

Feb. 6, 1951

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2,540,579

HANDLE LOCKING MEANS FOR TRAVEL IRONS

Filed May 16, 1947

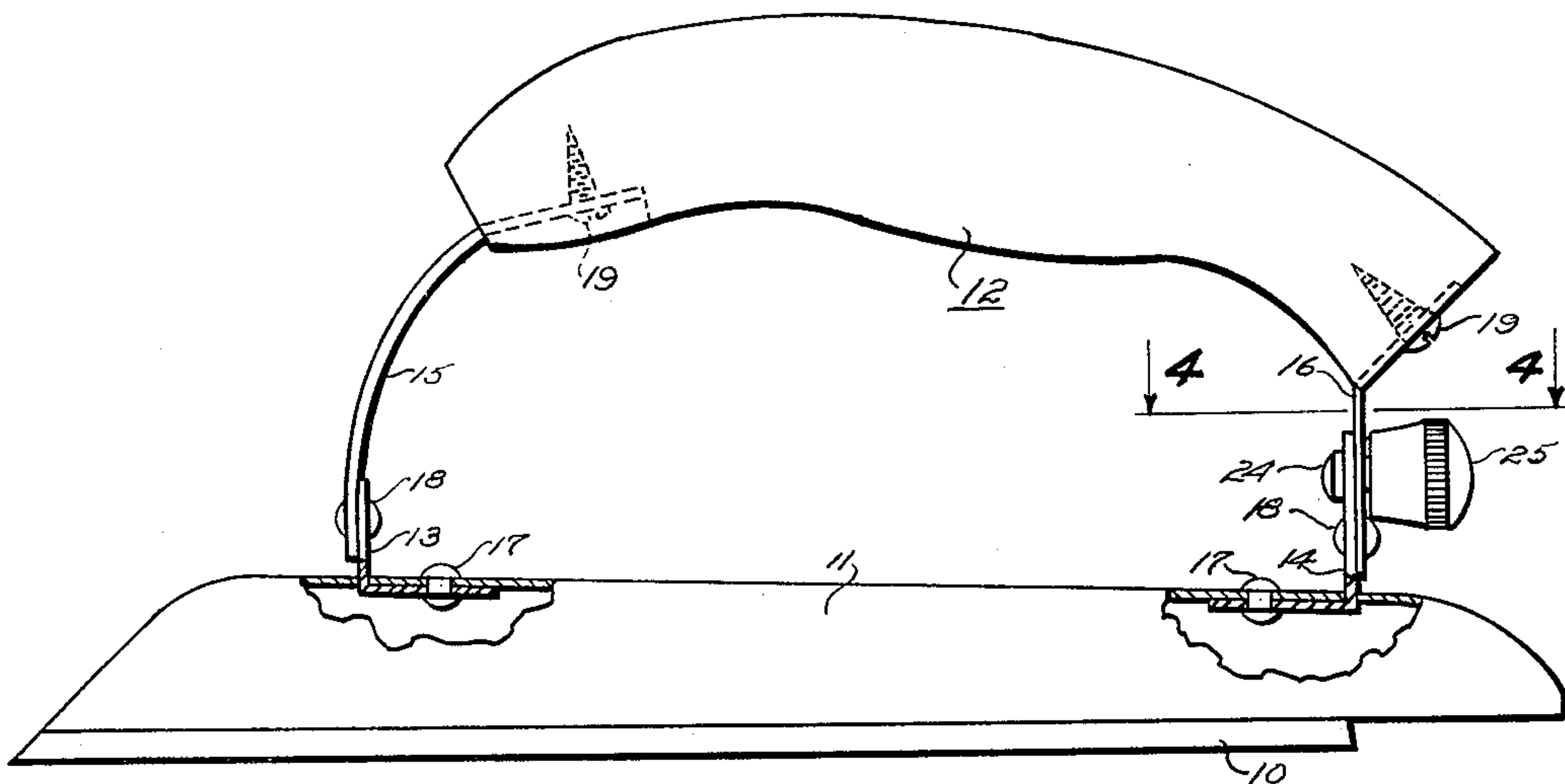


Fig. 1

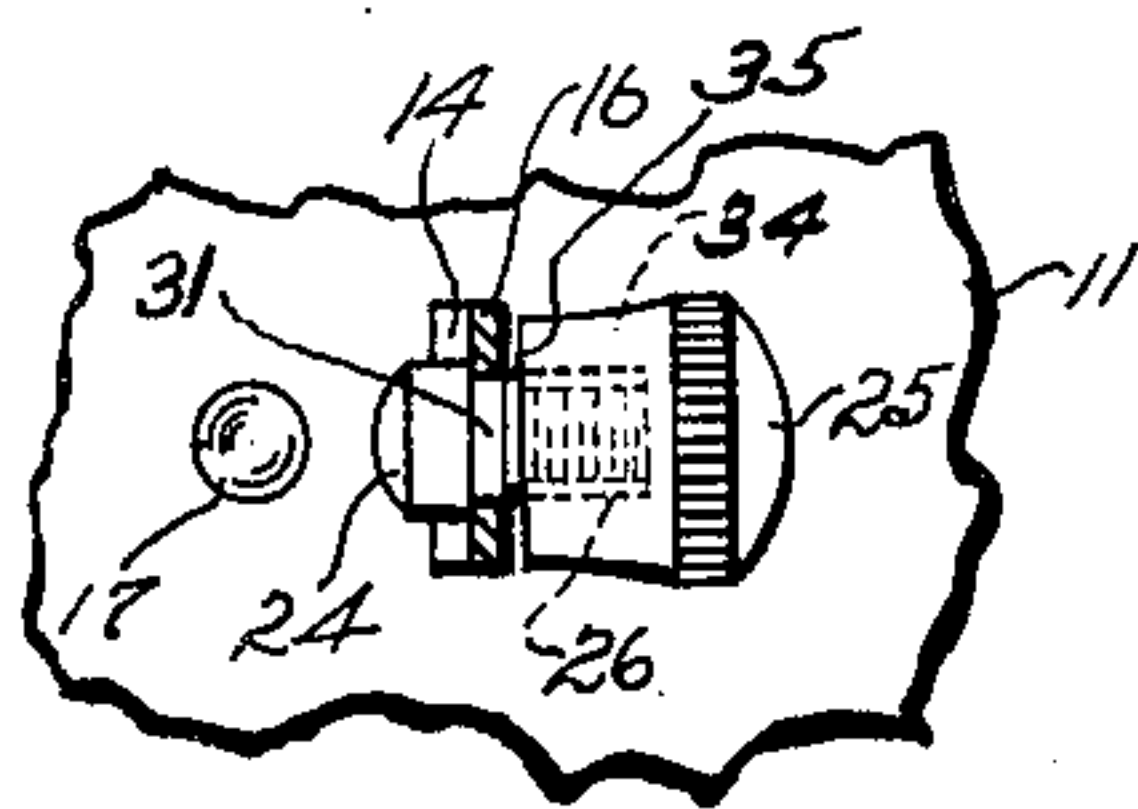


Fig. 4

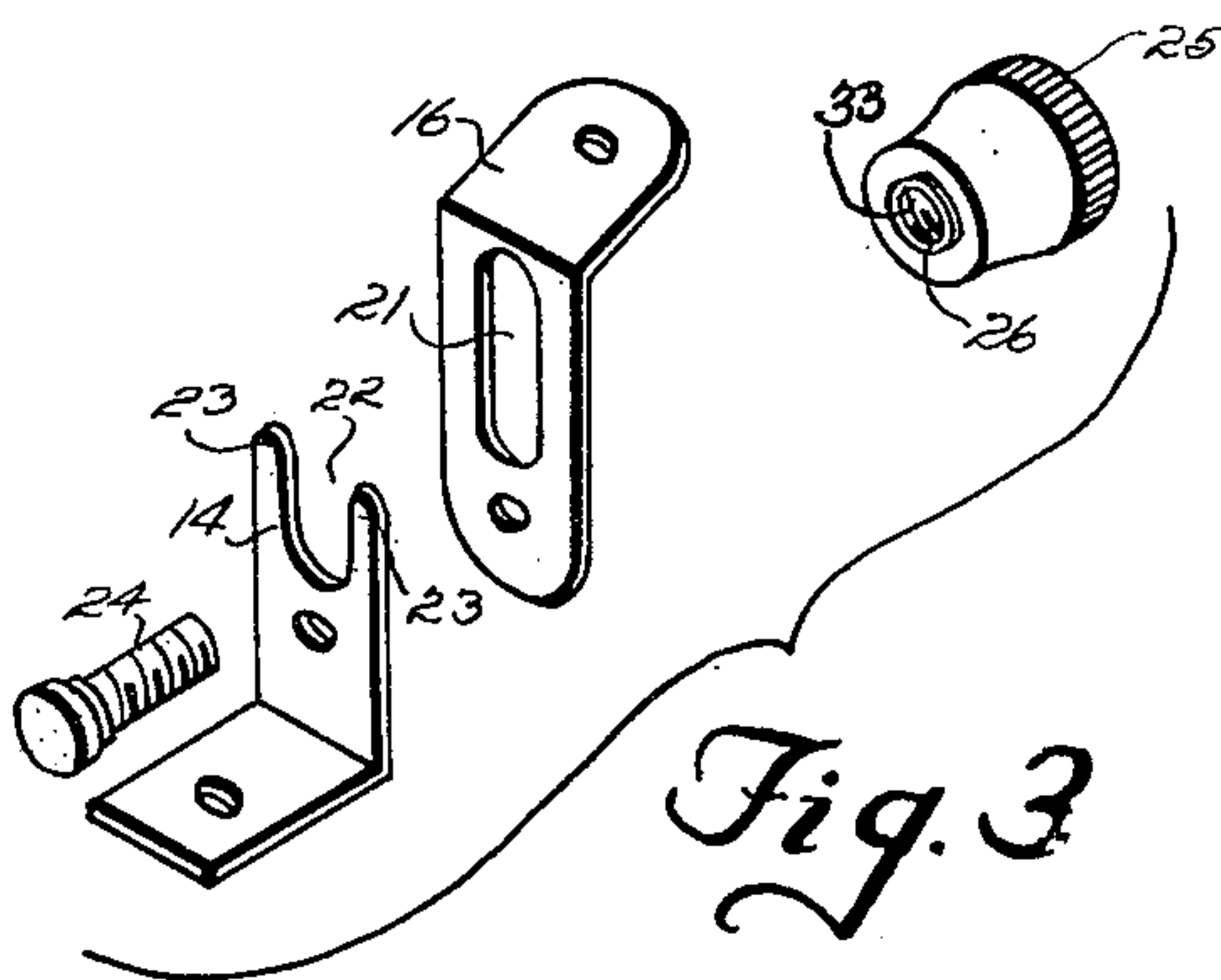


Fig. 3

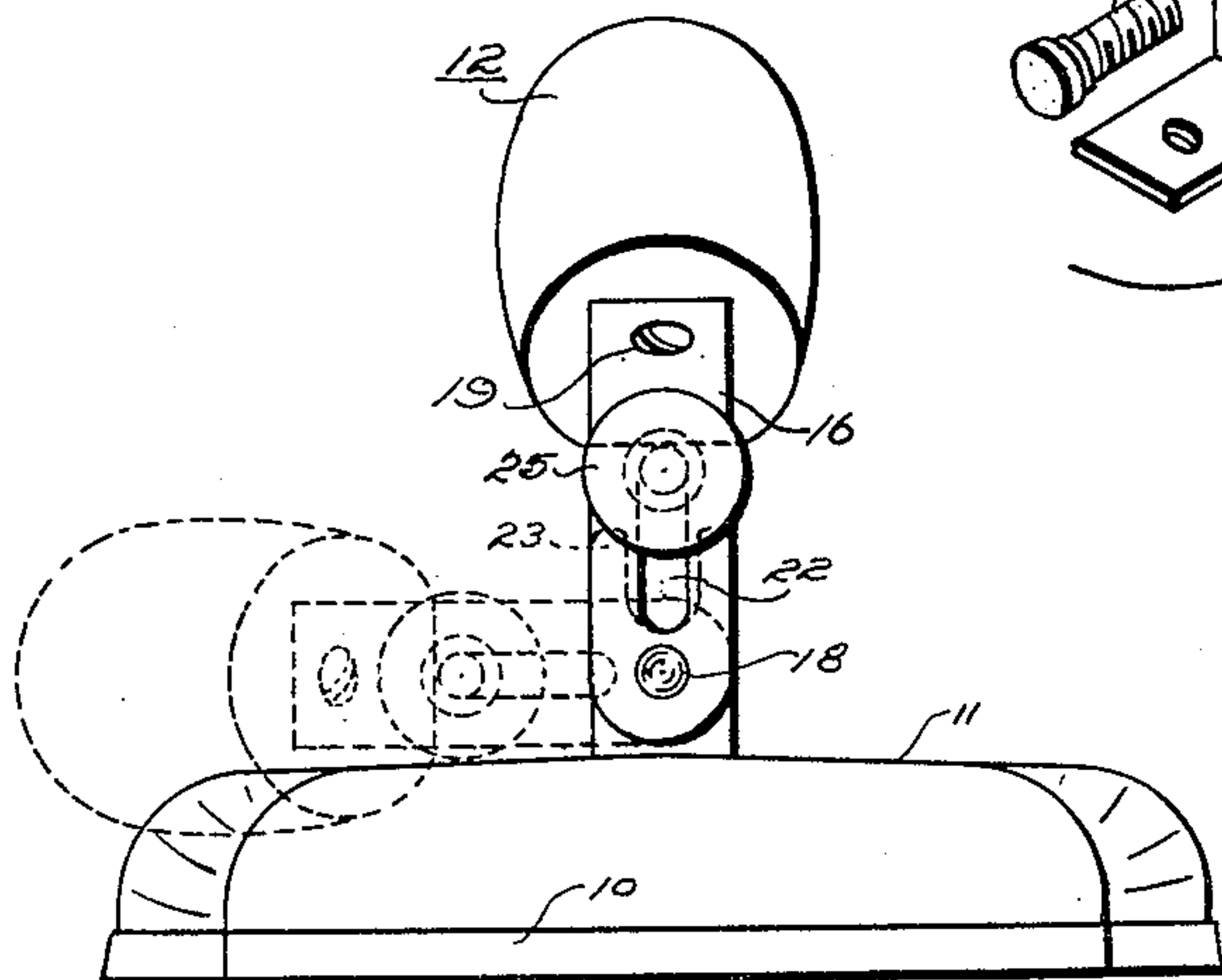


Fig. 2

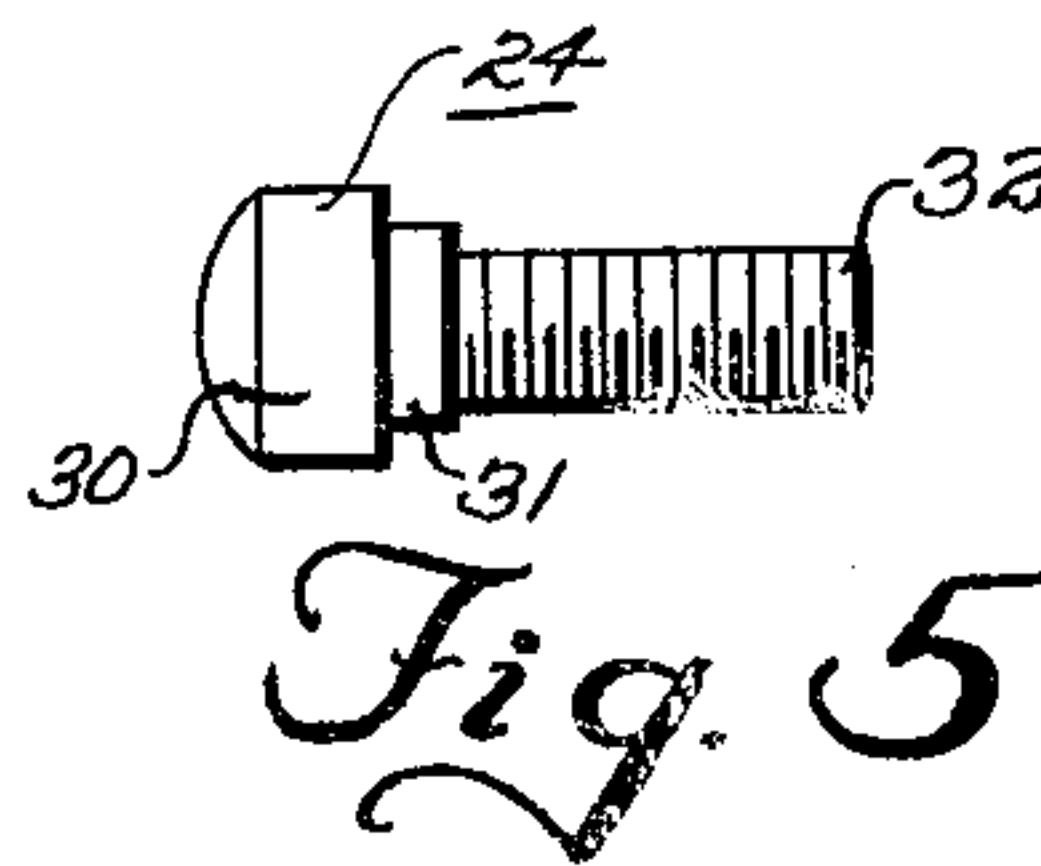


Fig. 5

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## UNITED STATES PATENT OFFICE

