

# United States Patent

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[54] **SEWING MACHINE**  
**2 Claims, 5 Drawing Figs.**

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112/63, 112/217.1

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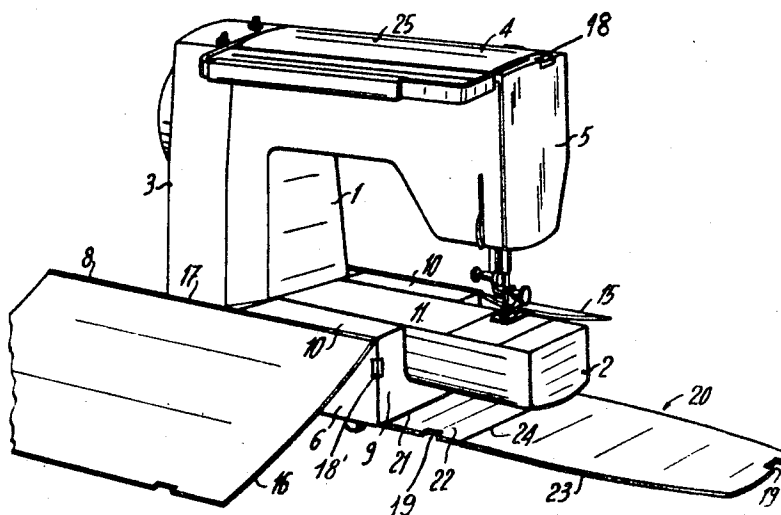
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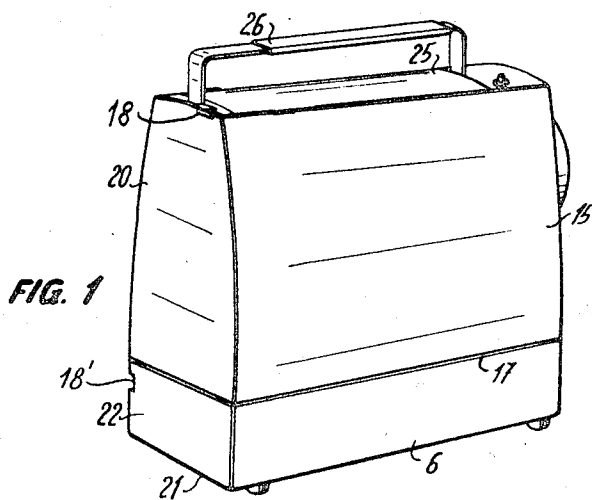
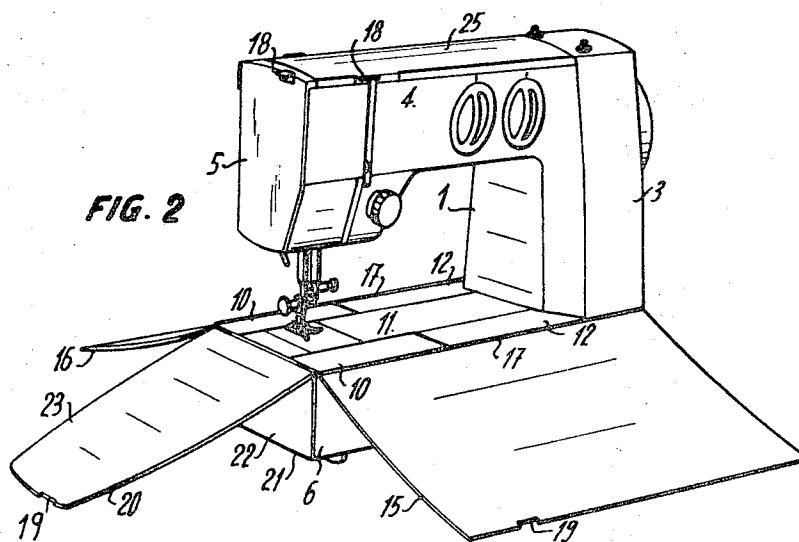
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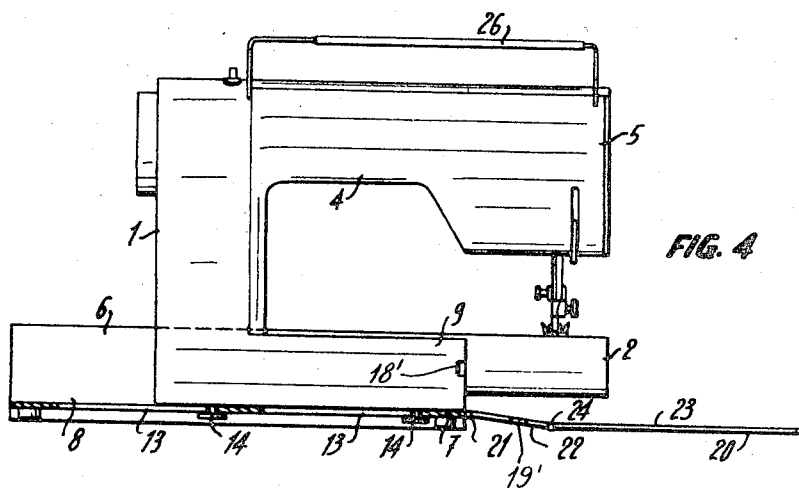
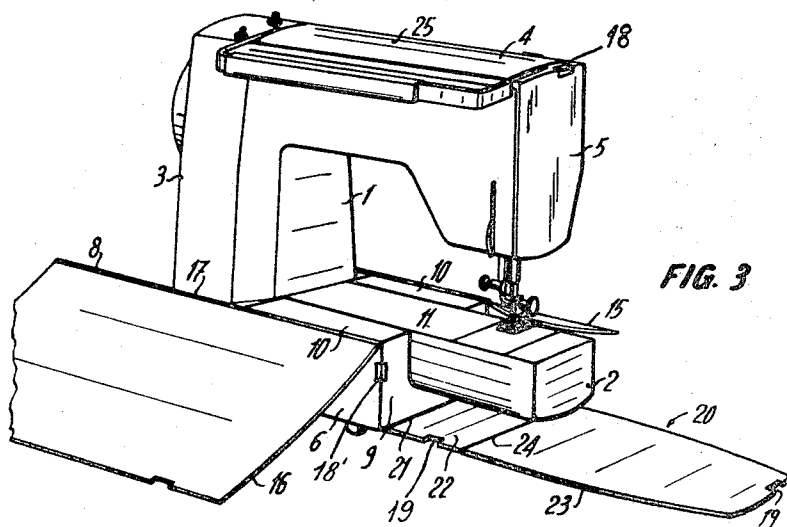
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**ABSTRACT:** The sewing machine casing incorporates a lower free arm and is slidably mounted in a base that serves as part of the work surface when the free arm is located within the base. The casing can be moved forward so that the free arm overhangs one end of the base. The sewing machine also has two swinging sides and an end flap for shutting up the machine after work is finished, and which, when open, serve as ramps leading to the work surface.







