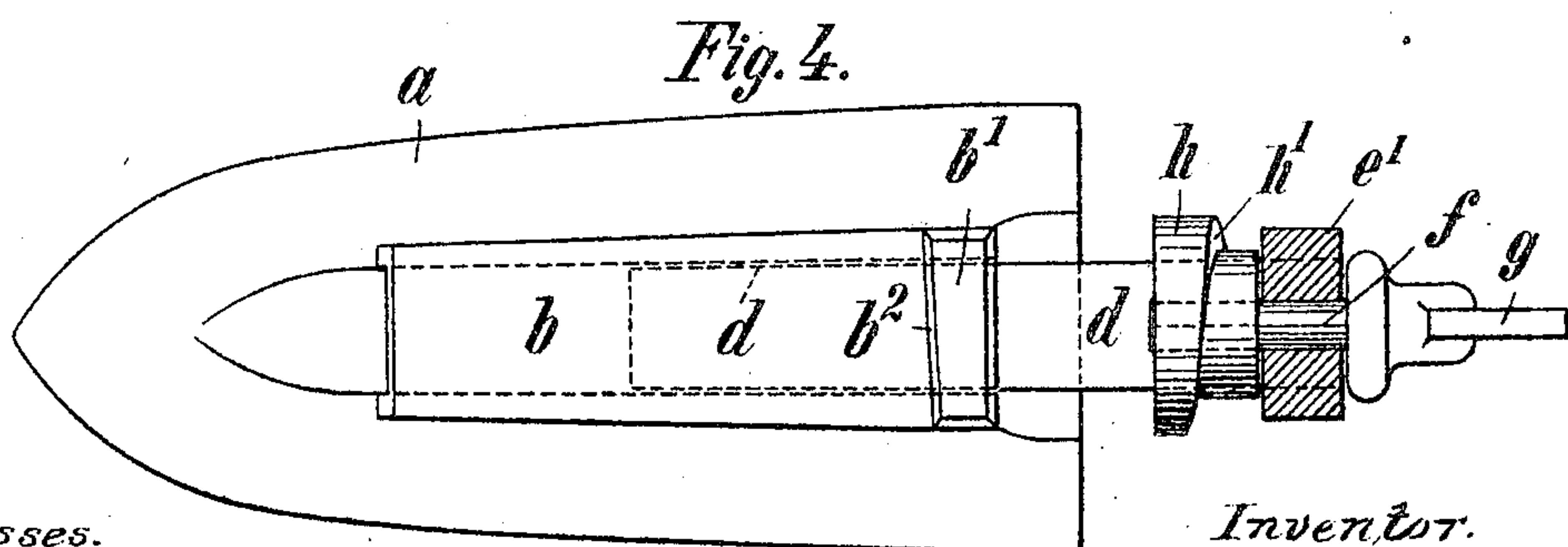
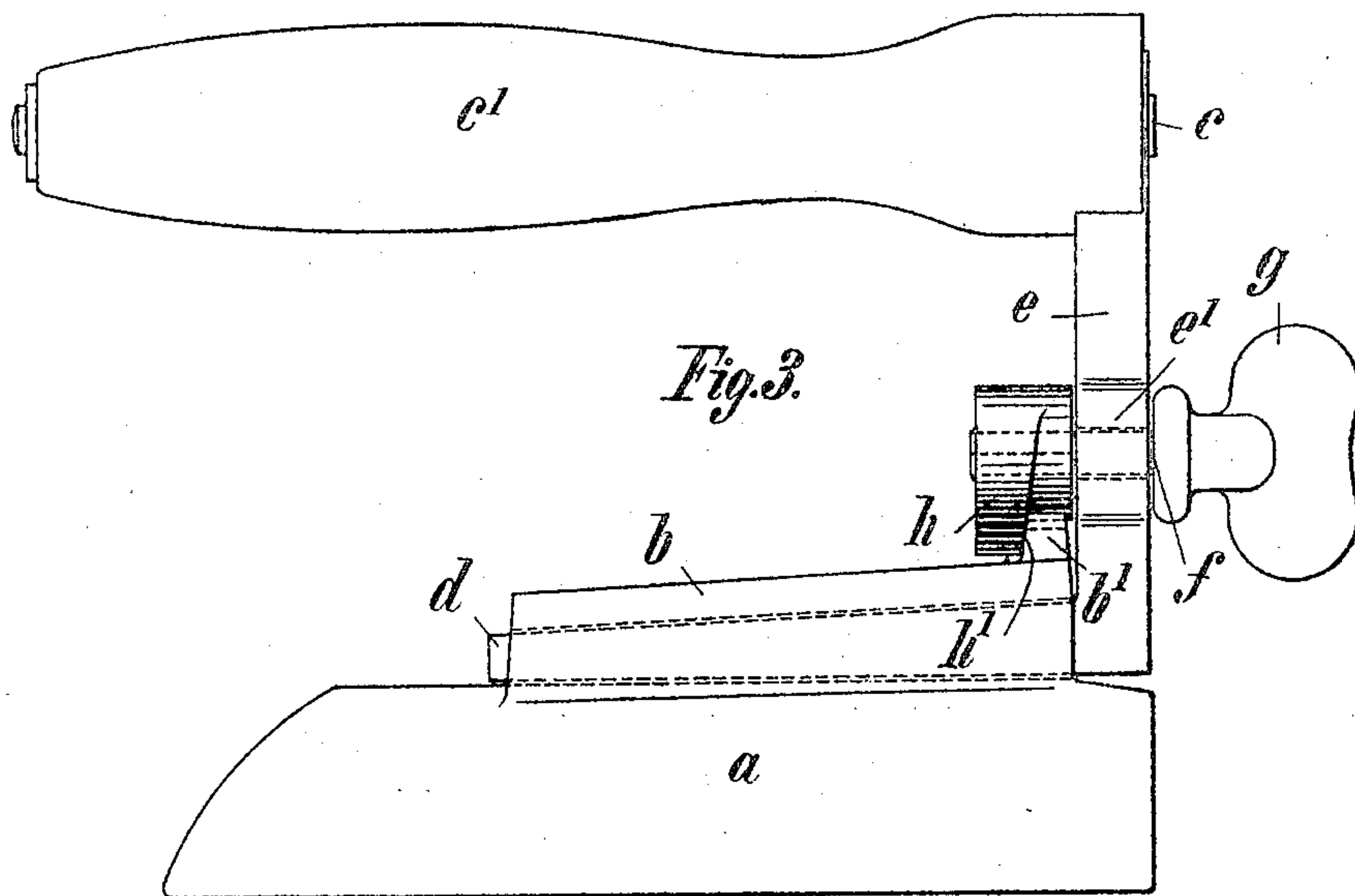
