2 Sheets--Sheet 1.

W. J. McCAUSLAND.

Fluting and Polishing Irons.

No. 164,196. Patented June 8, 1875.

Fig 1

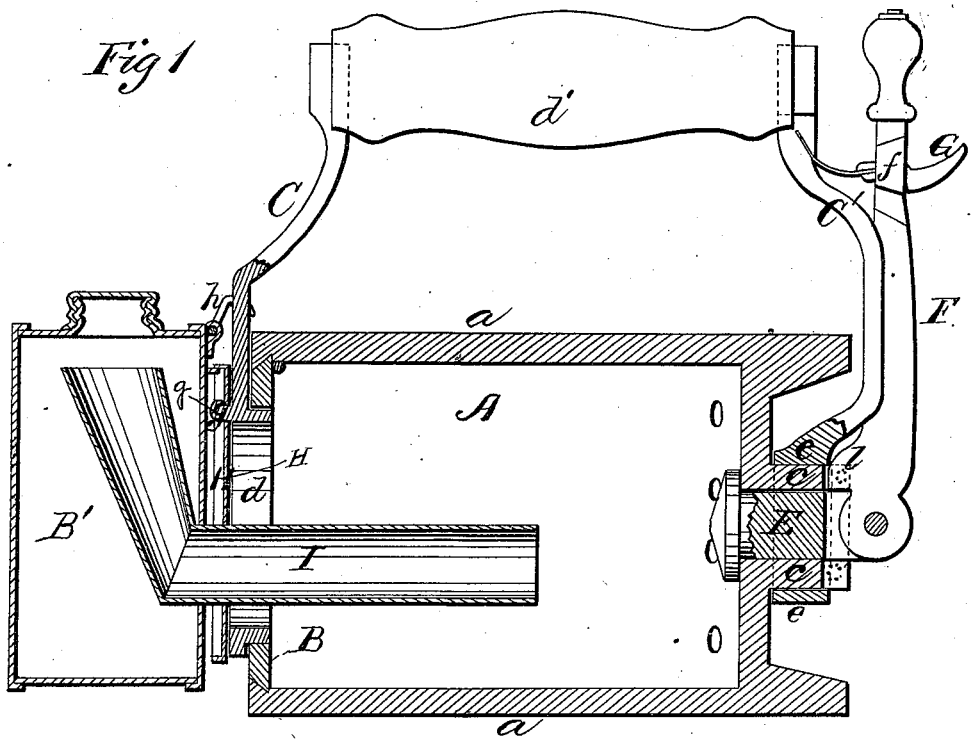
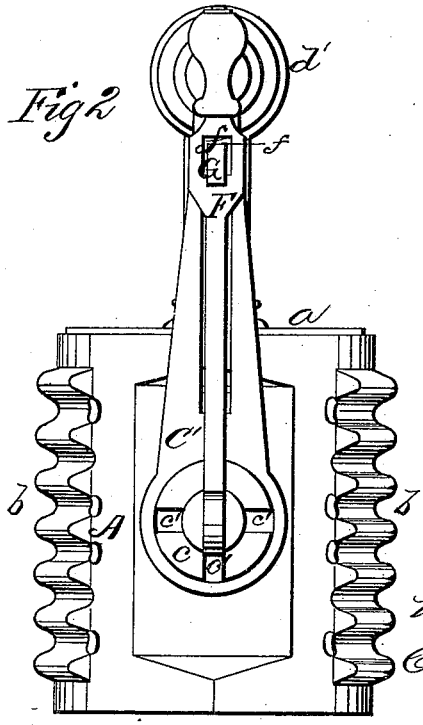


Fig 2



WITNESSES

Robert Everett

M. Carroll

INVENTOR

Wm. J. McCausland

Chipman Paum & Co

ATTORNEYS

THE GRAPHIC CO. PHOTO-LITH. 39 & 41 PARK PLACE, N.Y.

