

H. L. DRAKE.

Apparatus for Drying Shoe-Soles.

No. 151,107.

Patented May 19, 1874.

Fig. 1

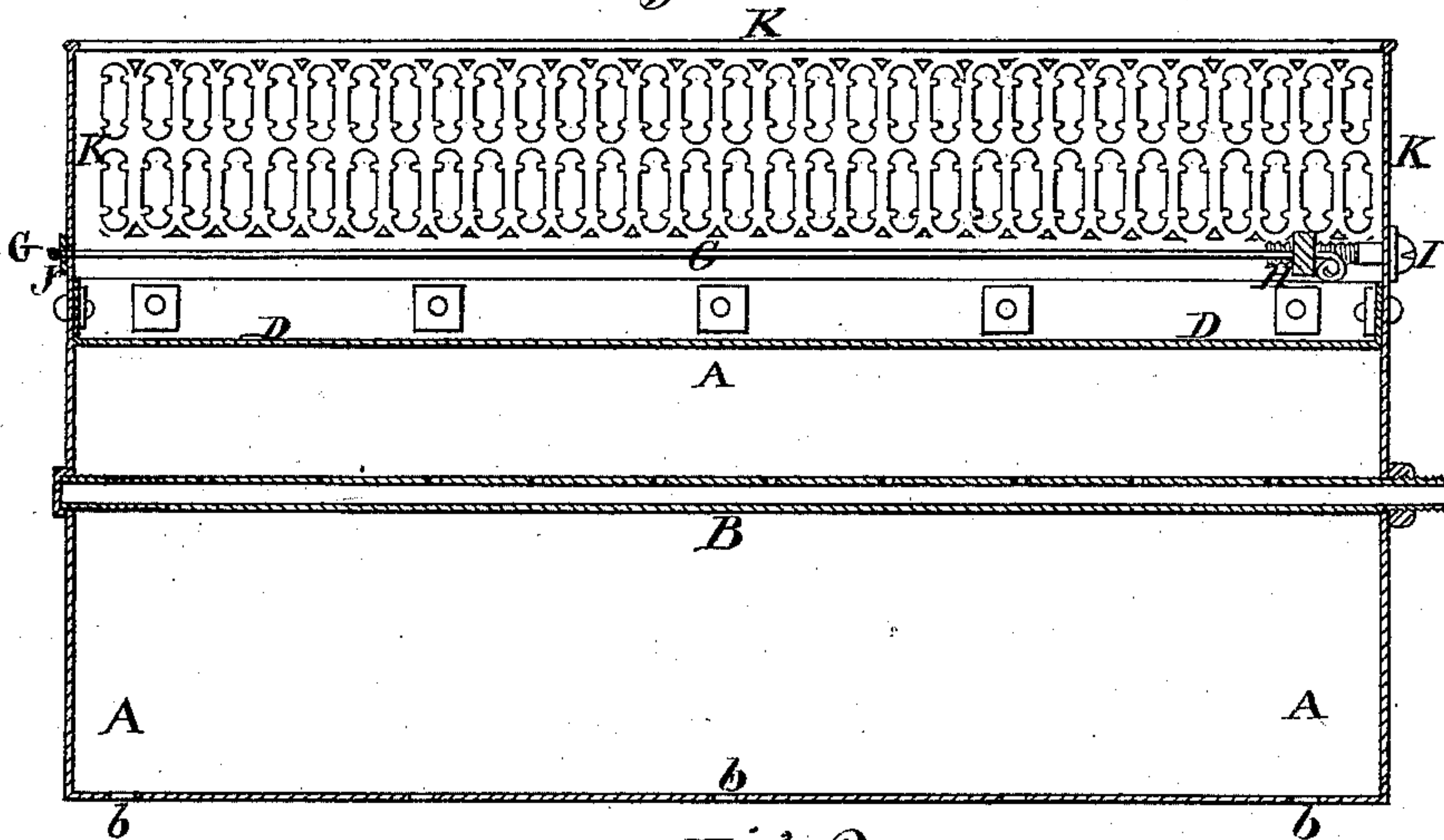


Fig. 2