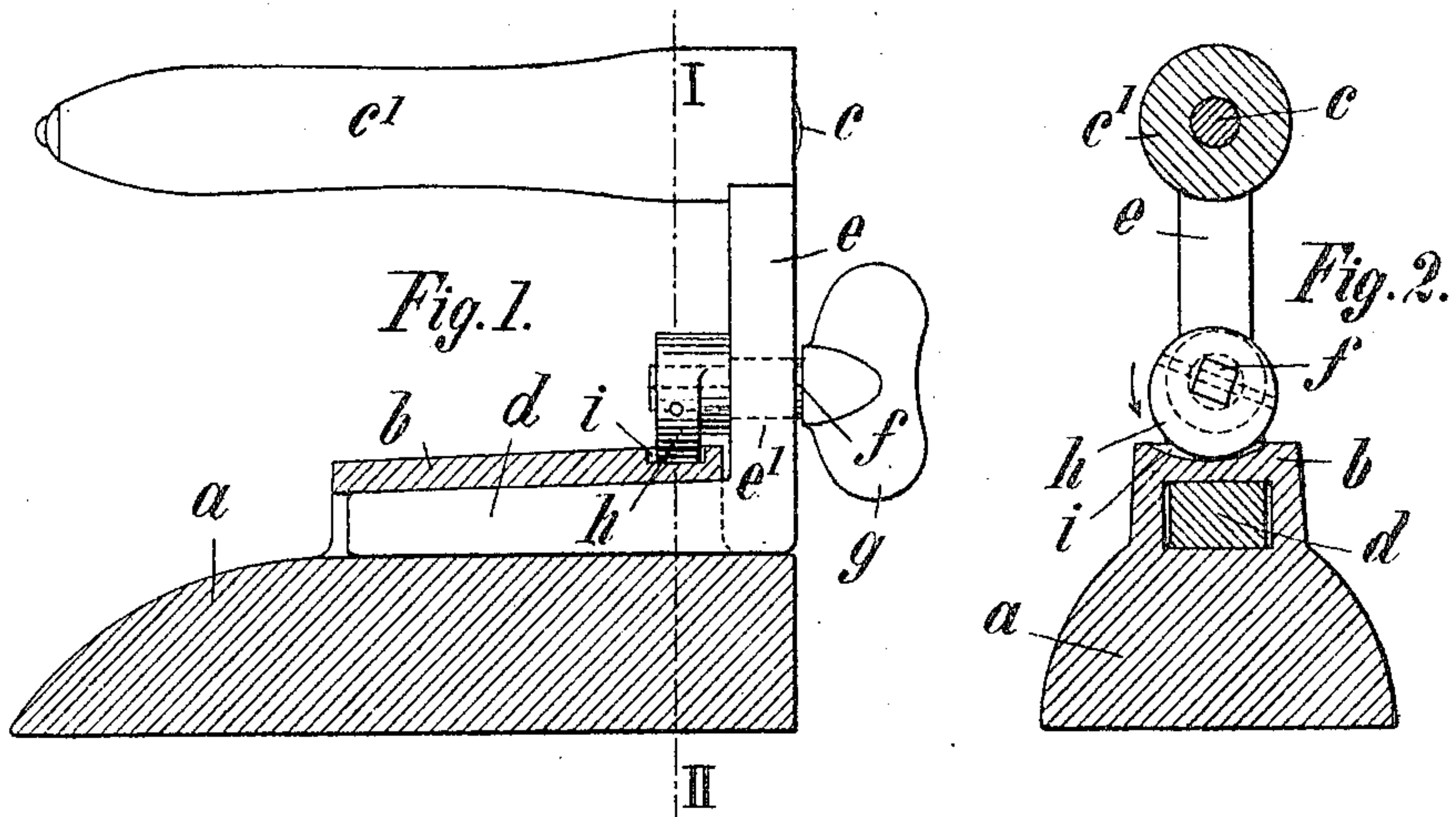


