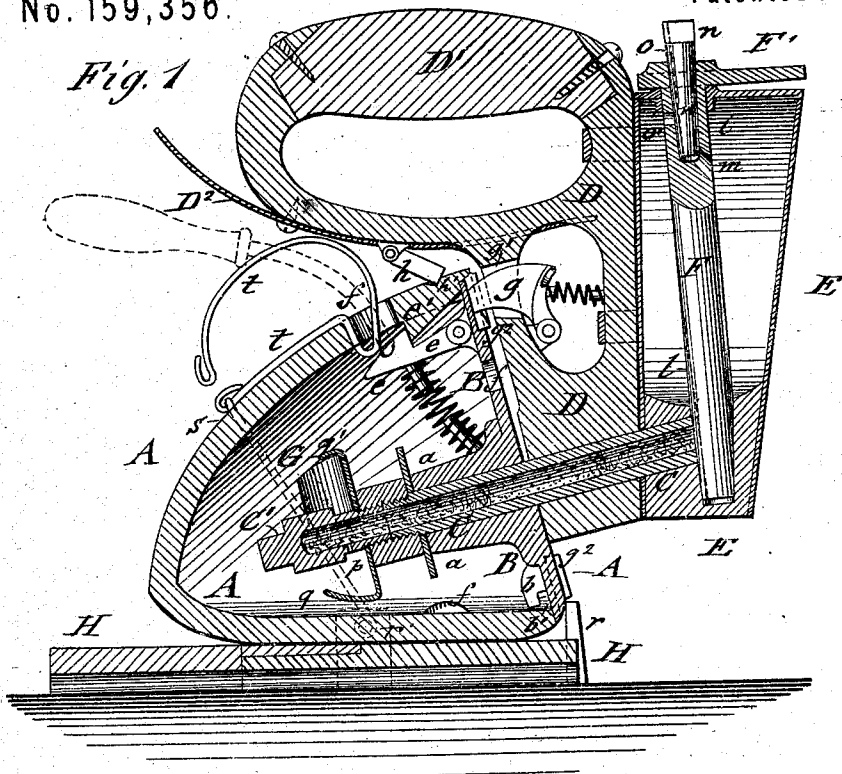


C. R. RAND.

Combined Fluting and Sad Iron.

No. 159,356.

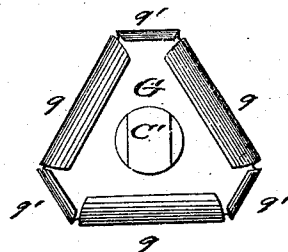
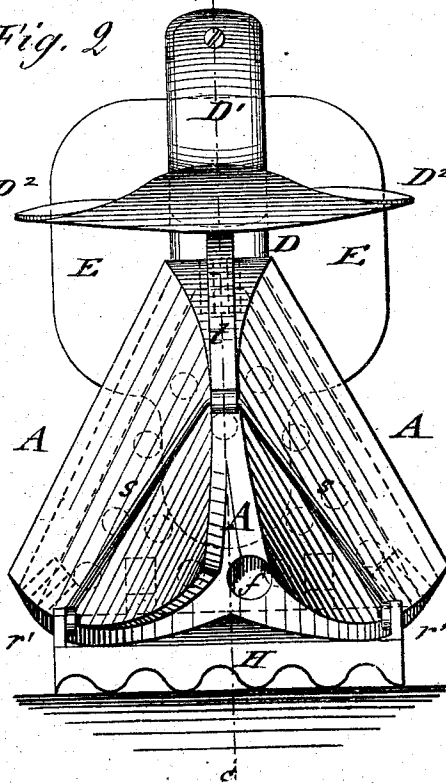
Patented Feb. 2, 1875.



*Fig. 2*

*Fig. 3*

*Fig. 4*



WITNESSES:

*C. Newell*  
*A. F. Terry*

INVENTOR:

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ATTORNEYS.