2 Sheets--Sheet 2.

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Fig 3

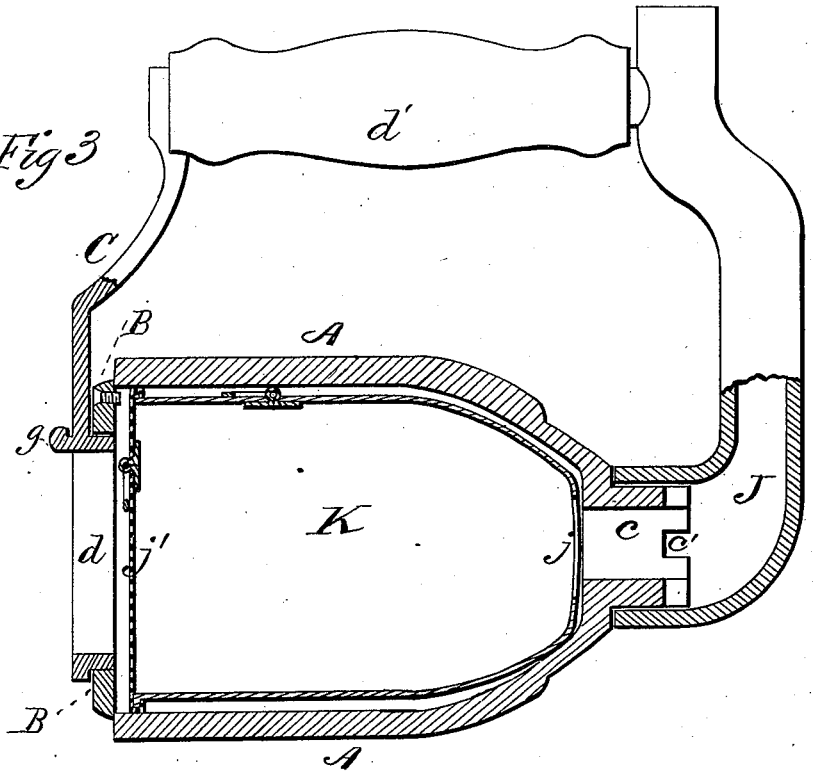


Fig 4.

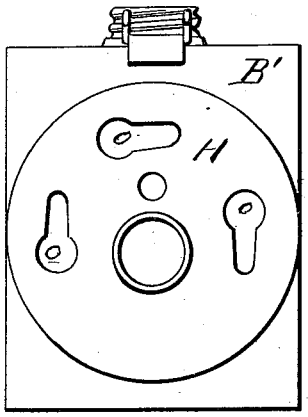
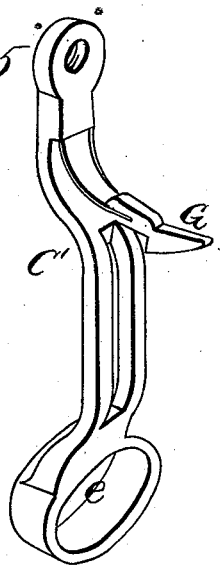


Fig 5



WITNESSES

Robert Everett

E. S. Hosmer.

INVENTOR

Wm. J. McCausland

Chipman Upson & Co

ATTORNEYS

THE GRAPHIC CO. PHOTO-LITH. 39 & 41 PARK PLACE, N.Y.

UNITED STATES PATENT OFFICE.

WILLIAM I. McCAUSLAND, OF LOUISVILLE, KENTUCKY.

IMPROVEMENT IN FLUTING AND POLISHING IRONS.

Specification forming part of Letters Patent No. **164,196**, dated June 8, 1875; application filed April 17, 1875.

To all whom it may concern:

Be it known that I, WILLIAM I. McCAUSLAND, of Louisville, in the county of Jefferson and State of Kentucky, have invented a new and valuable Improvement in Fluting and Polishing Irons; and I do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the annexed drawings, making a part of this specification, and to the letters and figures of reference marked thereon.

Figure 1 of the drawings is a representation of a longitudinal vertical section of my fluting and polishing iron, and Fig. 2 is an end view of the same. Fig. 3 is a modification of the same, and Figs. 4 and 5 are detail views.

This invention has relation to improvements in fluting-irons.

The object of the invention is to produce a device which will be capable of being converted from a fluting into a smoothing iron, and the reverse; also, an iron which may be heated either by a charcoal-fire kept up in its hollow interior, or by the flame of a lamp conducted therein, thus avoiding the expense of keeping up a fire in a stove or fire-place for the purpose.

To this end the nature of the invention consists, mainly, in a hollow metallic fluting and polishing iron, having the appearance of a thick sad-iron, the upper and lower horizontal surfaces of which are smooth, and the vertical sides longitudinally corrugated, in combination with a handle rotating in bearings on the said iron, and adapted to be locked in position after such rotation, so as to hold it against further movement, and to bring one of the smoothing-surfaces or of the corrugated surfaces undermost, as will be herein after more fully explained and claimed.