No. 807,674.

PATENTED DEC. 19, 1905.

E. H. HENNIGER.
SMOOTHING IRON WITH DETACHABLE HANDLE.

APPLICATION FILED DEC. 27, 1904.



Witnesses.

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SMOOTHING-IRON WITH DETACHABLE HANDLE.

No. 807,674.

Specification of Letters Patent.

Patented Dec. 19, 1905.

Application filed December 27, 1904. Serial No. 238,466.

To all whom it may concern:

Be it known that I, EMIL HUGO HENNIGER, a subject of the German Emperor, and a resident of Frankfort-on-the-Main, Germany, have invented certain new and useful Improvements in Smoothing-Irons with Detachable Handles, of which the following is a specification.

The present invention relates to improvements in smoothing-irons having detachable handles of that class in which the handle may be attached to the iron proper by means of a preferably horizontal lug, arm, pin, or the like to be inserted into a suitable socket, bore, guide or the like with which the body of the iron is provided, and more particularly refers to the device for coupling or connecting the handle to the iron-body.

The object of the improvements is to provide means whereby the handle may be readily and reliably attached to the iron, so as to make the connection practically a rigid one in order to prevent the handle or its lug from wagging and jiggling in its socket and to avoid thereby clacking or clapping noises when the smoothing-iron is used for ironing. On the other hand, the said improved means is adapted to allow of an easy and ready uncoupling and removal of the handle.

The object aimed at is essentially obtained by means of a cam or eccentric rotatably attached to the handle and adapted to act by its clamping effect against a suitably-faced projection or the like with which the iron-body or its socket for the handle-lug is provided.

In order that my invention may be more fully understood by one skilled in the art to which it appertains, I shall now proceed to describe the same in detail, reference being taken to the accompanying sheet of drawings, in which—

Figure 1 is a longitudinal vertical section, and Fig. 2 a transverse vertical section on the line I II, Fig. 1, of a smoothing-iron constructed in accordance with and embodying my invention. Fig. 3 is a lateral elevation, and Fig. 4 a plan of a smoothing-iron, showing a modification of the cam-coupling device. In the latter representation the upper part of the handle is shown as broken away, the cam-coupling device as uncoupled, and the lower arm of the handle as partly removed from the socket.

Similar letters of reference refer to like parts throughout the several figures.