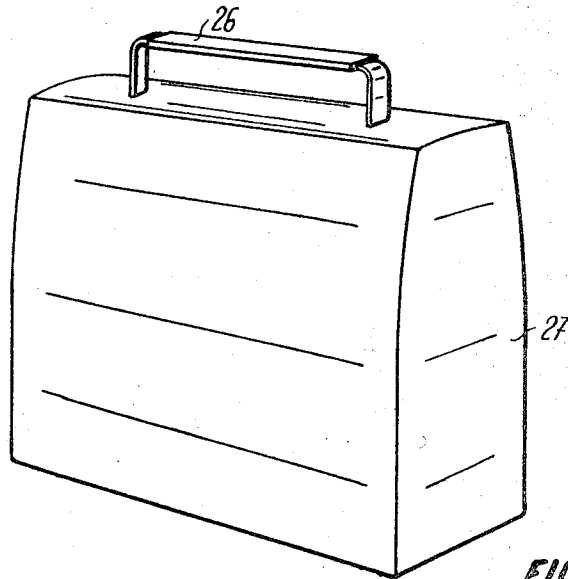
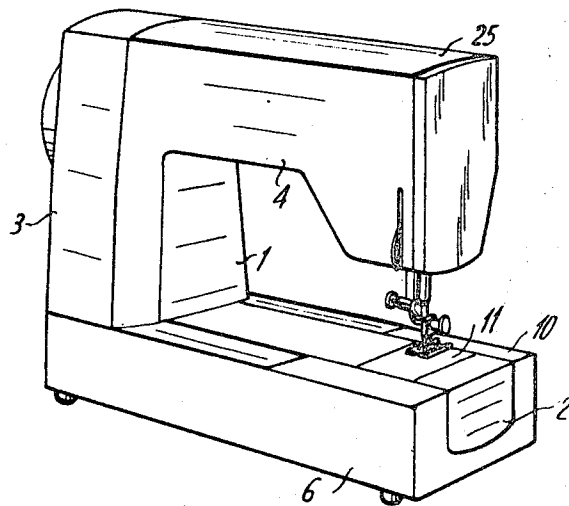