# UNITED STATES PATENT OFFICE.

CHARLES RAYMOND RAND, OF SAN FRANCISCO, CALIFORNIA.

## IMPROVEMENT IN COMBINED FLUTING AND SAD IRONS.

Specification forming part of Letters Patent No. 159,356, dated February 2, 1875; application filed December 5, 1874.

*To all whom it may concern:*

Be it known that I, CHARLES R. RAND, of San Francisco, in the county of San Francisco and State of California, have invented a new and Improved Combined Fluting and Sad Iron, of which the following is a specification:

In the accompanying drawing, Figure 1 represents a vertical longitudinal section on the line *c c*, Fig. 2, of my improved fluting and sad iron combined; Fig. 2, a front view of the same; Fig. 3, a detail front view of the burner, and Fig. 4 a detail top view of the faucet of the oil-reservoir.

Similar letters of reference indicate corresponding parts.

My invention relates to an improved fluting and sad iron which is heated internally with gasoline or other volatile distillate of petroleum, being constructed in a compact and convenient manner for easy lighting and adjustment, to be readily used on different sides, either as sad-iron or for fluting.

My invention consists of a three-faced sad-iron with front and rear air-holes, the rear part of which is locked by lugs and spring-latch to the sides of the sad-iron, being capable of turning on the fluid-conveying pipe for adjusting either side, by a suitable locking spring-latch, to the handle-stock. The oil-reservoir is applied back of the handle-stock, filled by a faucet having a top opening and vent-hole with grooved stoppers for admission of air. The lower part of the faucet is grooved and seated in the lower part of the oil-receptacle, conveying the oil to the fluid-pipe and interrupting the supply on being turned in its seat. The oil passes through a perforation near the end of the supply-pipe, and forms, by a burner of triangular shape with partially open corners, a flame for heating the sides of the sad-iron. The fluting-irons are attached, by means of rear lugs, pivoted front wire, and spring hooking device, into a side recess at each corner of the sad-iron, admitting readily the use of sad-iron or fluting-iron, as required.

In the drawing; A represents the sad-iron, made of suitable cast metal in triangular shape with three sides, of which two have sharp edges, while the third side bulges out at the edges for polishing purposes. The rear part B of the triangular sad-iron A is detachable therefrom

and seated, by means of a flanged hub, *a*, on a shoulder joint or washer of the fluid-supplying pipe C, turning freely on the same. The rear part B is locked to the sad-iron by means of hooks *b* sliding over shoulders or lugs *b'* at one side, and by a pivoted spring-latch, *c*, sliding over an inclined shoulder, *c'*, at the opposite side of the sad-iron, securing thereby the iron rigidly to its rear part, and producing the rotation of the same therewith, according as one face or the other is to be thrown into use. The sad-iron has suitable perforations, *f*, at the apex, corners, and rear, for admitting a sufficient quantity of air to the flame in the interior, and producing the complete combustion of the oil without smell. The supply-pipe C is firmly secured to the perforated lower part of the handle-stock D, passing, under slight inclination, through the same and into the solid lower part of the oil-reservoir E, which is attached in suitable manner to the handle-stock D and handle D'. The middle part of stock D is recessed for the spring-latch *g*, which passes through a front slot, *g'*, of the stock in a forward direction and locks into a slotted recess, *g''*, of the rear part B at each corner of the same, for securing thereby the sad-iron rigidly to the stock as the sides are consecutively used for ironing. A supplementary pivoted top latch, *h*, at the under side of the handle D<sup>1</sup>, below the hand-projecting shield D<sup>2</sup> of the same, drops simultaneously into a recess, *h'*, at the corners, and gives thereby additional steadiness to the sad-iron when locked to the handle-stock. The handle, with reservoir and rear part, is readily detached from the sad-iron by means of a handle-lever, which is introduced into the corner perforation *f* of the iron, and pressed on the latch *e*, forcing it downward and disengaging shoulder *e'*, as indicated in dotted lines in Fig. 1. The gasoline, naphtha, or other suitable volatile product of petroleum is introduced into the reservoir E, through its faucet F, which passes through a top aperture in downward direction until seated with its lower conical part in a corresponding recess of the solid bottom of the reservoir, closing in this position the upper end of the supply-pipe C. A longitudinal groove, *l*, of the lower part of the faucet F communicates the oil to the supply-pipe, when the faucet is turned by its top