In the annexed drawings, A designates a hollow metallic casting, presenting in its general configuration the appearance of a very thick sad-iron plate, which casting has smooth upper and lower horizontal surfaces *a* and longitudinally-corrugated vertical sides *b*, as shown in Fig. 2. The pointed end of casting A is cut away above and below smoothing-surfaces *a*, forming a flat surface, from which projects a tubular trunnion, *c*, having radial notches *c'* cut in its edges, for a purpose hereinafter explained. The rear end of this plate or casting A is closed by a detachable metallic sliding plate, B, through which is formed a circular opening adapted to receive the lower tubular cylindrical end *d* of an arm, C, constituting, with handle *d'* and a second arm, C', the operating mechanism of my improved smoothing and fluting iron. The lower end of arm C' has an eye, *e*, upon its lower end, adapted to be passed over trunnion *c*, and to vibrate freely thereon. Arms C C' are clamped into their respective ends of plate A by means of a screw, which is passed into and through the latter and wooden handle *d'*, and is screwed into the perforated screw-threaded upper end of arm C. When this screw is forcibly set up the above-described arms will be rigidly held against endwise or outward displacement, but will be allowed to vibrate vertically and freely on the plate A, so that the said handle may at pleasure be vibrated into a plane vertical to that of smoothing-surfaces *a* or to fluting-surfaces *b*, rendering either available at short notice for application to the discharge of their respective functions.

With a view to locking the handle against further vibration when it is in use, either with the fluting or smoothing surfaces, a headed bolt, E, is passed from within through the tubular trunnion *c*, in the outer bifurcated end of which is pivoted a locking-rod, F, in the upper portion of which a slot, *f*, is cut, adapted to admit a spring-catch, G, rigidly secured to arm C'.

To operate the handle, disengage catch G from rod F, and rotate the handle into a position vertical to the surface designed to be used; then rotate locking-bar F into the same plane with the handle, and draw it inward toward the same, causing catch G to enter slot *f*, and fasten the locking-bar to the handle, at the same time holding the latter against further vibration by the engagement of a lug, *l*, at the heel of the former in one of radial grooves *c'* of trunnion *c*.

g represents buttons projecting from cylindrical end *d* of arm C, which are adapted to be received into openings *o* in a plate, H, rigidly secured to the oil-receptacle of a lamp, B', the wick-tube I of which passes into the in-

terior of smoothing-iron A. When the wick has been lighted, and the lamp is secured, by means of buttons *g*, and a hook, *h*, adapted to be engaged over shoulders cut in arm C, to the ironing and smoothing device above described, a great heat will be speedily communicated to the walls of the same, which will be maintained as long as the contents of the lamp last, thus enabling me to dispense with the usual costly fires maintained in stoves or fire-places for the purpose.

In lieu of the above heater, I may adopt the following: Arms C C′ having been disconnected from plate A by removing screw S, and sliding door B removed from its enlarged end, a sheet-metal vessel, K, of corresponding shape is introduced into the interior of plate A, the same having been previously filled with charcoal, and then lighted. Door B is then replaced, arm C connected to the smoothing-plate, and a tubular conduit, J, having been substituted for arm C′, which, like the said arm, is passed over trunnions *c*, the said conduit and arm C are clamped on plate A by means of a screw passing through arm C and handle *d*′. The reduced end of this vessel has a perforation, *j*, registering with the opening in trunnion *c*, and a sliding reticulated door, *j*′, in its other end.

The products of combustion will be carried by the draft up through conduit J to the open air, and will keep plate A highly heated.

In lieu of the above, I may also substitute a block of metal of corresponding shape to, and dimensions with, the interior of plate A, which block, having been previously heated, will be introduced therein in lieu of vessel K, arms C C′ being then restored to the position shown in Fig. 1.

What I claim as new is—

1. In a fluting and smoothing iron, the combination of a hollow casting, A, having smoothing-surfaces *a* and fluting-surfaces *b*, and a vertically-vibrating operating-handle, C C′ *d*, adapted to be locked into position vertical to either of the surfaces, substantially as specified.

2. The hollow casting A, having tubular notched trunnion *c*, vertically-vibrating handle C C′ *d*, with spring-latch G, in combination with a locking-rod, F, having a lug, *l*, and slot, *f*, and pivoted in the end of a rotating bolt, E, substantially as specified.

3. The hollow casting A, having a notched trunnion, *c*, rotating bolt E, and a locking-rod, F, in combination with a rotating handle, C C′ *d*, substantially as specified.

4. The arm C, having tubular cylindrical end *d*, with buttons *g*, in combination with lamp B′, plate H, having openings *o*, and a wick-tube reaching into the interior of the ironing-plate, substantially as specified.

In testimony that I claim the above I have hereunto subscribed my name in the presence of two witnesses.

WILLIAM IVENHOW McCAUSLAND.

Witnesses:
P. P. SMOTHERS,
WM. H. CURLE.