

(Model.)

2 Sheets—Sheet 2.

A. F. CHABLE.

SAD IRON.

No. 354,685.

Patented Dec. 21, 1886.

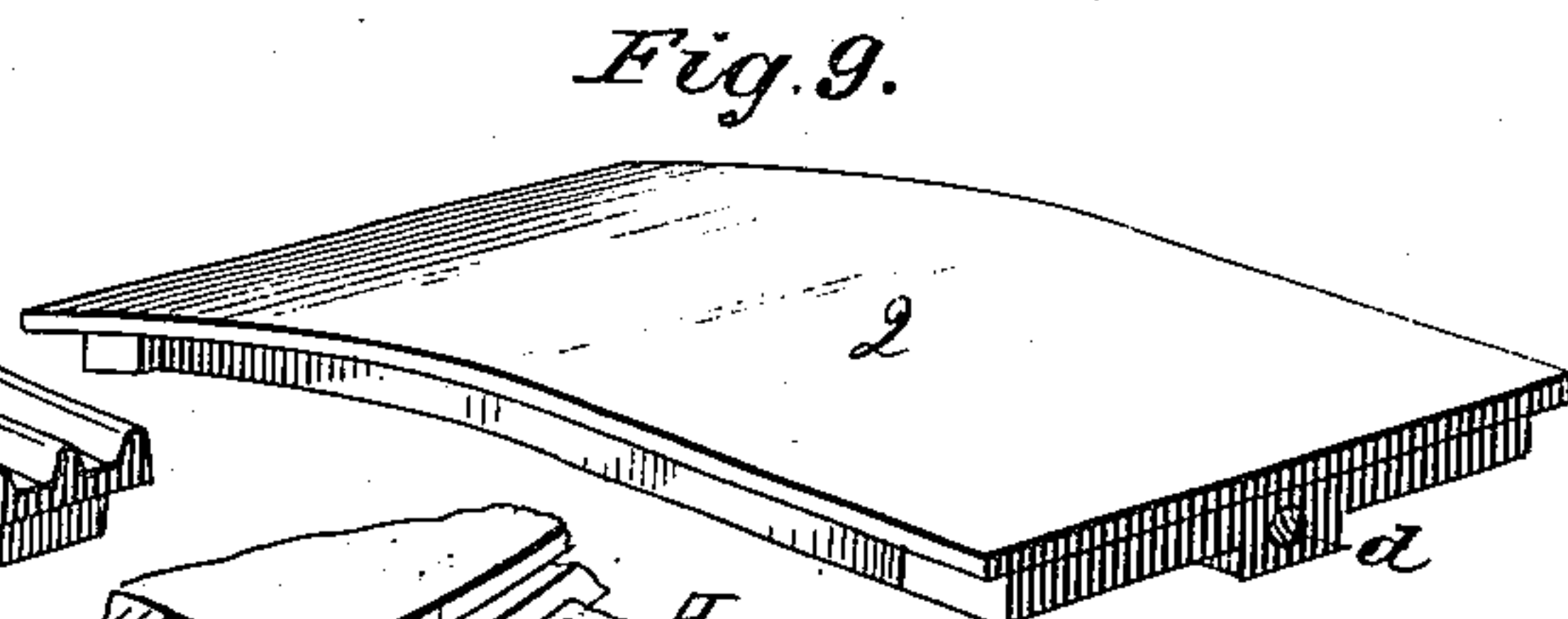
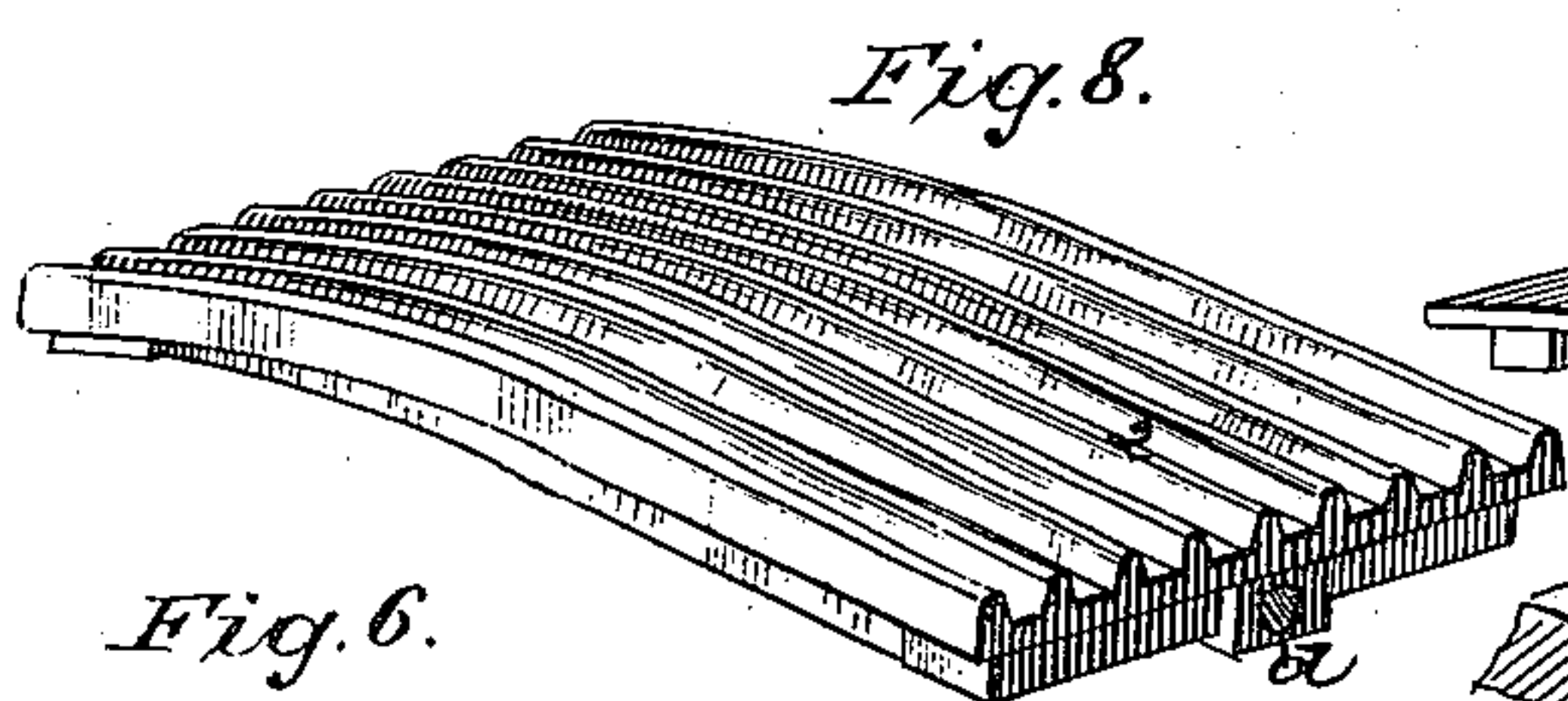
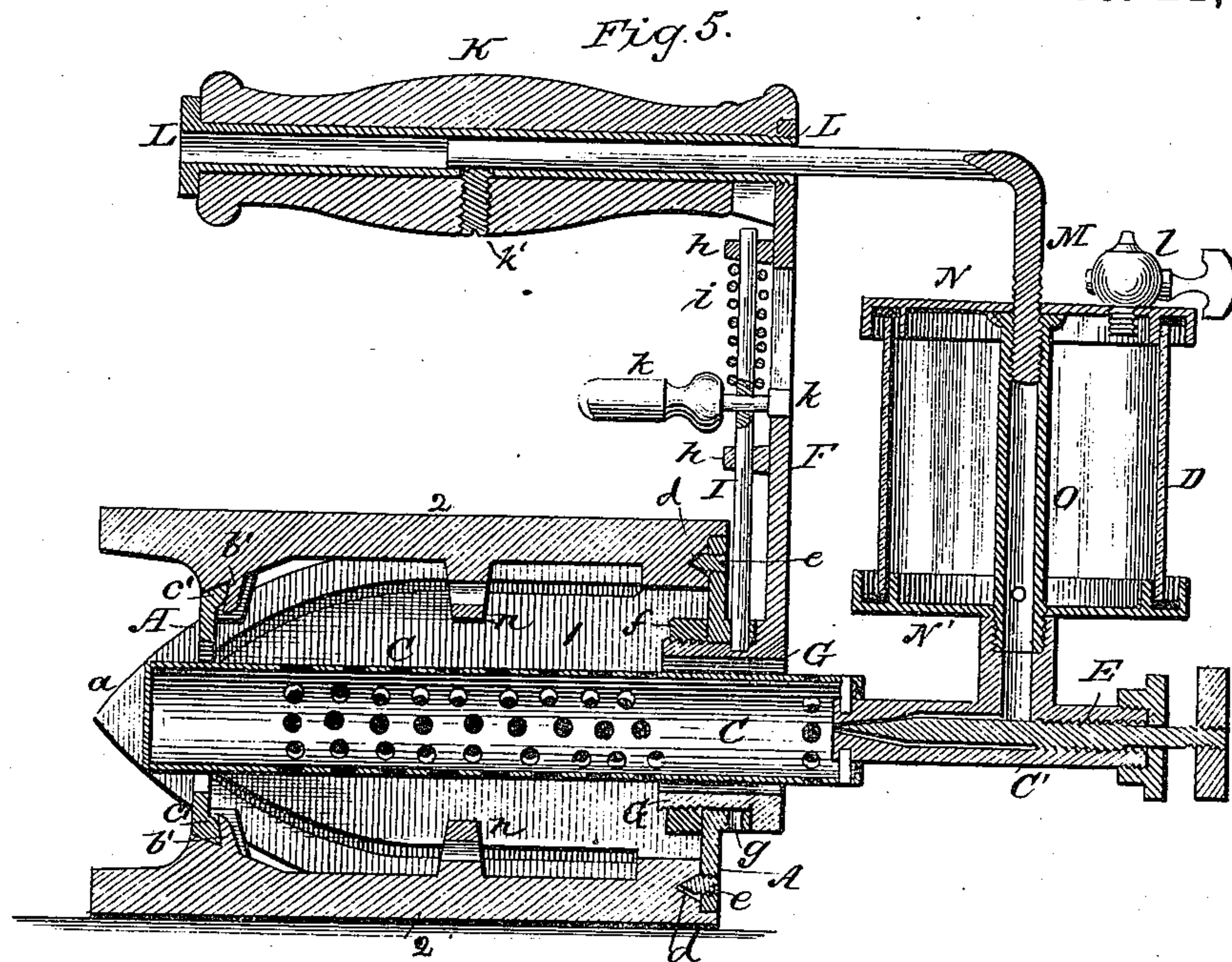


