

Nov. 21, 1939.

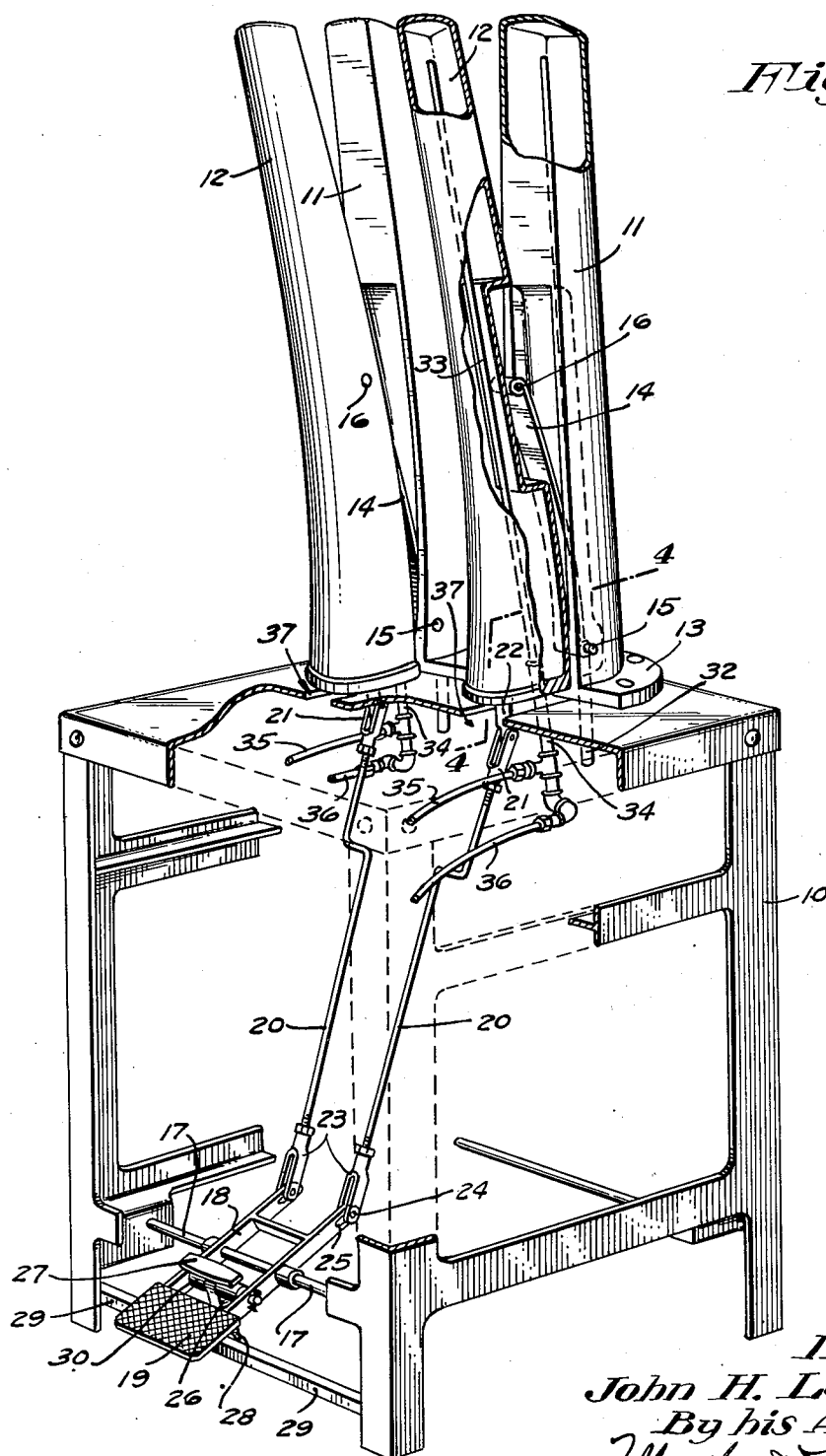
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2,180,939

