United States Patent [19]

Maag

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[45] **July 9, 1974**

[54] **PORTABLE SEWING MACHINE AND CASE**

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[21] Appl. No.: **323,050**

[52] **U.S. Cl.** **112/258,** 312/324

[51] **Int. Cl.** **D05b 77/00**

[58] **Field of Search** 112/258, 260, 217.1; 312/324, 283, 8, 10, 20

[56] **References Cited**

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FOREIGN PATENTS OR APPLICATIONS

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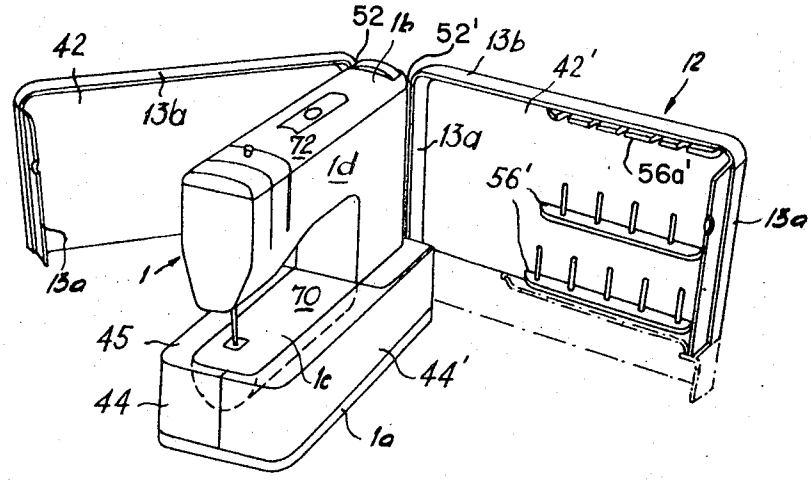
Primary Examiner—George H. Krizmanich
Attorney, Agent, or Firm—McGlew and Tuttle

[57] **ABSTRACT**

A portable sewing machine and case comprises a sewing machine having a lower usually horizontal free arm portion, an upright rear column portion and a generally horizontally extending top portion is provided with case-forming cover elements. The cover elements are pivoted about vertical axes which extend up adjacent the rear end of the column so that the covers may be folded inwardly to encompass the sides of the sewing machine. The cover elements advantageously include inturned edges which either engage directly over a base plate for the sewing machine or over a cover for the free arm portion which extends upwardly from the base flush with the top surface of the free arm portion. The cover elements for the free arm portion may be similarly pivotally mounted about an axis which extends vertically and which is located at the rear end of the column portion of the machine.