Fig. 6.

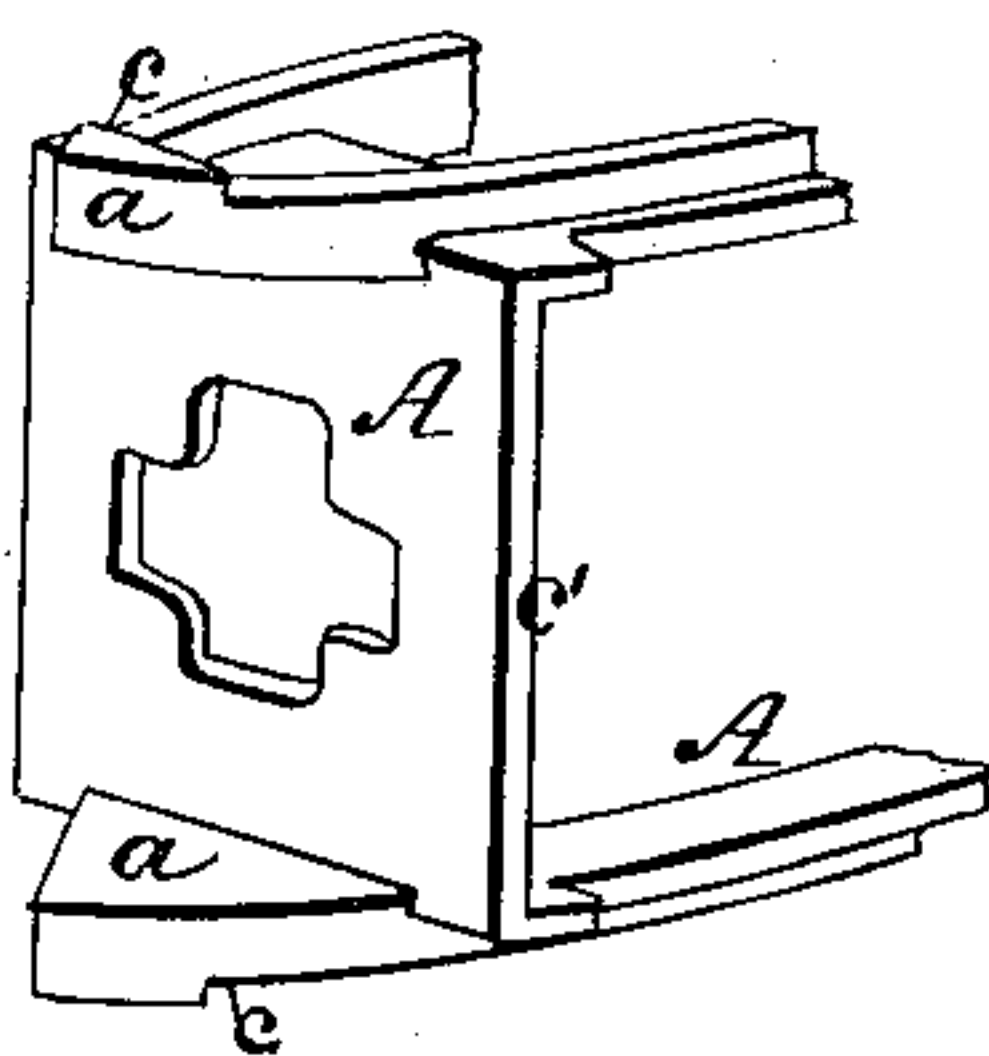


Fig. 7.