Referring to Figs. 1 and 2, the body *a* of the smoothing or sad iron is provided with a socket *b* or the like. The handle is U-shaped and consists of two horizontal arms *c* and *d*, connected by a vertical part or stem *e*. The arm *c* is furnished with a cover or lining *c'*, of wood or other insulating material, and serves as the handle proper, whereas the other arm *d* is formed to fit into the hollow of the socket *b*, as this is well known and evident from the drawings.

For rigidly connecting the U-shaped handle with the body of the sad-iron and to rigidly and reliably lock the arm *d* to the socket *b* I provide a cam *h*, the shaft *f* of which is rotatably mounted in a suitable bearing *e'* of the stem *e* and provided at its rear end with a thumb-piece *g* or the like. The top face of the socket *b* has a recess *i*.

When it is desired to attach the handle to the smoothing-iron, the arm *d* of the handle is inserted into the socket *b*. For allowing of such operation the cam *h* must previously have been turned so that its eccentric part is directed upward. After the insertion of the arm *d* into the socket *b*, fitting as snugly as possible into each other, the cam *h* is opposite the recess *i*. When now the cam *h* is turned in the direction of the arrow shown in Fig. 2, the eccentric part of the said cam enters or moves into the recess *i* and clamps the handle-arm *d* firmly to the socket *b*, a rigid connection being thus established between the detachable handle and the body of the smoothing-iron.

The uncoupling and removal of the handle may be effected in a like simple manner first by turning the cam in the other direction to bring its eccentric part out of contact with the socket and into the upper position and then by drawing out the handle-arm *d* from the socket *b*.

It is supposed that the width of the recess *i* corresponds to the thickness of the cam *h*, so that the latter fits most snugly into the recess; but sometimes after a longer period of use it may occur that the edges of the cam and recess may become worn. In such cases, although the arm *d* remains firmly clamped to the socket in a vertical direction, it may yet be liable to jiggle somewhat in its longitudi-

nal direction, which is caused by the slight difference between the thicknesses of the cam and the width of the recess, as above stated. In order to entirely obviate this small drawback and to secure at all events a rigid coupling or connection between the handle and smoothing-iron, it is advisable to have the device arranged so that the cam instead of entering a recess catches a suitable shoulder or projection of the socket and that either the contact-face of the shoulder or the end face of the cam, or both these bearing-faces, are cam-shaped or formed in a helical line, the latter modification being illustrated by Figs. 3 and 4. In this arrangement the socket *b* is provided with a shoulder *b'*, having a cam-face *b''*, whereas the end face of the cam *h*, adapted to bear against the cam-face *b''*, is also cam-shaped or formed in a helical line, as shown at *h'*. When the arm *d* has been inserted into the socket *b* and the cam *h* is turned down into the position Fig. 3, the cam-face *h'* bears against and slides along the cam-face *b''*, thereby clamping the handle firmly to the socket. By this arrangement it is possible to eliminate constantly any longitudinal play of the parts to be connected and to thereby avoid any jiggling or clattering of the handle in longitudinal direction.

The handle is detached and removed from the iron in the same manner as described with reference to the handle shown in Figs. 1 and 2—viz., by turning up the cam *h* *h'* from the position shown in Fig. 3 into the position shown in Fig. 4 and by drawing out the arm *d* from the socket *b*.

Having fully described my invention, what

I claim, and desire to secure by Letters Patent, is—

1. A smoothing-iron provided on its upper face with a central longitudinal hollow rib or projection, and a handle comprising a handle-bar having parallel arms one of which is adapted to be inserted into the aforesaid rib and the other carrying the handle proper, in combination with a cam revolubly mounted on the handle-bar and adapted to engage the upper face of the aforesaid rib.

2. In combination with a sad-iron having a longitudinally-disposed socket formed therein, a handle comprising a stem portion, an arm on the latter adapted to fit said socket, an abutment near the mouth of the socket having a cam-face, a rotatable shaft mounted in the arm, a cam on said shaft having a cam-face adapted to engage the aforesaid face on the abutment and an arm mounted on the stem parallel to the aforesaid arm.

3. A smoothing-iron provided on its upper face with a central longitudinal rib or projection having a bore of polygonal form in cross-section, and a handle comprising a handle-bar provided with parallel arms one of which carries the handle proper and the other of polygonal form in cross-section to fit the bore in the aforesaid rib; in combination with a cam revolubly mounted in the handle-bar and adapted to impinge on the upper face of the aforesaid rib.

EMIL HUGO HENNIGER.

Witnesses:

ULYSSES J. BYWATER,
ABRAHAM SCHLESINGER.