GARMENT LEG AND SLEEVE IRONER

Filed May 31, 1938

3 Sheets-Sheet 1



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Fig. 2

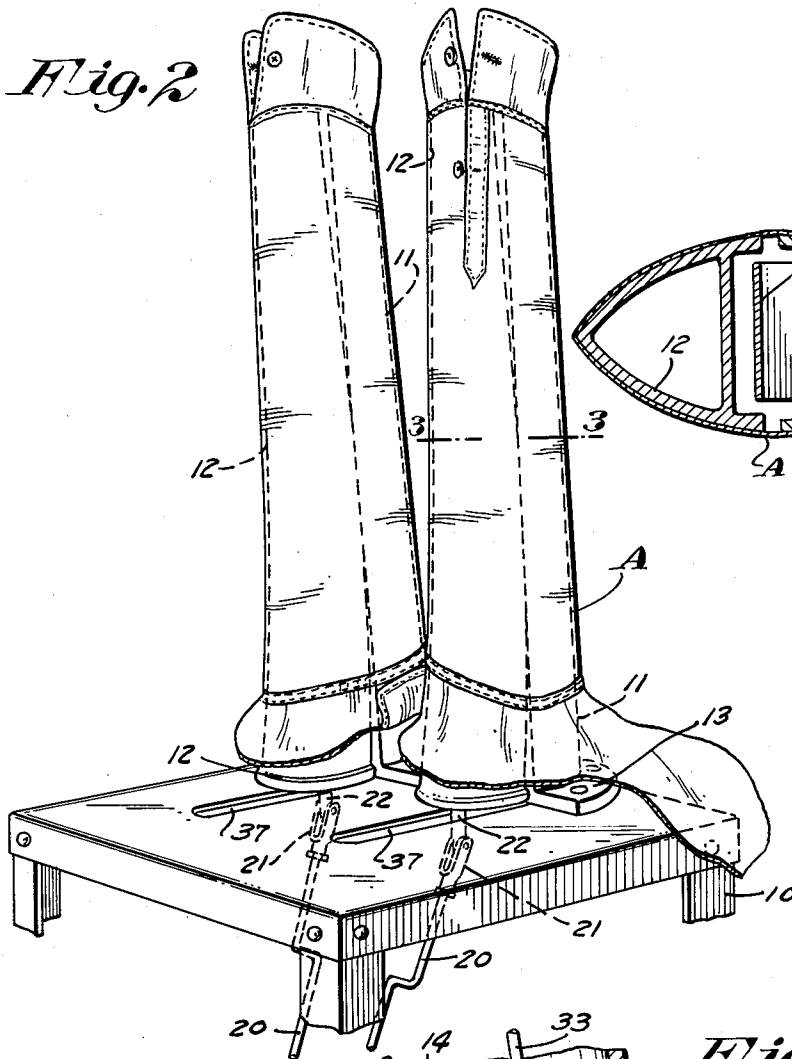


Fig. 3

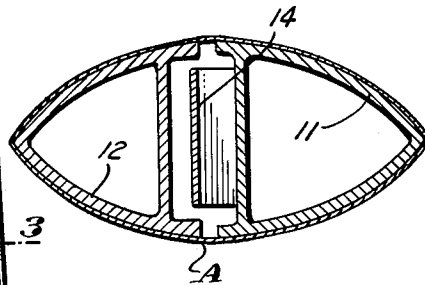
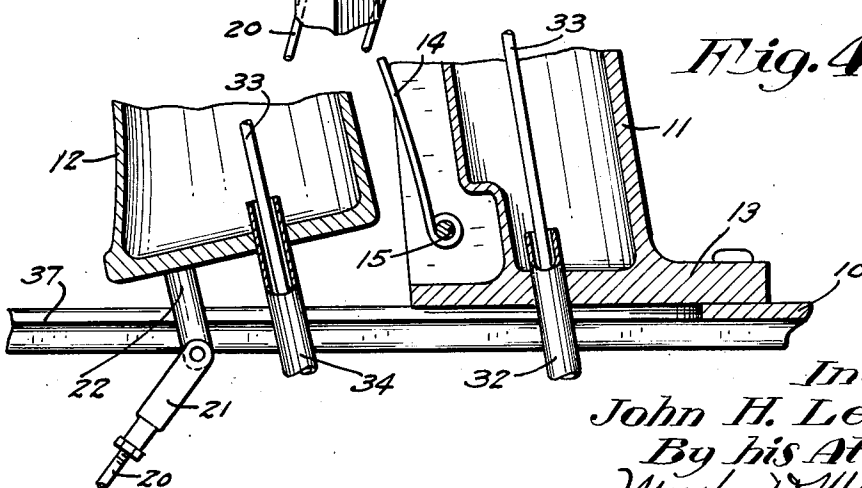