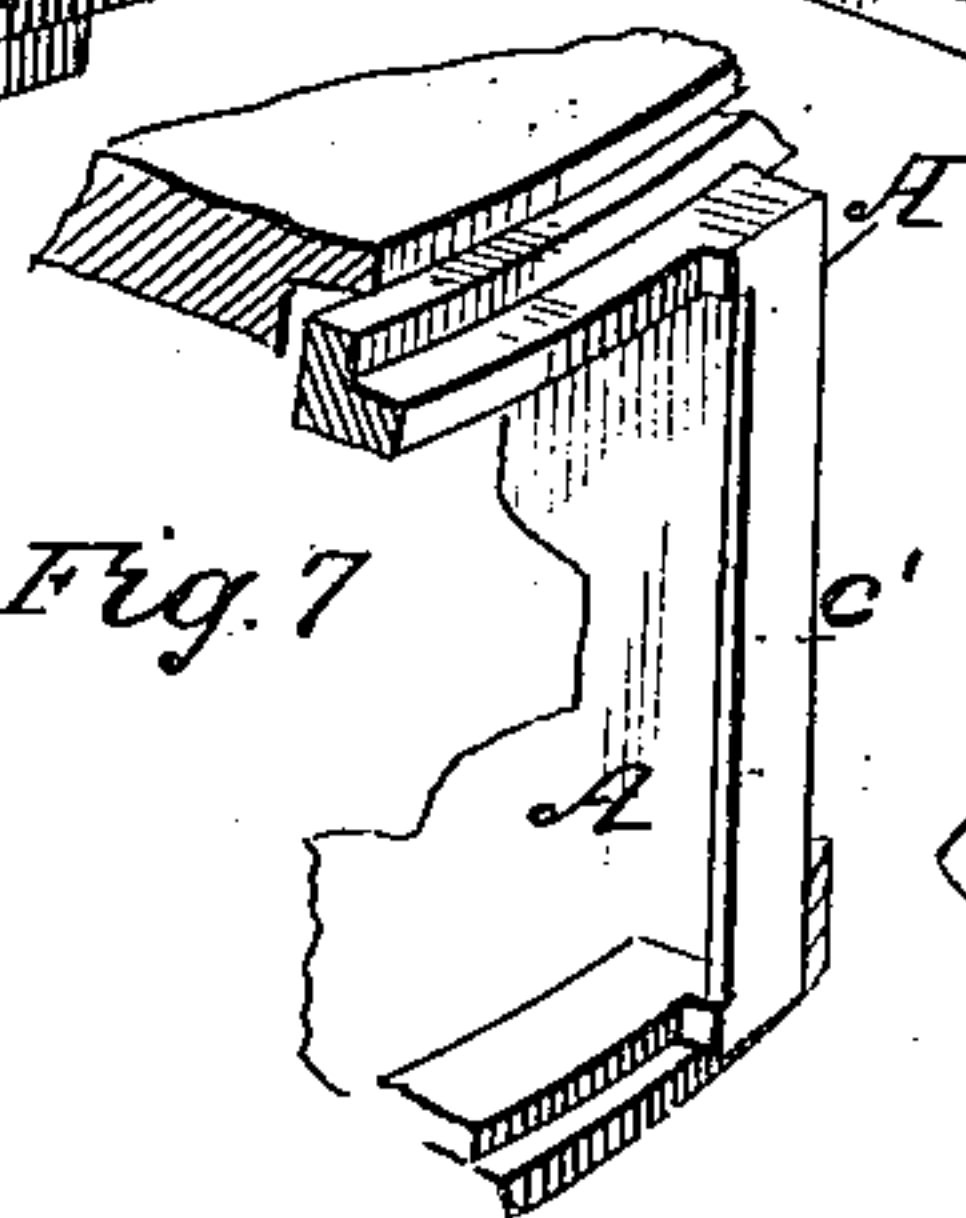