4 Claims, 8 Drawing Figures



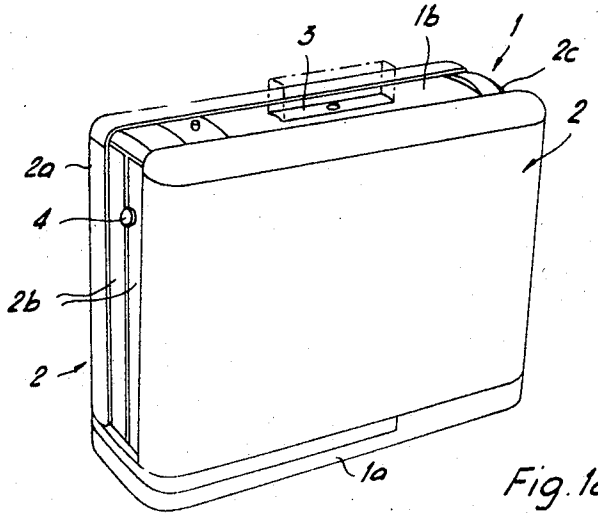


Fig. 1a

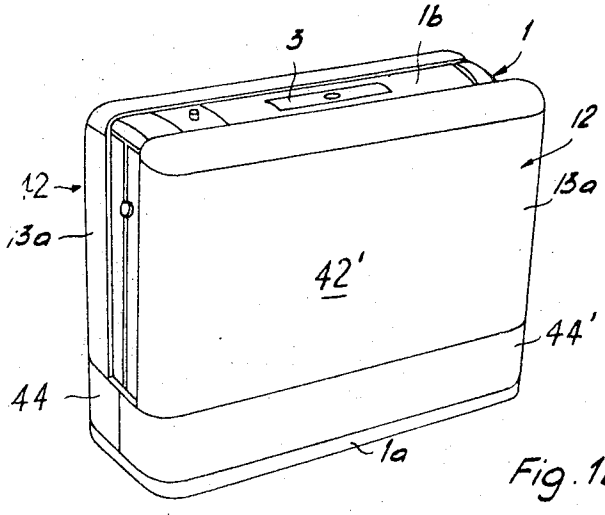


Fig. 1b

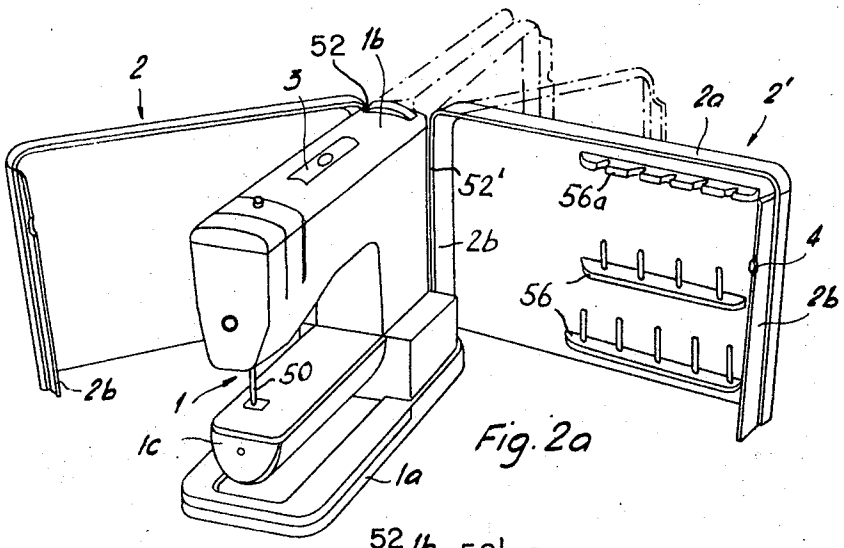


Fig. 2a

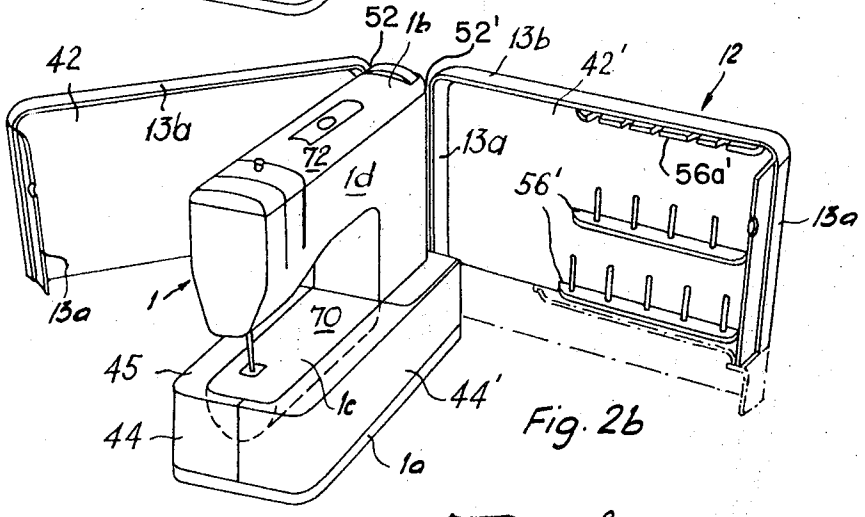


Fig. 2b

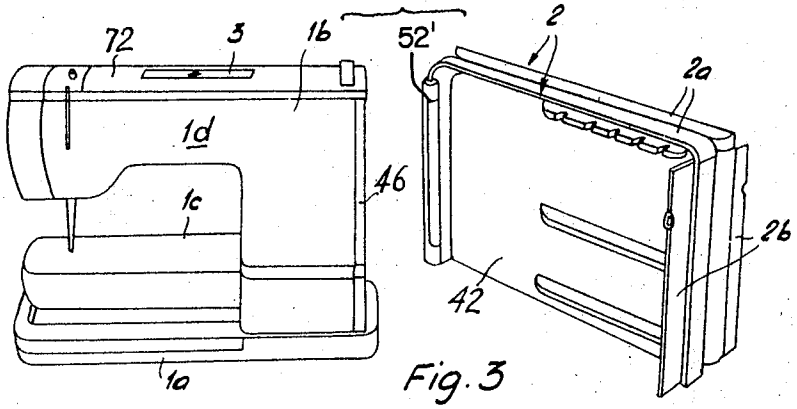


Fig. 3

Fig. 4

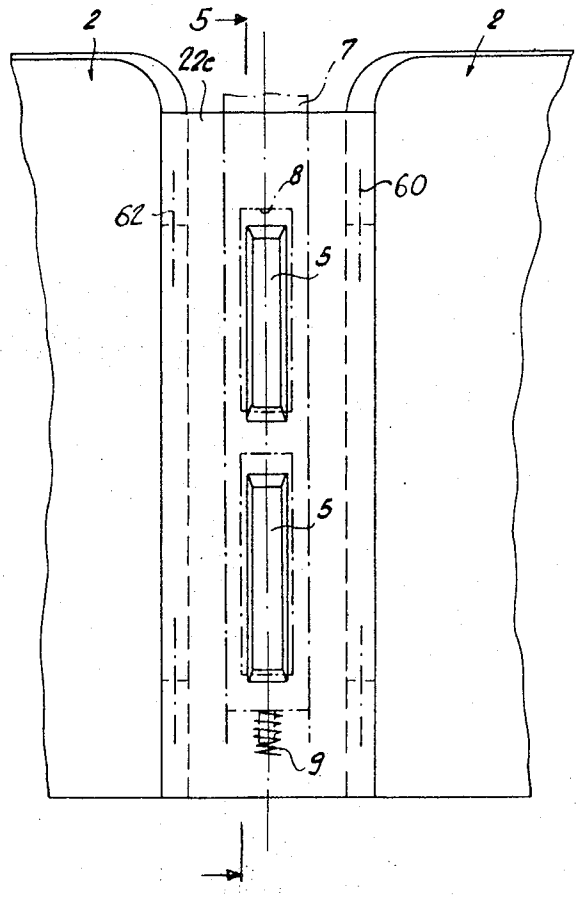
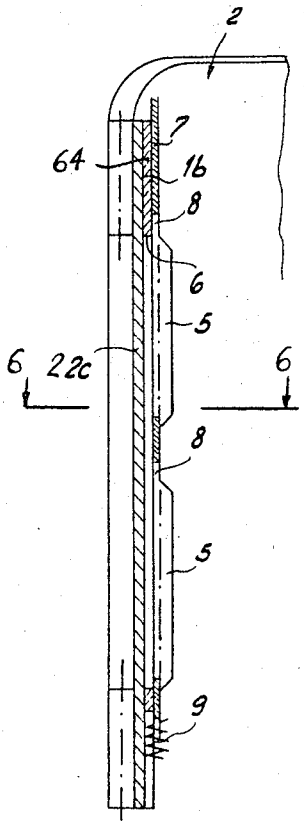


Fig 5



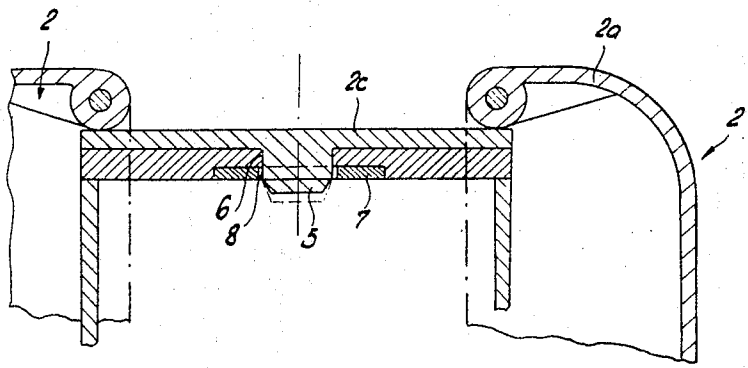


Fig. 6

PORTABLE SEWING MACHINE AND CASE

BACKGROUND OF THE INVENTION

1. Field of the Invention

This invention relates in general to sewing machines and, in particular, to a new and useful portable sewing machine having case-forming elements in the form of cover members which are hinged to the rear of the machine and which may be folded over the sides to provide a case which may be locked at the front of the machine.

2. Description of the Prior Art

Sewing machines are known which include flaps which are articulated to the machine base at either the head, rear or front sides and where the flaps are foldable so that they can be folded from top position in which they form parts of the machine case down into an operating position where they form parts of a work table. Such use of these case-forming flaps as a part of a work table requires a separate flap on the head side in addition to the horizontal hinges and separate flaps on the front and rear sides of the machine because these separate flaps must have plane inner surfaces. The construction and handling of this machine are relatively complicated and the space requirement for the machine in a sewing position is relatively great and, in fact, the increase of the area formed by the work table is not always desirable.