FIG. 5



## SEWING MACHINE

The invention relates to a sewing machine enclosed in a casing which has a lower free arm.

Sewing machines of this kind have the disadvantage that the work surface is annoyingly and inconveniently narrow.

The purpose of the invention is to provide a sewing machine which combines the advantages of a machine with a free arm with those of a machine having a wide work surface.

An object of the invention is a sewing machine that is slidable in a base which serves as part of the work surface when the lower free arm of the machine is located entirely within the base.

This object and others of the invention will be apparent from the following detailed description.

The invention will be described, with reference to the FIGS. of the accompanying drawings, wherein:

FIG. 1 shows a sewing machine of the invention closed up;

FIG. 2 shows the machine ready for use, with a wide work surface;

FIG. 3 is a view in three-quarter-face of the sewing machine completely opened up;

FIG. 4 is a side view of the machine in the position shown in FIG. 3, with the base partly in section; and

FIG. 5 is a perspective view of a second form of the invention.

With reference to the FIGS. the sewing machine is housed in a casing 1 comprising a lower free arm 2 (best seen in FIGS. 3 and 4), a pedestal 3, an upper arm 4, and a head 5. The casing rests on an elongated base 6 in form of a channel or gutter. As shown in FIGS. 3 and 4, the base incorporates a bottom 7 and two longitudinal sides 8. The rear part of the base 6 embodies an opening equal in size to the width of the lower part of the pedestal 3. The front part 9 of the base is hollow to form a compartment, the two surfaces 10 of the compartment forming, together with the upper face 11 of the free arm, the work surface of the sewing machine. The hollow of the front part 9 of the base 6 accepts the lower part 12 of the casing 1 when the sewing machine is located in the position shown in FIGS. 3 and 4, wherein the free arm 2 projects beyond the one end of the base 6.

As shown in FIG. 4, the bottom 7 of the base 6 embodies longitudinal slots 13. Projections 14 with heads pass through the slots and are rigid with the bottom of the casing 1. The casing bottom is, therefore, free to slide in the base 6, so that the sewing machine can be used in the position shown in FIG. 2, with a wide work surface formed by the upper face 11 of the free arm and the complementary surfaces 10 of the base 6. In this position, the free arm is located within the base 6. The sewing machine, in the position shown in FIGS. 3 and 4, can be used to sew tubular pieces, such as sleeves or trousers, by sliding the casing 1 with respect to the base 6 so that the free arm 2 overhangs the base end.

The sewing machine of the invention, which can be converted from a sewing machine having a broad work surface to one having a free arm, is further provided with swinging sides 15 and 16 pivotally connected to the longitudinal edges 17 of the base 6. These sides can be swung between two different positions:

one, in which the sides are open, or swung down, as shown in FIGS. 2 and 3, the sides constituting each a ramp leading to the work surface 10 and 11; and

another, in which the sides are closed, or swung up, as shown in FIG. 1, the sides covering the upper part of the casing 1 after sewing is finished. Any suitable closure means can be used to hold the sides shut. In the embodiment illustrated, the sides are snapped shut by spring catches 18 that engage in notches 19 embodied in the sides 15 and 16.

The sewing machine also has an end flap 20 pivotally connected to the lower front edge 21, of the base 6, underneath the free arm 2. The flap covers the front end of the free arm, as well as, when the machine is to be covered up, the head 5. A spring catch 18 cooperates with a notch 19 in the flap 20, for holding the latter shut in its raised position.