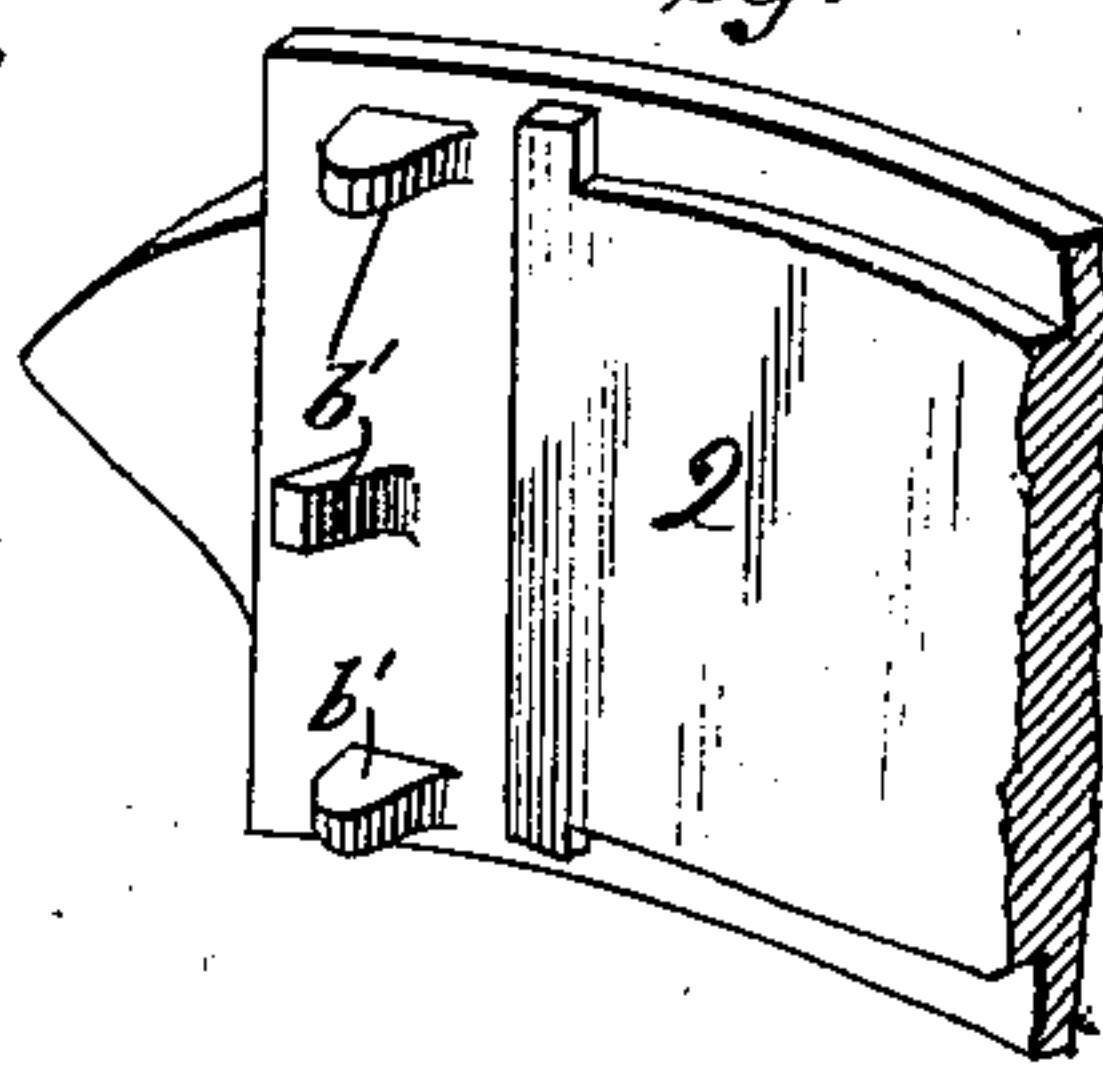