2,540,579

HANDLE LOCKING MEANS FOR  
TRAVEL IRONSGeorge E. Hanner, Mansfield, Ohio, assignor to  
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Application May 16, 1947, Serial No. 748,500

3 Claims. (Cl. 38—90)

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My invention relates in general to a travel iron handle lock incorporated in and interconnecting the sole plate cover and the foldable handle of a travel iron to lock the handle in usable position relative to the sole plate.

Many different methods have been employed to lock the foldable handle of a travel iron in usable position. One of the problems involved is to provide a locking device which is easy to operate and which readily permits folding of the handle into foldable position relative to the sole plate. In this folded position the travel iron may be more easily packed into a suitcase or other package.

It is one of the objects of my invention to overcome certain problems involved and provide a locking device which is simple in construction and inexpensive to manufacture.

Another object of my invention is to provide a travel iron handle lock which is easy to operate for locking the handle in usable position relative to the sole plate cover.

Another object of my invention is to provide a handle member and an ear member pivotally connected together with one of the members having a slot and the other having a keyhole whereby a key may easily be inserted in the slot to lock the members and hold the handle of a travel iron in usable position.

Other objects and a fuller understanding of my invention may be had by referring to the following description and claims, taken in conjunction with the accompanying drawing, in which:

Figure 1 is a side elevational view of a travel iron with the handle in usable position, and with certain parts shown in cross-section to better illustrate the design thereof.

