

No. 863,861.

PATENTED AUG. 20, 1907.

J. J. LUCAS.  
SAD IRON.

APPLICATION FILED MAY 11, 1906.

2 SHEETS—SHEET 1.

Fig. 1.

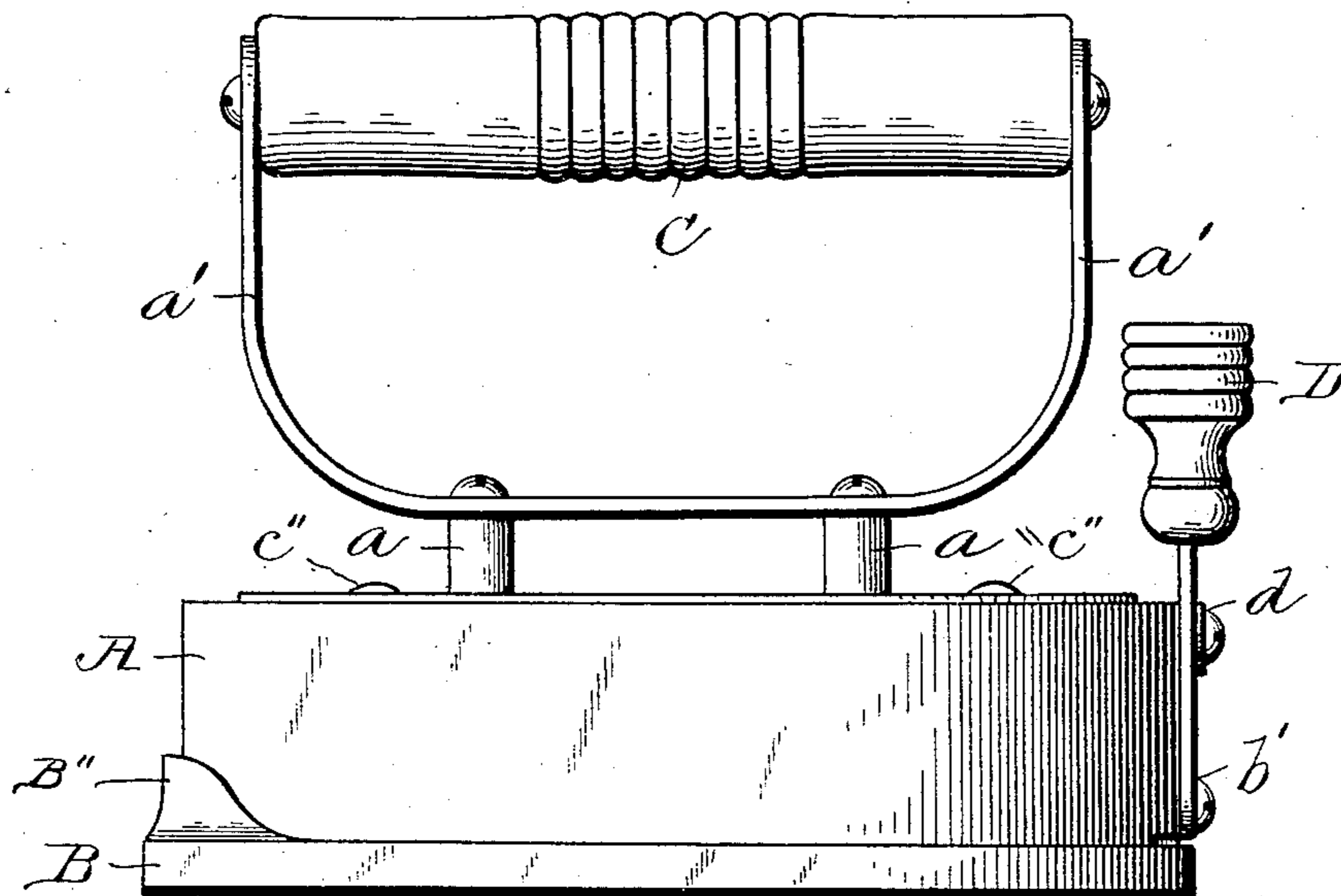
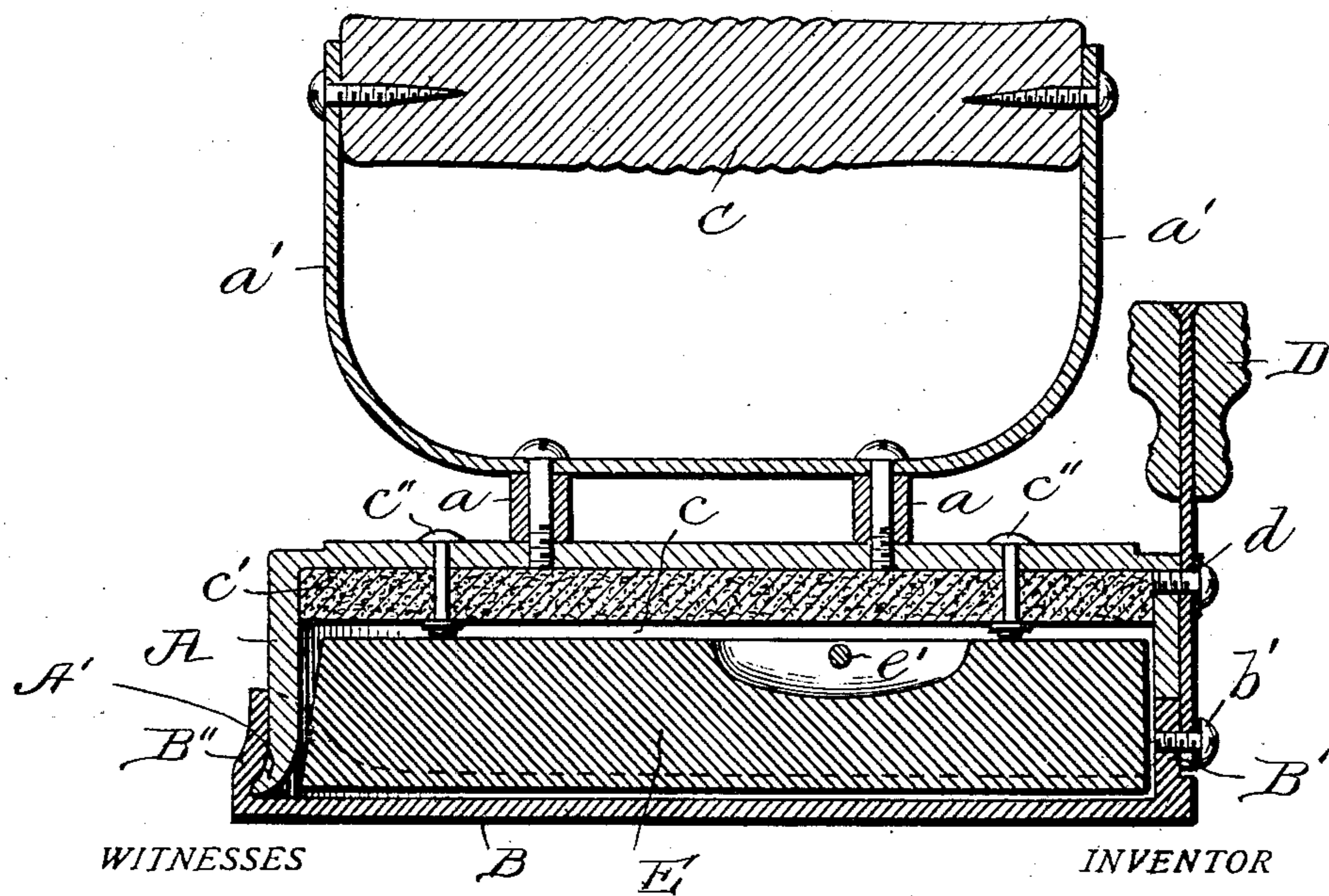