In the embodiment shown, the flap 20 comprises two parts 22 and 23, pivotally connected together at 24. The shape of the lower part 22 is similar to that of the base front end, except for the groove of the latter. The upper part 23 extends from the level of the work surface 10 and 11 to the top of the sewing machine head 5. A spring catch 18' and a notch 19' as shown in FIGS. 1, 3 and 4 releasably and securely hold the lower part 22 against the front end of the base 6, when the free arm 2 is located within the base 6. In this position, the upper part 23 is lowered to permit sewing, and forms a ramp leading to the work surface.

The sewing machine advantageously incorporates means for locking the casing 1 and base 6 in their two mutual positions, respectively illustrated in FIGS. 2 and 3. The locks can be a conventional spring arrangement or mechanically operated by a lever or button.

The machine further has an accessory compartment in the upper arm 4 of the casing 1. The upper plate 25 of the arm 4 constitutes the cover for the compartment, and is removable.

A handle 26, pivotally connected in the upper part of the arm 4, enables the sewing machine to be easily carried about particularly when it is shut up.

The invention described admits of various embodiments lying within its scope. The sides 15 and 16 and the flap 20 can be eliminated, and replaced by a simple cover placed over the casing 1, when the sewing is finished. This embodiment is shown in FIG. 5, the lower part of which shows the sewing machine with its casing 1 slidably supported in the base 6. The upper part of FIG. 5 shows the cover 27, which is placed over the casing 1 to protect the sewing machine when it is not in use. The cover 27 can be sufficiently high to cover the entire machine, either from the bottom of the casing 1 up or from the level of the work surface 10 and 11 up. The handle 26 is non-rotatably fixed to the cover 27, and any suitable releasable fastening means is used to secure the cover to the sewing machine.

In a further variation of the first embodiment, only the two sides 15 and 16 are retained, the front end of the machine being left open, or the flap 20 being replaced by a plate sliding in the head 5, as in the front end thereof, for example, to cover the space between the head and the lower free arm of the sewing machine.

In another variation, the sides 15 and 16 can be shortened in length to cover only the open space comprised between the pedestal 3 and the head 5.

The arrangement to facilitate sliding between the casing 1 and the base 6 can be of any kind suitable to the purpose, such as, among others, a dovetail slide, a roller or ball bearing slide, or a slide employing guide rods.

Although the preferred embodiments of the invention have been described, the scope of, and the breadth of protection afforded to, the invention are limited solely by the appended claims.

I claim:

1. A sewing machine having a casing, said casing including an upper arm terminating in a head, a lower free arm, and a work surface incorporated by said free arm, the improvement comprising a base for the sewing machine for receiving said free arm thereof and supporting the latter for relative sliding therebetween, whereby the sewing machine can be moved from a first position in which said free arm is located within said base to a second position in which said free arm projects from said base, at least one horizontal surface incorporated by said base extending from said free arm work surface to provide a work surface of increased width when the sewing machine is in said first position, said base having two sides located opposite respective sides of said casing, two swinging side members, means for pivotally mounting said two swinging side members one on each of said sides of said base to permit each said side member to swing about a horizontal axis between an open position in which it constitutes a ramp extending to said work surface of increased width and a closed position in which it covers a respective side of the upper arm

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of said sewing machine casing, and releasable means for holding each said side member in its closed position, said head and lower free arm each having a front end located at the same end of said casing, a front end flap for covering said free arm and casing head front ends, and means for pivotally connecting said flap to said base, and wherein said base embodies a front end with an edge located below said free arm front end, said means for pivotally connecting said flap to said base connecting the flap to said edge, said flap including first and second parts, means for pivotally connecting together said first and second parts, said first part having a shape similar to said base front end for covering the latter, and said second part extending from the level of said free arm work surface to

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the top of said casing head, and releasable means for holding said first part against said base front end when the sewing machine is in said first position, whereby said second part can be swung down to form a ramp leading to said work surface of increased width.

2. The sewing machine as defined in claim 1, wherein said casing includes a pedestal, said base includes a front part located remotely from said casing pedestal when said free arm is in said first position, and further including a compartment incorporated within said base front part for accepting the lower part of said casing that adjoins said pedestal when the sewing machine is in said second position.

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