Fig. 10.



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TO JOSEPH CLARK PRICE, OF SAME PLACE.

SAD-IRON.

SPECIFICATION forming part of Letters Patent No. 354,685, dated December 21, 1886.

Application filed December 24, 1885. Serial No. 186,648. (Model.)

To all whom it may concern:

Be it known that I, AUGUST F. CHABLE, a citizen of the United States, residing at Evansville, in the county of Vanderburg and State of Indiana, have invented a new and useful Improvement in Sad-Irons, of which the following is a clear description.

My invention is an improvement in the class of sad-irons which are adapted to be reversed or turned on the handle, so that any one of two or more working-faces may be used.

The improvement consists in the construction and combination of parts, as herein described and claimed.

In accompanying drawings, Figure 1 is a perspective view of my improved sad-iron, one of the flat faces or irons being detached and its inner side exposed. Fig. 2 is an end view of the same with the oil-reservoir and part of the handle removed. Fig. 3 is a detail cross-section through one of the side angles of the sad-iron on line *xx*, Fig. 1. Fig. 4 is a detail longitudinal section on line *yy*, Fig. 1, showing the construction whereby the detachable faces are locked at the front end to the frame of the sad-iron. Fig. 5 is a longitudinal central section of the sad-iron. Fig. 6 is a perspective view of the front end of the sad-iron frame. Fig. 7 is a perspective view of a portion of the front end of the frame of the sad-iron, and of detachable faces or irons. Figs. 8, 9, and 10 are perspective views of different forms of detachable faces or irons. Fig. 11 is a side elevation of the sad-iron provided with a gas-pipe attachment, one of the faces being removed.