Fig. 2.



WITNESSES

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F<sub>1</sub>

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2 SHEETS—SHEET 2.

Fig. 3.

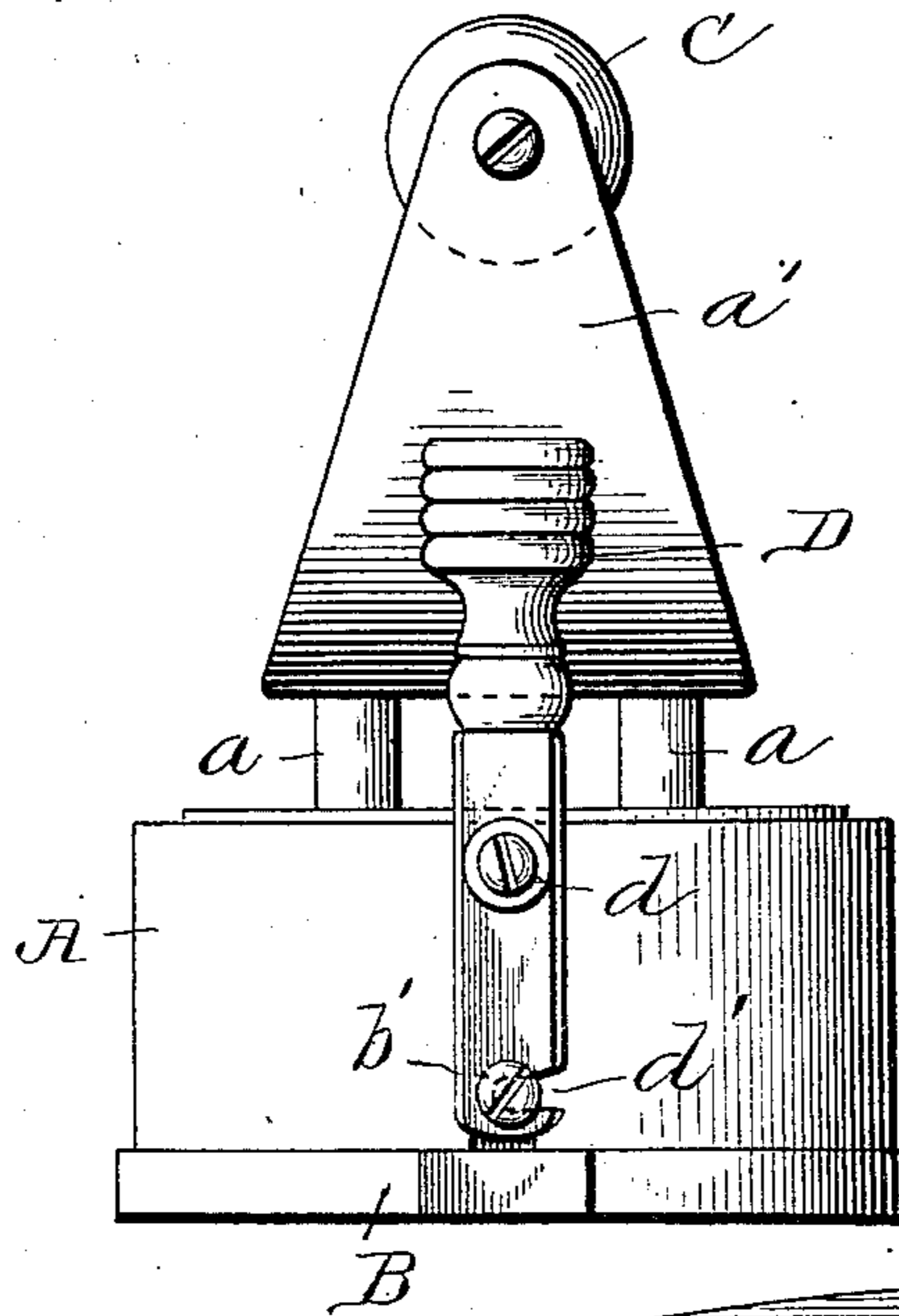


Fig. 4.