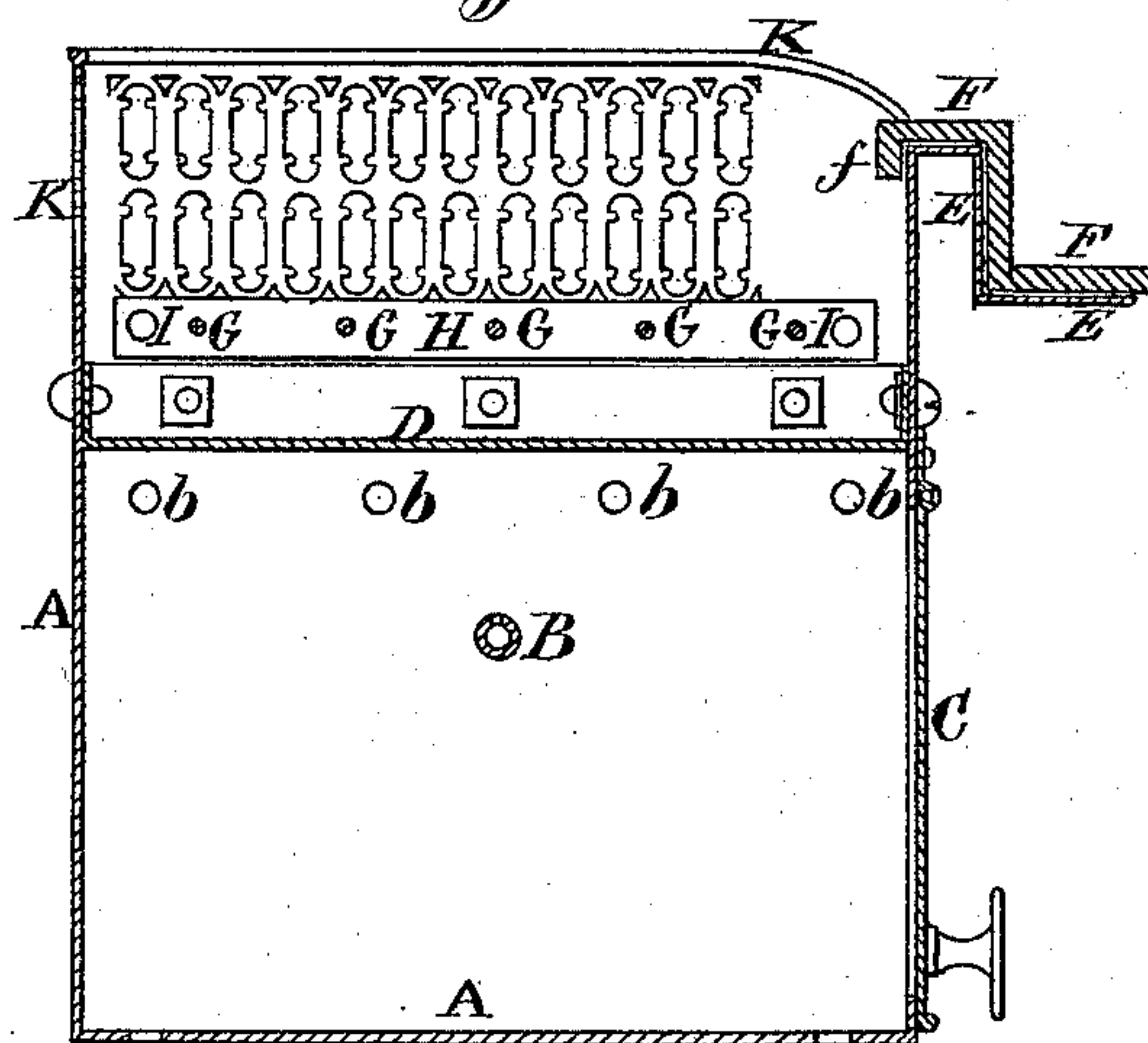
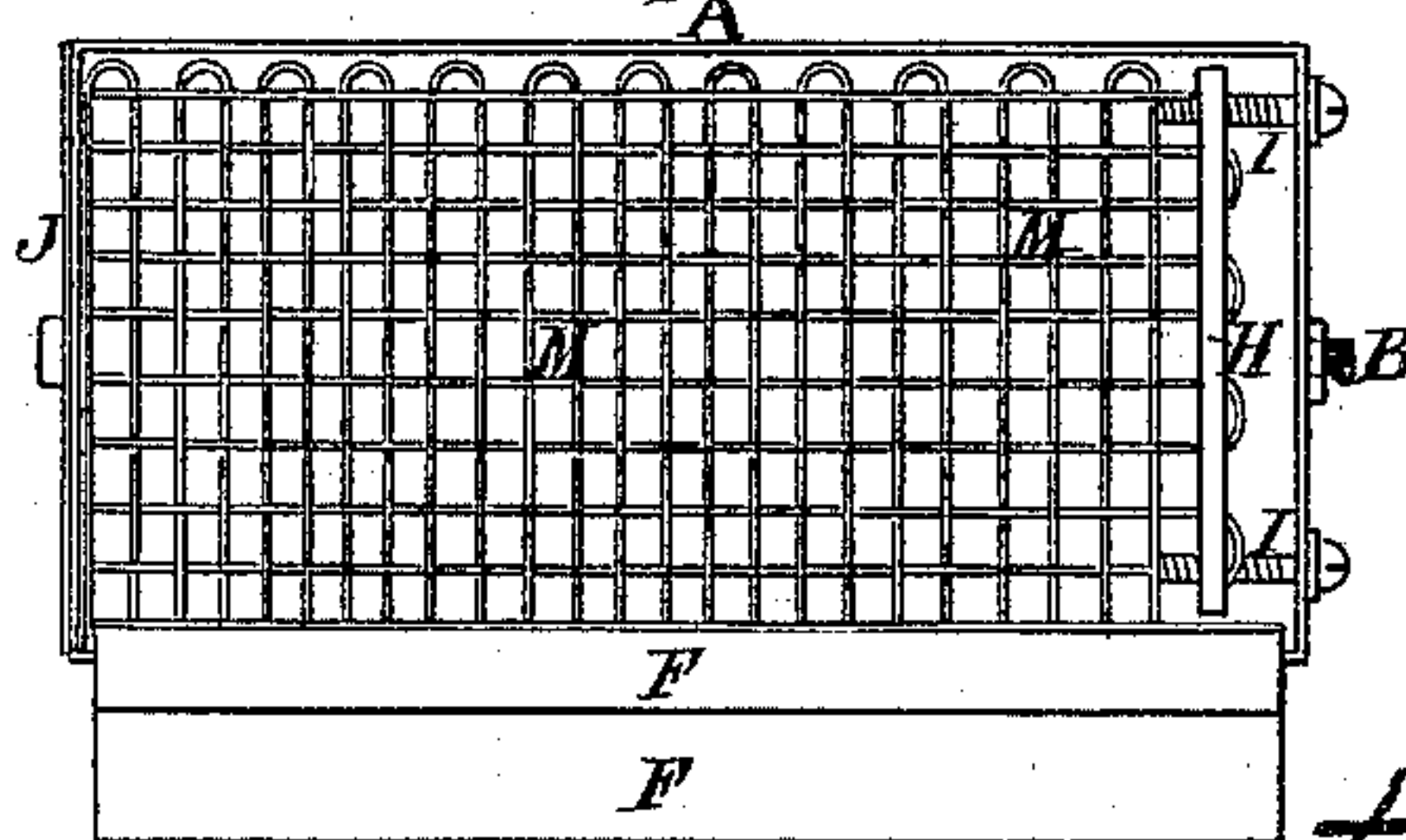