The rotatable body A, Figs. 1, 2, 6, of the sad-iron is an oblong, nearly rectangular, iron frame, whose sides have openings corresponding to the general form of the detachable faces or irons, Figs. 1, 8, 9, 10, that are adapted to be secured thereto, as hereinafter described. The ends of said frame or body A are also provided with openings to receive, either from front or rear, the perforated tube C, Figs. 1 and 5, that conducts the burning-fluid into the chamber and permits its escape, to burn as flame and heat the faces of the sad-iron. Gasoline, alcohol, or other easily-inflammable liquid

is supplied from the reservoir D, its flow being regulated by the conical adjustable screw-valve E. The handle has a rigid vertical arm, F, having a hollow cylindrical extension, G, that constitutes the bearing of the rotatable frame A. A spring locking-rod, I, serves to secure the latter in fixed relation to the arm F—that is to say, to prevent its rotation except when released at the will of the operator.

I will now proceed to describe the invention more in detail.

The frame A has pointed extensions *a*, Figs. 1 and 6, at its front end on two opposite sides. These (*a*) are always visible to the operator. To these open sides are applied the detachable working-faces, some of which are flat and smooth, others curved and corrugated. On two opposite sides of the frame A these faces are pointed at the front end, as shown in Fig. 1, and on the other two opposite they are square or straight at the front end, as shown in Figs. 8 and 9. The several faces are secured by the same means at their rear ends; but at the front ends the pointed faces 1 are locked by devices that differ slightly from those for securing the square faces 2, and will hence be described separately.

A forwardly-projecting lip or flange, *b*, is formed on the under side of each face 1, Fig. 4, to engage with a corresponding rearward projection, *c*, on the extensions *a*. The faces 2 (see Figs. 8, 9, 10) have aligned lugs *b'*, that lock with the straight edge *c'*, Figs. 1, 6, 11, of the front end of frame A. In effect, therefore, the faces 1 1 and 2 2 are locked at the front end by substantially similar means, and at the rear end the means are identical. Thus at the rear ends of the detachable faces is a lug, *d*, having a conical cavity, to receive a pointed screw, *e*, Fig. 5, that passes through the rear end of frame A. As the point of the screw enters the cavity it bears on the inner side of the latter, and thus draws down the detachable face, at the same time forcing it forward, so that it is firmly secured.

The edges of the faces are rabbeted, as shown, Figs. 1, 3, 7, the inner edge or side of the rabbet being cut away save at the ends which abut the inner edges of the frame A.

The space thus formed allows admission of air to the chamber within for the support of combustion.

The rear end of the burner-tube C is detachably connected with the cylindrical neck G of the arm F of the handle, and the forward imperforate end of the burner projects through the hole in the front end of frame A when the lamp is attached to the rear of the iron frame, as shown.

When the lamp is attached in front of the frame, (not shown,) the forward imperforate end of the tubular burner C passes through the cylindrical neck of the arm of the handle. The rear perforated end of the burner projects out in front of the front hole in the frame, which is notched or cut at that point to allow admission of air. The burner-tube C is secured in neck G by a screw, *e'*, Fig. 2. The cylindrical neck G of the arm F of the handle is secured to the frame A by means of a nut, *f*, Fig. 5, which is secured upon its threaded inner end, and is in easy frictional contact with the inner side of the frame. The cylindrical neck G of the arm of the handle is also provided with a socket which does not pass quite through it, and into which the locking-bolt I enters, Fig. 5, after passing entirely through one of the holes in the circular boss *g*, formed on the frame A, thus making a double lock. The said locking-bolt I slides in perforated lugs *h*, formed on the handle-arm. Between these lugs, and encircling said bolt, is a spiral spring, *i*, whose lower end rests on a cross-pin, *k*. One end of the latter slides in a vertical slot in the arm F, and has a wooden guard applied to its other end, to serve as a finger-hold for raising the bolt I against the tension of the spring *i*.