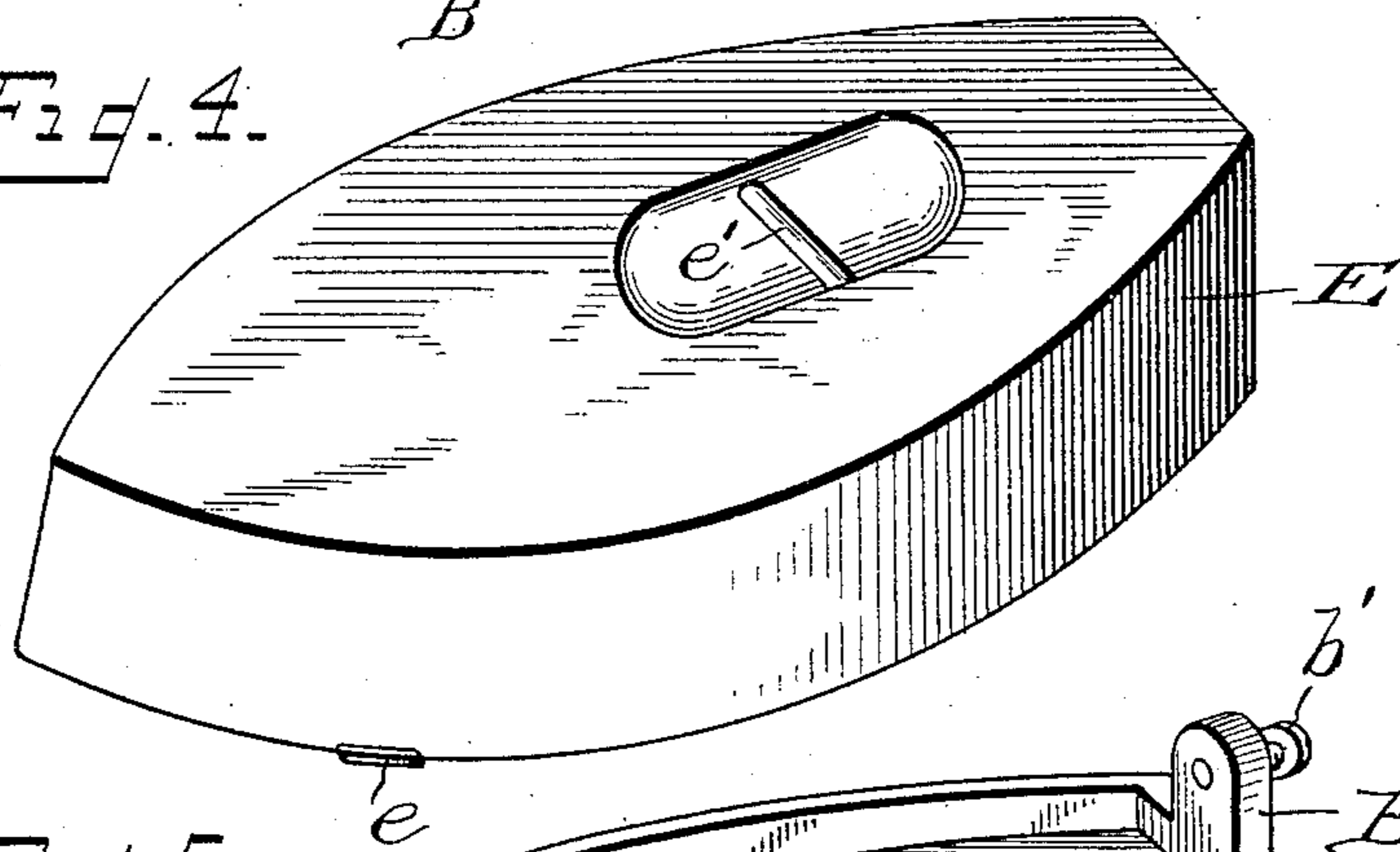
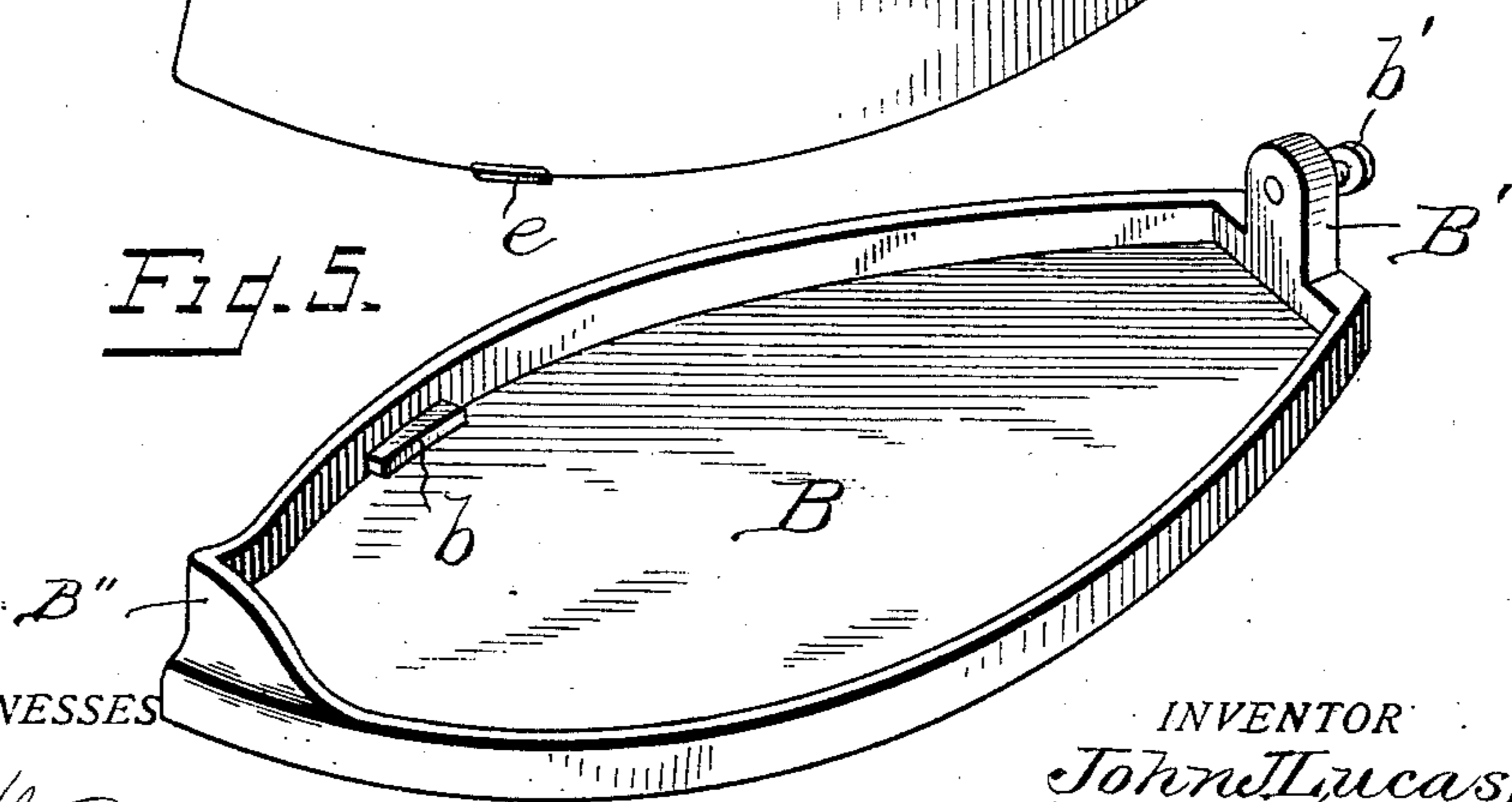