Fig. 4



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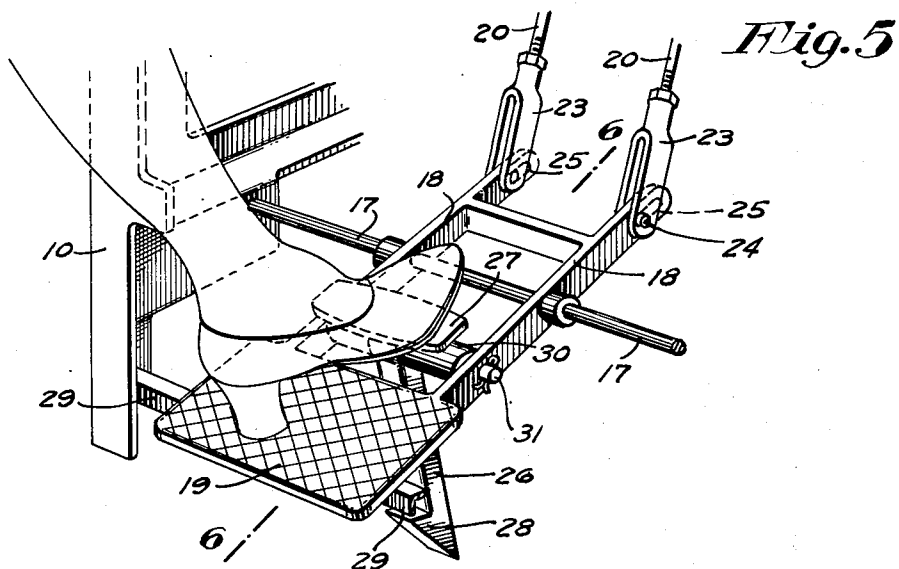
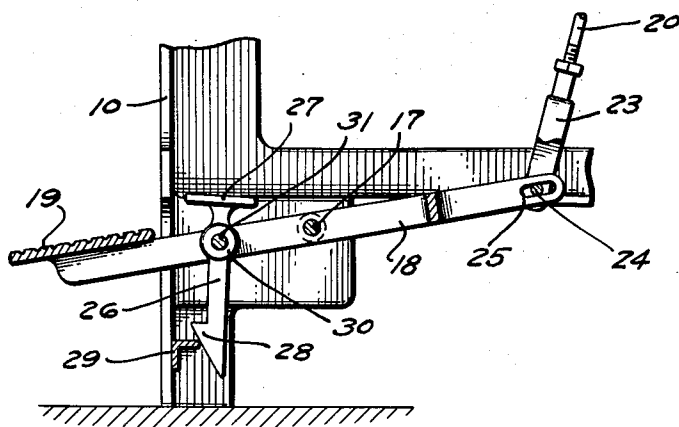


Fig. 6



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UNITED STATES PATENT OFFICE

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GARMENT LEG AND SLEEVE IRONER

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Application May 31, 1938, Serial No. 210,950

3 Claims. (Cl. 223-73)

My present invention relates to devices generally known as garment leg and sleeve ironers, such for example, as that disclosed and claimed in Letters Patent of the United States No. 1,937,656 granted to myself and George H. Leef December 5, 1933. The present invention improves apparatus of the above character in various particulars, but relates more particularly to means for moving, locking and releasing the movable boots or members of the ironer.

These ironing devices are usually arranged in pairs for simultaneous ironing of a pair of garment legs or a pair of garment sleeves; and each leg or sleeve ironer involves a pair of hollow steam heated boots, one of which is generally fixed to a table and the other is movable in respect to the fixed member. In the improved and complete machine here illustrated, the movable boots are connected to a common pedal for simultaneous movements, and in connection with this foot pedal there is a lock dog or latch for securing the pedal, in different adjustments.