It will now be understood that when the point of the rod I passes through a hole in the boss *g* into the socket of the cylindrical neck G of the arm F, the frame A, with its attached faces, is locked so that it cannot revolve; but by raising the rod by the finger, while the hand grasps the handle, the frame A is released and left free to turn on the cylindrical bearing G, as required, for the purpose of bringing another face underneath.

The wooden portion of the handle K is secured on a horizontal iron tube, L, that is fixed in the arm F, and provided with an octagonal head on its outer end. Into this tube L is inserted a rod, M, (it may be inserted at either end,) which is secured by a clamp-screw, *k'*, Fig. 5, passing transversely through the wooden part K and the tube L. The outer end of rod M is bent downward at a right angle, and threaded to adapt it to screw through the metal cap or head N of the fuel-reservoir D, and into the head of a vertical tubular post, O, that is connected with a horizontal tubular rear extension, C', of the burner-tube C. The lower head, N', of the reservoir D has a circular aperture in its center, which slides on over

the lower end of the threaded vertical tubular post O, and the cylindrical glass body of the reservoir is held between said heads, which have circular flanges and elastic packing to prevent leakage.

To regulate the flow of gasoline or other liquid fuel from the reservoir to the burner, I employ the conical or tapered screw-valve E, which has its seat in the extension-tube C', as shown in Fig. 5. The liquid enters the vertical tube O through small openings adjacent to the lower head, N'. To fill the reservoir, the rod M is screwed out, and next the cock *l*. The latter is then replaced and the rod M screwed in again. Air is then forced into the reservoir D, to create the pressure on the liquid required to feed it to the burner C, by placing the mouth over the open cock *l* and blowing into the reservoir. Then by shutting the cock the escape of air is prevented.

In some cases, especially in sad-irons intended for tailors' use, the reservoir D will be placed at the front end of frame A, instead of its rear end, as shown.

By removing the face and turning uppermost that side of the frame to which it is applied, and locking the handle K on the side in horizontal position, the reservoir D remaining in upright position and disconnected from the handle, the iron can be used in a sick-room and for many other purposes, as it heats so rapidly that hot water or necessary warm appliances can be had quickly without use of a stove. It can also be used to heat small dishes or for other purposes.

I show in Fig. 11 a modification, the reservoir D and tubes C C' being detached, and a gas-conducting metal tube, C'', and flexible tube C''' substituted therefor.

The flexible tube will extend in practice to a gas-bracket. The metal tube C'' has circular collars *o*, that fit and are secured in the end openings of frame A.

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

1. The combination, with the sad-iron frame A, of the detachable faces, whose edges are rabbeted, the inner shoulders of the rabbets being cut away for a portion of their length to form air-openings, and the perforated burner-tube C, arranged within said frame, all as shown and described.

2. The combination, with the metal frame A, of a detachable face having a locking-projection, *b*, on one end and a conical recess in the other end, and a screw, *e*, having a conical point and arranged as specified, whereby when it enters such recess its point comes first in contact with the inner side of the recess, and thus draws inward the rear end of the detachable face while pushing the latter forward.

3. The combination of rod I, spring *i*, and finger-piece *k* with the frame A and its circular boss, having holes *g*, and the handle F, hav-

ing the cylindrical portion G, provided with a socket to receive the rod, whereby the parts may be locked together, as specified.

5 4. The combination of the handle, the horizontal tube fixed in the same, the screw *k'*, the rod which is bent downward and threaded, the reservoir, the vertical tubular post within said reservoir, provided with openings for supply-

ing the burner, and the burner-tube connected with said post, substantially as shown and described. 10

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