Figure 2 is an end view of a flatiron showing the features of my invention, with the handle illustrated in usable position, and a phantom view of the handle as folded for shipment or travel.

Figure 3 is an expanded and oblique view illustrating the parts of my invention;

Figure 4 is a view along the line 4—4 of Figure 1; and

Figure 5 is an enlarged view of the keybolt used to interconnect relatively pivotal handle parts.

In Figure 1 of my drawings I illustrate a side elevational view of a travel iron having a sole plate 10, a sole plate cover 11 and a folding handle 12. The sole plate cover 11 has a front ear 13 and a back ear 14 extending upwardly therefrom for pivotally supporting the folding

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handle 12. The ears 13 and 14 may be fastened by rivets 17 or by other suitable means to the sole plate cover 11. A front handle member 15 may be fastened by a screw 19 to the handle 12 and by a pivot rivet 18 to the front ear 13. A back handle member 16 may be fastened by screw 19 to the handle 12 and by a pivot rivet 18 to the back ear 14. It is understood that these handle members 15 and 16 may be fastened to the handle 12 by other suitable means, such for example as molding the folding handle 12 of plastic material on the end thereof. The pivot rivets 18, connecting the handle members to the ears respectively, permit folding of the handle 12 relative to the sole plate cover 11. The ears 13 and 14 and the handle members 15 and 16 may be constructed of any suitable material. However, I have found it preferable to construct them of a metal.

In the preferred embodiment of my invention, the back handle member 16 has an elongated keyhole 21 therein. The back ear 14 has a slot 22 therein with the slot 22 opening on an edge thereof. This preferred embodiment is provided with the elongated keyhole 21 positioned longitudinally of the back handle member 16, and the slot 22 opening on a top edge 23 of the back ear 14. Thus, when the handle 12 is positioned in usable position relative to the sole plate cover 11, as illustrated in Figure 2, the elongated keyhole 21 and the slot 22 are aligned.

As best illustrated in the Figures 4 and 5 of the drawings, I illustrate a keybolt 24 having a head portion 30 and a small shoulder portion 31 and a threaded bolt portion 32. Also, a knob 25 is provided with a threaded recess 33 therein to receive the threaded portion 32 of the keybolt 24. In the use of my improved handle lock, I desire that the keybolt 24 and knob 25 be freely movable relative to the keyhole 21, but also desire that the movement be smooth. Therefore, I have provided a shoulder 26 extending from the knob 25 about the recess 33. In actual construction of this locking means, I provide both the thread for the recess and the shoulder 26 by the provision of a metal insert in the knob 25, as indicated by the dot-dash line 34 in the Figure 4. Also, I have dimensioned the small shoulder 31 to be of substantially the same length as the thickness of the member 16. Therefore, when assembling the keybolt 24 and the knob 25, the threaded portion 32 of the keybolt 24 is inserted through the keyhole 21 and threaded into the threaded recess 33 of the knob 25. The keybolt 24 is tightened into the recess 33 until the shoulder 31 is tightly



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in contact with the shoulder 26. Therefore, it will be seen that the small shoulder 26 will provide a clearance 35 between the face of the knob 25 and the surface of the handle member 16, whereby the keybolt 24 and the knob 25 may be freely moved in the keyhole 21, but the movement will be smooth and easy.

In order to provide secure locking, I have provided the outside diameter of the head portion 30 on the keybolt 24 to be slightly larger than the width of the slot 22 on the back ear 14. I have found that the outside diameter of the portion 30 need be only a few thousandths of an inch larger than the width of the slot 22 in order to tightly secure the portion 30 in the slot 22. In fact, in actual practice, I have found that it is preferable to provide a slight taper for the slot 22 from the surface 23 inwardly of the member 14 capable of holding the head 30 with a gripping action.