SUMMARY OF THE INVENTION

This invention relates to a construction in which case-forming elements are incorporated directly on a sewing machine frame and in which the sewing machine provides an extremely compact portable unit not only when the case-forming flap elements are brought into the case-forming position, but also in the sewing position, when the side cover portions are pivoted outwardly in a simple manipulation to place them in a position in which they require very little space. With the invention, the case-forming flaps or cover elements are pivoted about vertical axes provided on the machine column. The cover elements may be folded from a position in which the cover elements overlie the sides of the sewing machine and form an enclosing case therefor to one in which they extend outwardly on each side of the machine in an outwardly folded operative position. The cover elements work similar to a book cover and they are advantageously made with inturned edges so that they have hollow portions which accommodate racks for receiving sewing machine accessories. The hinges for the cover elements are arranged preferably on a common rear part which can be mounted directly to the column of the sewing machine, for example.

Since no separate cover elements are required on each end of the sewing machine due to the formation of the rear column in the free arm and the top arm portions of the machine, only side flaps are provided so that the construction and handling of the sides flaps or cover elements is very simple. By pivoting the cover elements vertically to the outside which may preferably be up to about 180°, the flaps can be brought completely out of the operating range of the machine in the sewing position. The space requirement for the machine in the sewing position is hardly increased, particularly not when the flaps are so designed that they can be removed, preferably as a unit if desired. Since the closed flaps extend over the head side of the machine,

they can be made in the form of a recessed or hollow body which can receive supporting brackets for accessories which may be oriented in a position for easy use when the cover flap elements are pivoted outwardly from the machine.

Accordingly, it is an object of the invention to provide an improved portable sewing machine which includes case-forming elements which are pivotally mounted adjacent one end of the machine and which may be folded inwardly to overlie the sides of the machine and form an encompassing case therefor which advantageously may be locked at the front.

A further object of the invention is to provide a case-forming assembly for a sewing machine which comprises a mounting plate which is adapted to be attached to the rear of a sewing machine and a pivotal cover carried on each side of said mounting plate which may be pivoted so the covers are brought together over each side of the sewing machine and encompass it or pivoted outwardly to open the machine.

A further object of the invention is to provide a sewing machine and case and to provide a simple case-forming element for a sewing machine, which are simple in design, rugged in construction and economical to manufacture.

For an understanding of the principles of the invention, reference is made to the following description of typical embodiments thereof as illustrated in the accompanying drawings.

BRIEF DESCRIPTION OF THE DRAWINGS

In the Drawings:

FIG. **1***a* is a front end perspective view of a combined sewing machine and case, constructed in accordance with the invention;

FIG. **1***b* is a view similar to FIG. **1***a* of another embodiment of the invention;

FIG. **2***a* is a view of the case shown in FIG. **1***a* with the cover element shown in an open position;

FIG. **2***b* is a view of the sewing machine and case shown in FIG. **1***b* with the cover element in an open position;

FIG. **3** is an exploded side perspective view of a sewing machine having a case-forming element alongside;

FIG. **4** is a partial rear elevational view of a case-forming assembly which may be attached to the rear of a sewing machine;

FIG. **5** is a section taken along the line **5—5** of FIG. **4**; and

FIG. **6** is a section taken along the line **6—6** of FIG. **5.**

GENERAL DESCRIPTION OF THE PREFERRED EMBODIMENTS

Referring to the drawings in particular, the invention embodied therein in FIGS. **1***a*, **2***a* and **4 – 6,** comprises a combined sewing machine and case which includes a sewing machine portion having a base plate **1***a* with an upright rear column portion **1***b*, a usually horizontally extending free arm portion **1***c* at the lower end of the column and a horizontally extending upper portion **1***d* which extends outwardly from the upper end of the column **1***b* toward the front and carries the needle bar **50.**

In accordance with the invention, the sewing machine case-forming portion includes first and second side cover portions, generally designated **2** and **2'**,

which are pivotally mounted on hinges **52** and **52'** which are carried in the vicinity of the rear face of the column **1***b* and may be carried directly on the column, if desired.

In the embodiment shown, the cover members **2** and **2'** may be oriented in a case-forming closed position, as shown in FIG. **1***a*, or they may be pivoted outwardly around the vertical hinge axis of the hinges **52'** to the position shown in FIG. **2***a*, in which the sewing machine is opened for operation. In the closing position, the cover members **2***a* bear against the base plate **1***a* and they include inturned top wall edges **2***a* and side edges **2***b*, which overlie the top portion **1***d* and a portion of the front of the sewing machine. The rear part of the sewing machine may be provided with a separate mounting plate **2***c* which carry the hinges **52** and **52'**, if desired. In the closed position, shown in FIG. **1***a*, the complete case, including the sewing machine, may be easily carried by extending a recessed handle **3** to the dotted line position in FIG. **1***a*, where it may be easily gripped by a person's hand.