The operating connections include self-adjusting or slip connections that will compensate for different size garment legs or sleeves and in this respect is an improvement on the device disclosed and claimed in my Patent No. 2,128,003 of date August 23, 1938. In the said pending application the above noted compensating action was accomplished by a sliding movement of one of the boots on a vertically movable push rod, while in the present improved arrangement the connecting rods or links are pivotally connected directly to the movable boots.

A commercial form of the improved ironing apparatus is illustrated in the accompanying drawings wherein like characters indicate like parts throughout the several views.

Referring to the drawings:

Fig. 1 is a perspective with parts broken away, showing the complete ironer designed as above outlined;

Fig. 2 is a perspective showing the sleeves of a shirt applied over the boots of two ironing devices, the lower portion of the ironing table and operating connections being broken away;

Fig. 3 is a section taken approximately on the line 3-3 of Fig. 2;

Fig. 4 is a fragmentary view in section approximately on the line 4-4 of Fig. 1 some parts being broken away;

Fig. 5 is a perspective showing on a larger scale than in Fig. 1 the foot pedal, the lock dog and part of the operating connections; and

Fig. 6 is a section taken on the line 6-6 of Fig. 5.

Preferably and as shown, the ironing devices proper are mounted on the top of a metallic table 10, but each ironing device includes a hollow relatively fixed boot 11 and a hollow relatively movable boot 12. The boot 11 is shown as provided with a base flange 13 by which it is bolted, riveted or otherwise rigidly secured on the top of the table 10. The relatively movable boot 12 is connected to the co-operating boot 11 for movements toward and from the same preferably by a leaf-like link 14, the lower end of which is pivoted to the base of the co-operating boot 11 at 15 and the upper end of which is pivotally connected to the intermediate portion of the movable boot 12 at 16.

In cross section the boots 11 and 12 somewhat closely approach triangular form but with rounded outer sides in engagement with the garment. The relatively flat surface of the boot 11 is more nearly longitudinally straight, that is, has less longitudinal curve than does the adjacent relatively flat surface of the boot 12. This is to permit rocking movement of the boot 12 on pivot 16 even when the two boots are close together or in contact and thereby better adapt the boots for complete contact with the garment leg or sleeve. In Figs. 2 and 3 the garment sleeves are indicated by A but it will, of course, be understood that the garment legs might have been shown.

Immediately pivoted on a cross rod or bar 17 rigidly secured to the legs of the table 10 is a foot pedal 18, which as shown, comprises laterally spaced rigidly secured bars and a foot piece 19. The inner ends of the bars of the foot pedal 18 are connected, one to each of the movable boots 12, by means of connecting rods or links 20. As shown, these rods 20 at their upper ends have forked heads 21 pivotally connected to lugs 22 that are rigidly secured to and depend from the bottoms of the respective boots 12. At their lower ends the rods 20 are shown as provided with forked heads 23 that are pivotally connected to the inner ends of the bars of pedal 18 by pivotal anchoring pins 24, which, for an important reason presently to be noted, work in longitudinal slots 25 in the arms of said pedal and are free for pivotal and for limited sliding or slipping movements in said slots. Preferably the heads 21 and 23 are screw threaded on the ends of the rods 20 so that the said rods are made extensible and contractible to set the operating connections in proper adjustment. Pivoted to the forwardly or

outwardly projecting portion of the foot pedal 18 is a depending lock dog or latch 26, which at its upper end has a flat head 27 and at its lower end has a bevelled lock lug 28 that is engage-
 5 able with a lock flange or detent 29, which, as shown, is an angle bar the ends of which are rigidly secured to the front legs of the table. In the structure shown, the lock dog 26 has a trans-
 10 versely extended hub 30 located between the bars of the foot pedal 18 and through which and the said bar is passed a pivot pin 31.

Steam or hot air will be supplied to the interiors of the boots. As shown, heating medium is supplied to the fixed boots through fixed pipes
 15 32 and further connections, not shown. As shown, steam is supplied to the movable boots through smaller pipes 33 and is carried therefrom through surrounding concentric pipes 34. These connections may be varied, but as illus-
 20 trated, the short pipes 34 are passed through and rigidly secured to the bottoms of the movable boots, and the steam will be supplied to the pipes 34 through tubes 35 and will be carried from the lower end of pipes 33 through tubes 36. Here it
 25 should be noted that the top of the table 10 is provided with slots 37 through which the pipes 34 and lugs 22 work freely when the movable boots are moved in respect to the fixed boots.