Fig. 3



Witnesses
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UNITED STATES PATENT OFFICE.

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IMPROVEMENT IN APPARATUS FOR DRYING SHOE-SOLES.

Specification forming part of Letters Patent No. 151,107, dated May 19, 1874; application filed February 12, 1874.

To all whom it may concern:

Be it known that I, HENRY L. DRAKE, of Lynn, in the county of Essex and State of Massachusetts, have invented certain Improvements in Apparatus for Drying Shoe-Soles, of which the following is a specification:

Figure 1 of the accompanying drawings is a central vertical longitudinal section. Fig. 2 is a central vertical transverse section of my improved apparatus for drying boot and shoe soles.

The object of the present invention is to obviate the objections made to apparatus for similar purpose, occasioned by the cracking or other injury to which the heels of the shoes were exposed by not being sufficiently isolated from the heating-surface, as well as to provide a more efficient method of supporting the shoes, so that their shanks may be dried and buffed before heeling, and to guard the leg of a high-top gaiter or bootee, &c., from any injury that might otherwise occur by its falling over upon the heated surface of the box; and to accomplish these ends, my invention consists, mainly, in a rectangular or other-shaped tin or other metal box, having its sides and bottom perforated for the supplying of air, and provided within with a pipe or pipes for the introduction of heated air or steam to the box, or arranged with petroleum or other oil lamp or lamps, the said box having a suitable door, to allow access to its interior heating device or devices. The top of said box is formed of Russia iron, or other suitable radiating metallic or other material, above which top, on the sides and rear, extends upward a perforated or other non-radiating guard, to support the shoe, and prevent the leg of a high gaiter-shoe or bootee from falling over against the sides or the heating-surface of the box, the lower portion of said guard, or upper portion of the box, being arranged to receive, on one side, wire-netting or bent ends of rods, for supporting the sole of the shoe, the other ends of the rods or netting being held by a transverse bar, adjusted so as to tighten the tension of rods by screws operating in the lower portion of the other side of the guards or upper portion of the box. These improvements also consist in extending upward the front of the box above its top heating-plate, and projecting forward a Z-shaped

shelf, supporting a wooden or other non-heat-conducting heel-support, Z-shaped, and having a front lip extending downward over the inner face of the upper front extension, or otherwise formed and arranged to be isolated from the heated surface of the box, all of which I will now proceed to describe.

In the drawings, A represents a tin or other metallic, rectangular, or other desired shaped box, having in its bottom, and in each side, at or near the top, apertures *b*, for the circulation of air. Extending longitudinally within the box, is a pipe, B, or pipes, perforated, and formed at one end to be connected with a pipe or tube for the introduction of inflammable gas; or the box may, if preferred, be provided with a pipe or pipes, or tube or tubes, suitably connected, and arranged to supply heated air or steam to the interior of the box; or the box may be provided with petroleum or other oil-burning lamp or lamps, or otherwise heated as desired. The front of the box is formed with an opening, having a door, C, to give access to the heating device or devices of the interior. The top of the box A is formed of Russia iron, or other suitable metallic or other heat-radiating material or compound, turned up on the front, rear, and ends, or otherwise formed to have screwed, riveted, or otherwise attached to it, the ends and rear of the lower portion of an upward-extending tin or other suitable guard, K, perforated, or otherwise formed to prevent the radiation of heat, and of sufficient height to support the leg of a gaiter-shoe or bootee, and prevent its falling over upon the heated sides or top of the box. The front of the box A is extended above the top D, to allow the formation of a forward-projecting and downward and outward extending longitudinal Z-shaped shelf, E, which supports a Z-shaped wooden or other non-heat-conducting heel-support, F, formed on the top with a front downward-projecting lip or flange, *f*, that extends over so as to hold on the inner face of the upper extension of the front of the box. This heel-support F may, if desired, be covered with felting or other equivalent material, to better protect the heel from injury; and may, if preferred, be otherwise formed and supported, so as to extend from the upper portion of the box in any manner to support the shoe-heel, and protect

it from the heated surface of the box. At a sufficient distance above the top D to effectually dry but not injure the soles of the shoes, the desired part of which rests upon them, extend parallel longitudinal rods or rails G, bent at one end around the outside of the lower portion of, or otherwise connected with, one side of the guard K, or the upper part of one side of the box. The disunited or other ends of the rods G are held in a transverse bar, H, formed near each end with screw-threads, to receive ends of screws I, that extend through, and hold against, the outside of the lower portion of one end of the guard K, or upper portion of one side of the box A, for the purpose of tightening the rods when slacked. A transverse metal plate, J, is attached to the outside of the guard K or box, at one end, and formed with apertures to receive the rods G, which are bent horizontally across the face of the plate J, which thus receives the strain of the rods, and prevents the tearing away or pulling in of the guard or box side. Or parallel rods or rails may be otherwise attached, so as to be securely held to one side of the box or guard.