handle  $F'$ , so that groove  $l$  connects with the end of the supply-pipe. The middle part of the faucet is solid. The upper part has a central perforation,  $m$ , with side issuing-hole, through which the oil is filled into the reservoir. A stopper,  $n$ , closes the hollow faucet part, but communicates, by a side groove,  $o$ , with a small vent-hole,  $o'$ , of the faucet, for admitting the required quantity of air to the inside of the reservoir. By turning the stopper  $n$  in its seat the vent-connection is interrupted and the feeding of the oil to the burner discontinued. The front end of the supply-pipe  $C$  is closed by a cap-piece,  $C'$ , having one or more small issuing-orifices,  $p$ , back of the larger shoulder part of the cap. The oil is fed uniformly by means of cotton or other fibrous material placed into the supply-pipe. A burner,  $G$ , of triangular shape, with bent side flanges  $g$  and shorter half-open corner flanges  $g'$ , divides the flame and heats the sides of the sad-iron, the full combustion of the oil gases being produced by the current of air through the air-holes  $f$  of the iron. Fluting-irons  $H$ , of various shapes, double or single, are attached, by rear lugs  $r$  and side lugs  $r'$ , with a  $\nabla$ -shaped pivoted spring-wire,  $s$ , and spring hooking device  $t$ , shown in Fig. 1, to the sad-iron, the spring-hook  $t$  being seated into one of the corner air-holes of the iron, producing a rigid connection of fluters and sad-iron, to be used in either manner, as required.

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

1. The combination of revolving three-faced sad-iron with detachable rear or end part, handle-stock, oil-receptacle, communicating oil-supply pipe, with distributing-burner and fluting-irons, attached by suitable spring locking devices, all being arranged and applied substantially in the manner and for the purposes set forth.

2. The triangular sad-iron, provided with

front and corner air-holes  $f$ , in combination with the perforated rear or end plate for admitting air-supply to heating-flame, as described.

3. The triangular sad-iron  $A$ , having projecting lugs or shoulders  $b'$  at one side and a shoulder,  $e'$ , at opposite sides, in combination with end plate  $B$ , locking thereon by corresponding hooks  $b$  and pivoted spring-latch  $e$ , substantially as set forth.

4. The end plate  $B$ , having recesses  $g^2$  and turning on connecting supply-pipe  $C$ , in combination with spring-latch  $g$  of the handle-stock, for being locked thereto, and admitting consecutive use of each side, as specified.

5. The handle  $D'$ , having pivoted supplementary latch  $h$ , in combination with corner recesses  $h'$  of sad-iron  $A$ , for forming additional steady locking device of sad-iron to handle-stock, substantially as set forth.

6. The faucet  $F$ , having oil-admitting hole  $m$  and vent-hole  $o'$ , in combination with closing-stopper  $n$ , provided with vent-groove  $o$ , substantially for the purpose set forth.

7. The combination of oil-supply pipe  $C$ , provided with pivoted perforated cap or end pipe  $C'$  in the interior of sad iron, with flame-distributing burner  $G$ , substantially as described.

8. The combination of the flame-distributing burner  $G$ , having curved side flanges and partly-open shorter corner flanges for throwing flame to inner surface of sad-iron, as shown and described.

9. The combination, with the side air-holes  $f$  of the sad-iron, of fluting-irons  $H$ , provided with rear and side lugs  $rr'$  and pivoted spring-wire  $s$  and spring hooking device  $t$ , for applying fluting-irons to each heated side of sad-iron, substantially in the manner specified.

CHARLES RAYMOND RAND.

Witnesses:

ROBERT BOYLE,  
JESSE CURTISS.