Operation

30 It will be noted that the weight of the movable boot 12, in a direction away from the boot 11, is offset from the pivot 15 so that it will, under the action of gravity, tend to move away from the
 35 co-operating fixed boot 11. To set the ironing devices in contracted condition for the application of a garment leg or sleeve thereon, the movable boot is pressed toward the co-operating fixed boot. In the operation of the improved pedal
 40 connection, when the pedal is stepped upon and the foot piece 19 is pressed downward so as to cause the lock dog 26 to engage the detent 29, both of the movable boots will be simultaneously pressed against the co-operating fixed boots.
 45 Under this movement of the pedal, the pivot pins 24 will slip downward in the slots 25 until the positive action is produced.

After the garment sleeves or legs have been applied to the two ironing devices, the operator, with
 50 his heel on the foot piece 19 and the sole of the shoe on the outer portion of the head plate 27, readily releases the lock dog and then permits the pedal to freely move under the action of gravity and pressure produced by the tendency of the
 55 movable boots 12 to move away from the co-operating fixed boots. Under the action of gravity, the elements of the two ironing devices will separate until the garment sleeves or legs are expanded and pressed into ironing condition on
 60 the outer surfaces of the two co-operating boots. Frequently, or in fact, it usually happens that the sleeves of the same garment will vary somewhat in diameter, and the same statement is true in respect to the legs of garments. These state-
 65 ments are particularly true in respect to cheaply made garments such as overalls and work shirts. If there is no yielding or differential action between the pedal connections to the two movable boots, then when the one ironing device is ex-
 70 panded to press out the smaller sleeve or garment

leg, further expanding movement of the other ironing device in the larger sleeve would be stopped and the latter or larger sleeve would not be smooth or pressed out or properly ironed.
 5 However, with the slip connections in the preferred arrangement afforded by the rivets 24 and slots 25, when expansion of the first ironing device is stopped by the smaller sleeve, the other ironing device can expand until it is completely
 10 expanded and tightly presses the larger sleeve, due to the fact that there is a slippage in the last noted connections 24—25. The above noted differential actions between the foot pedal and the several movable boots, has in practice generally
 15 been found to be highly important. Of course, the scheme just described can be carried out in an arrangement where, for example, a common pedal is used to operate the movable boots or more than two ironing devices.

From the foregoing it will be understood that
 20 the machine illustrated in the drawings as a commercial form is capable of modifications within the scope of the invention herein disclosed and claimed.

The direct pivotal connection between the
 25 links 20 and the movable boots eliminates friction such as was present in the structure of my copending application above identified, wherein the movable boots are arranged to slide over the
 30 upper ends of push rods.

What I claim is:

1. In a device of the kind described, a pair of fixed boots, a pair of co-operating relatively movable boots, a foot pedal, individual links inde-
 35 pendently pivoted to their respective moveable boots at their upper ends and at their lower ends having slip-acting slot and pin connections to said pedal, pressure on the pedal serving to force the relatively movable boots toward the relatively
 40 fixed boots and said slot and pin connections permitting variations in the extent of movement of the movable boots in respect to said fixed boots.

2. In a device of the kind described, a pair of fixed boots, a pair of co-operating relatively movable boots, an intermediate pivoted foot pedal
 45 having rearwardly projecting arms, individual links independently pivoted to their respective moveable boots at their upper ends and at their lower ends having slip-acting slot and pin con-
 50 nections to the rearwardly projecting arms of said foot pedal, pressure on the pedal serving to force the relatively movable boots toward the relatively fixed boots and said slot and pin connections permitting variations in the extent of
 55 movement of the movable boots in respect to said fixed boots.

3. In a device of the class described, a pair of fixed pressing boots, a pair of cooperating relatively moveable pressing boot elements, a foot
 60 pedal element, connecting rods independently pivotally anchored to their respective boot elements at their upper ends by pivot pins, and at their lower ends said rods being pivotally anchored to said foot pedal element by pivot pins,
 65 the pivotal anchoring pin at one end of each of said rods working in a cooperating closed slot permitting limited differential movement between the moveable boot elements.

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