Fig. 5.



WITNESSES

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# UNITED STATES PATENT OFFICE.

JOHN J. LUCAS, OF BELLEVILLE, ILLINOIS.

## SAD-IRON.

No. 863,861.

Specification of Letters Patent.

Patented Aug. 20, 1907.

Application filed May 11, 1906. Serial No. 316,239.

To all whom it may concern:

Be it known that I, JOHN J. LUCAS, a citizen of the United States, residing at Belleville, in the county of St. Clair and State of Illinois, have invented certain new and useful Improvements in Sad-Irons, of which the following is a specification.

My invention relates to sad-irons and consists in the construction and arrangement of the parts which will be more fully hereinafter described, illustrated in the drawings, and particularly pointed out in the claims.

One object of my invention is to provide a sad-iron in which the heating core shall be inclosed in a separable shell composed of two parts, an inclosing shell and a smoothing plate, which shell and plate may be readily secured together, or detached from each other by convenient means.

A further object of my invention is to provide means for attaching and detaching the inclosing shell and smoothing plate quickly and effectively.

A still further object of my invention is to provide means for insulating the handle from the heating core, and thereby rendering the same cool to the grasp at all times.

I accomplish these objects by the mechanism shown in the accompanying drawings forming a part of this application in which like letters relate to similar parts.

Figure 1 is a side elevation of the sad-iron complete and ready for use. Fig. 2 is a longitudinal vertical section of the sad-iron with all of the parts in place. Fig. 3 is a rear end view of the sad-iron showing the swinging lever in place and means for holding the inclosing shell and the smoothing plate securely together. Fig. 4 is a perspective view of the heating core showing a lifting-bail for removing same, and securing tongues for holding the same firmly to the smoothing plate. Fig. 5 is a perspective view of the smoothing plate showing a block and screw bolt for securing and holding the inclosing shell by the swinging lever, and cleats for securing the tongues on the heating core and holding the same firmly in place.