The elongated keyhole 21, as best illustrated in Figure 2 of my drawings is of greater length than the slot 22 in the back ear 14. That is, with the rivet 18 pivotally securing the member 16 to the member 14, the top of the keyhole 21 will be positioned above the top surface 23 of the back ear 14. Therefore, in order to use my improved handle locking means, the keybolt 24 and knob 25 may be moved longitudinally in the keyhole 21 to insert and withdraw the head portion 30 of the keybolt 24 relative to the slot 22 of the back ear 14. Thus, as illustrated in Figure 2, the keybolt 24 and knob 25 are positioned at the end of the keyhole slot 22 nearest the handle 12. The keyhole slot 21 is aligned with the slot 22. In this position, the handle 16 is unlatched from the ear 14 and may therefore be pivoted about the pivot 18 to the position illustrated in phantom in the Figure 2, or the locking means may be moved to lock the handle 12 in position for use.

From the position as illustrated in the Figure 2, the knob 25 is moved downwardly toward the base 10 in order to lock the handle member 12 into a usable position. By thus moving the knob 25 downwardly, the head portion 30 of the keybolt 24 is forced into the tight slot 22. Thus, it is obvious that the members 14 and 16 are secured together at two points, namely, at the pivot 18 and at the position where the keybolt 24 is finally positioned in the slot 22 and the keyhole 21. This locking movement as described is very simple and requires only a slight pressure of the thumb to press downwardly on the knob 25.

In order to unlock the handle 12 to position the handle for shipping, the forefinger is used to pull upwardly on the knob 25 relative to the handle 12, and therefore disengage the head portion 30 of the keybolt 24 from the slot 22. The handle may thereafter be pivoted about the pivot 18, to position the handle as illustrated in the phantom view in Figure 2.

In the preferred description of my invention, I have incorporated this travel iron handle lock mechanism in the back handle member 16 and a back ear 14 which extends from the sole plate cover 11. However, it is understood that the features of my invention may be incorporated in the front handle member 15 and the front ear 13. It is further to be understood that the keyhole slot 21 may be positioned in the ear mem-

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ber and that the slot 22 may be positioned in the handle member.

Although I have described my invention with a certain degree of particularity in its preferred form, it is understood that the present disclosure of the preferred form has been made only by way of example and that numerous changes in the details of construction and the combination and arrangement of parts may be resorted to without departing from the spirit and the scope of the invention as hereinafter claimed.

What is claimed is:

1. In a folding handle, a support member having an end provided with a slot therein, a handle member pivoted on said support member at a distance from said end and having an aperture extending longitudinally thereof, and alignable with said slot, and a finger engageable bolt extending through said aperture and positionable in said slot to restrain pivotal movement of said handle member on said support member.

2. In a folding handle for travel irons, a sole plate including an ear upstanding with respect thereto and terminating in a top edge, said ear having a slot opening on said top edge, a handle member pivoted to said ear at a distance from said top edge and adapted to assume a usable position during use of the iron or a folded position during transporting of the iron, said handle member having an elongated keyhole therein alignable with the slot when the handle is in usable position, and a bolt slidable in said keyhole and into said slot, said keyhole extending beyond said top edge of said ear at least a distance equal to the thickness of said bolt when said handle member is in usable position whereby the bolt may be slid in said keyhole and out of said slot, said bolt including a finger engageable nut threadable thereon to tighten said bolt in said slot and lock said handle member in said usable position and against said ear.

3. A folding handle for travel irons and the like, said folding handle comprising a supporting ear terminating in an edge, said ear having a slot opening on said edge, a handle member pivoted to said ear at a distance from said edge and adapted to assume a usable position or a folded position, said handle member having an elongated keyhole therein alignable with the slot when the handle is in usable position, and a bolt slidable in said keyhole and into said slot, said keyhole extending beyond said edge of said ear at least a distance equal to the thickness of said bolt when said handle member is in usable position whereby the bolt may be slid within said keyhole and out of said slot, said bolt including a finger engageable nut threadable thereon to tighten said bolt in said slot and lock said handle member in said usable position and against said ear.

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