Instead of rods or rails, a metallic netting may be attached, at one end, to one side of the guard, or to the upper portion of one end of the box, and the other end of the netting be connected with an adjustable bar, H, operated by screws I, as in the former instance. Or a wire-netting may be otherwise supported over the top plate D of the box.

In apparatus heretofore adopted for drying shoe-soles it was necessary to heel the sole before drying, in order to support the shoe, which hung by the heel on a back rod, there being no way provided to hold a shoe without a heel; consequently the sole was imperfectly dried, and the heel, not being sufficiently protected from the heat while the sole was drying, was liable to crack and be otherwise injured. Moreover, in the previous method there was nothing to prevent the leg of a gaiter or bootee, &c., from falling over, and coming in contact with the side of the box, so as to be injured by the heating-surface. Besides, the rods supporting the shoe-soles were, in time, apt to sag, so as to bring the soles too near the top heating-surface, thereby injuring them.

These objections are obviated in my invention by isolating the heel-support by means of the separate wooden or other non-heat-conducting material, held off from the box by the Z-shaped shelf, or otherwise.

By means of the perforated or other non-radiating guard K a boot or shoe sole shank may be dried before the heel is attached, thereby preventing any injury heretofore liable to occur to the heel, the shank of the sole resting on the netting or rods, and the forward part of the sole being supported on the heel-support, the back of the shoe being held by, and prevented from slipping off, and the leg of a high shoe or bootee, &c., being prevented from falling over, by the guard K.

When the shank is sufficiently dried it is buffed, and the heel is attached to the shoe, which is reversed on the apparatus, so that the fore part of the sole rests on the netting or rods, and the heel is supported by the heel-support F, thus drying the fore part of the sole without injury to the heel.

In case the netting or rods become depressed, so as to bring them too near the top radiating-plate D, they are readily tightened by means of the adjustable bar H, operated by the screws I.

Heat is supplied to the box by means of gas, hot air, or steam, introduced through a pipe or tube, or pipes or tubes, within the box, or by any other means preferred.

The heat generated within the box A heats the top plate D, and is radiated therefrom, to evenly heat the soles of the shoes resting on the netting or rods.

By means of the bottom and side apertures b in the box, a sufficient draft is secured to insure the necessary supply of air for the perfect generation of heat.

The apparatus is made of any desired length, to hold any number of shoes desired, and is located on one side of a workman, near the buffing-machine, or in any other convenient position.

A number of shoes are placed in the apparatus, to dry the shank part of the sole, as hereinbefore described, which, when sufficiently dried, are removed for buffing the shank and heeling, and are replaced by a number of other heeled shoes, which, when dried, are in turn removed for buffing and finishing, and replaced by other shoes, either heeled or not, as the demand of the work requires.

Having thus described my improvements, what I claim as my invention, and desire to have secured to me by Letters Patent, is—

1. In an apparatus for drying the soles of boots or shoes, a wooden or other heel support F, held by a shelf, E, projecting from the front above the top B of the box, substantially as specified.

2. In an apparatus for drying boot or shoe soles, a perforated metallic guard, K, extending upward from the sides and rear of the box, in combination with a wire-netting, M, substantially as and for the purpose described.

3. In an apparatus for drying boot or shoe soles, a transverse adjustable bar, H, connected with parallel rods G, and operated by screws I, substantially as and for the purpose herein set forth.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

HENRY L. DRAKE.

Witnesses:

CARROLL D. WRIGHT,
SAML. M. BARTON.