Referring to the drawings A represents the inclosing shell, B the smoothing plate, C the handle, D the swinging lever, and E the heating core.

The inclosing shell A and the smoothing plate B are made in the general shape now common in sad-irons, and are, preferably, cast of suitable metal and afterwards nickel-plated or otherwise given a high polish.

The handle C is formed in the shape shown in Figs. 1 and 3 and is supported on the inclosing shell A by short posts *a a* secured to the top of said shell and by the bent arms *a' a'* of said handle. The posts *a a* are of such length that they will raise the handle C a short distance above the shell A for a purpose hereinafter mentioned.

The top of the shell A is formed so as to provide a heat insulating chamber *c* in the top of the same. In

said chamber *c* is secured heat insulating material *c'*, preferably sheet asbestos, in the form of a slab of the general shape of the interior of the shell A; said slab held to the under side of the top of the shell by bolts, *c'' c''*, as shown.

The handle C, preferably made of a poor heat conductor, such as wood, is connected by thin metal arms *a'* and posts *a* to the shell A. Because these posts are relatively small and therefore have relatively small heat conductivity, and because of the provision for free circulation of air between the shell A and the arms *a'* and handle C, and because also of the low heat conductivity of the handle itself, said handle may be grasped by the operator without danger of burning, no matter how hot the shell A may be.

The smoothing plate B, as heretofore stated is preferably made of cast metal and either nickel-plated or given a high polish as above stated.

It is so shaped that the inclosing shell A will readily fit just inside its upper edges as shown in Figs. 1—3—& 5—. To the rear end of said plate a block *B'* is formed, preferably cast as a part of the plate, in the upper part of which a screw-bolt is secured for a purpose hereinafter mentioned.

At the front of plate B is a lip *B''* projecting upward and backward, and adapted to receive between it and the base of said plate B the lip *A'* of the shell A. By means of the engagement of this lip *A'* with lip *B''*, and the engagement of the latch D, hereinafter mentioned, with the screw-bolt *b'* of lug *B'*, the casing or shell A is removably secured to the plate B.

Inside of the smoothing plate and near the forward end cleats *b b* are formed to receive tongues *e e* on the heating core E.

The swinging lever D, is loosely pivoted to the inclosing shell A, at its rear end and near the upper part by a screw-bolt *d*. It is made of a piece of flat metal and has a hand-piece, preferably made of wood. At its lower end it has a side notch *d'* which in operation is adapted to inclose a screw bolt *b* in block *B'*. The function of this swinging lever is threefold;—first, it effectively and instantly secures the inclosing shell and the smoothing plate together;—second, it releases them quickly and perfectly;—third, it produces a pressure on the rear end of the inclosing shell which forces it forward, carrying the heating core with it and thus firmly locks all of the parts together.

The heating core E is formed, preferably of cast metal, in the form of the inclosing shell A, and the smoothing plate B, and of such length and depth as to loosely fit within them. It is provided with a lifting bail *e'* by which and suitable tongues or levers, it may be deposited in a heating furnace to be heated, and after being heated may be lifted out and placed on the smoothing plate of the sad-iron, and then inclosed in the shell for service.

In operation it is proposed to use several of said heating cores so that one or more of them may be in the process of being heated while one may be in use.

With the foregoing description, taken in connection with the drawings it is believed that the operation of this invention will be fully understood by any and all persons desiring to use it.

Having thus fully described my invention, what I claim and desire to secure by Letters Patent is:

- 10 1. In a sad-iron, the combination with a case comprising a shell and smoothing plate separable from each other and provided with locking means for holding them together, of a heating core adapted to be placed within said case; said case and core provided, the one with horizontally-  
15 projecting lugs, the other with corresponding recesses, whereby the core and case may be interlocked.

2. As an article of manufacture, a sad-iron comprising an inclosing shell, A, provided with a heat insulating chamber, *c*, having a slab of heat insulating material, *c'*, secured in said chamber, a smoothing plate, B, a heating core E, a handle C, supported on said inclosing shell, a swinging latch D, pivoted to the rear end of the shell A, and a pin *b'* at the rear end of the plate B, for engagement, and for securing the shell A and the plate B together; and tongues *ee* on the core E, and cleats *bb* on the inside of the smoothing plate B for locking said core and plate together, substantially as described. 20 25

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

JOHN J. LUCAS.

Witnesses:

THOMAS H. AREY,  
HERBERT HOWELL.