The front end extensions **2***b* of the cover elements **2** and **2'** are advantageously positioned so that they overlap in the front of the sewing machine and they carry a lock **4** so that the two flaps may be locked in position. The cover elements **2** and **2'** are advantageously recessed due to the projecting edges of the top wall **2***a* and the side wall **2***b* so that they provide space for mounting brackets **56** for accommodating various sewing machine accessories.

When the lock **4** is opened, the cover elements **2** and **2'** are folded backwardly to the position indicated in FIG. **2***a* or even further to a position up to 180° from the closed position, the accessories in the cover are readily accessible, and the work area in front of the machine is free.

In a preferred arrangement, the invention provides sewing machine case-forming elements which include a back mounting wall portion **22***c* carrying hinges **60** and **62** at respective sides which pivotally support covers **2** and **2'**, the mounting plate **22***c* has an interior wall with two vertically spaced cams **5** which protrude through a vertical slot **6** of a column wall **64** of the column portion **1***b* of the sewing machine. The inside of the column wall advantageously carries a vertically movable latch **7** having vertically spaced openings **8, 8** which permit passage of the cams **5.** The cams **5** have a groove on their underside which is engaged by the bottom edge of the latch **7** under the biasing action of a spring **9** which urges the latch **7** upwardly. In the latch position, shown in FIG. **5,** the mounting plate **22***c* cannot be removed from the column **1***b* with the latch in the position engaged below the projecting cams. The upper end of the latch **7** includes a part (not shown) which can be pressed down to move the latch out of engagement with the cams **5** in order to permit release of the cams and the plate **22***c*. With such a construction, the entire unit can be removed from the machine in the open position so that this unit can be set up within reach of the sewing station with the accessories carried within the cover being readily accessible. It is thus not necessary to have a separate accessory box provided at the upper part of the column arm and with a separate cover.

The variations of the invention which are shown in the embodiment indicated in FIGS. **1***b* and **2***b* relate to a sewing machine having the identical parts as the other embodiment, but to a cover assembly, generally designated **12,** having cover-forming members or flaps **42** and **42'** which extend only from the top **70** of the free arm **1***c* to the top **72** of the upper arm portion **1***d* of the sewing machine. In this embodiment, the top walls **13***b* and side walls **13***a* of the cover members **42** and **42'** provide a recessed interior for the holding of accessories **56'** as in the other embodiment. In this embodiment, there is a lower set of cover members **44** and **44'** which are hinged in a manner similar to the cover members **42** and **42'**, but which are of an extent such that they extend between the base **1***a* and the top **70** of the free arm **1***c*. With the construction described in FIGS. **1***b* and **2***b*, the machine may be used as a free arm machine in which case, the cover members **42** and **42'** are opened outwardly and, in addition, the cover members **44** and **44'** are also opened outwardly to the dotted line position shown to the right of FIG. **2***b*. When the machine is to be used as a pedastal machine, only the upper flaps **42** and **42'** need be opened and the other flaps **44** and **44'** are closed, as in the position indicated in FIG. **2***b*. The top flanges **45** of these cover members **44** and **44'** are flush with the top face **70** of the free arm **1***c* so that they form an increased plane work table.

As shown in FIG. **3,** both of the flap parts **42** and **42'** may be mounted so that they can be removed easily for example by lifting them out of a hinge carried on a mounting plate **46** of the column **1***b*, if desired.

While specific embodiments of the invention have been shown and described in detail to illustrate the application of the principles of the invention, it will be understood that the invention may be embodied otherwise without departing from such principles.

What is claimed is:

1. A portable sewing machine and case comprising a sewing machine having a lower usually horizontal free arm portion, an upright rear column portion extending upwardly from the one end of the free arm portion and a usually horizontally extending top portion arranged adjacent the top of said column portion, and first and second hinged cover portions carried by said sewing machine and having vertical hinge axes adjacent said column portion and being pivotal about respective ones of said hinge axes to overlie and cover the respective sides of said sewing machine in a case-forming closed position or to be swung outwardly from the sides into an opened position for operation, said cover portions each including an outer side cover flap of size to cover a side of said sewing machine from said base to said top portion and with inturned top and side edge flaps extending inwardly, said cover portions comprising two separate parts, one of said parts comprising an outer cover flap with inturned side and top edge portions and extending from the top surface of said free arm portion to the bottom of said machine, and the other of said parts comprising an outer cover flap and inturned top and side edge portions extending from the top portion of said free arm portion of said sewing machine to the top of said sewing machine.

2. A portable sewing machine and case, according to claim **1,** wherein said cover portions inturned side edges abutt in front of the sewing machine, and locking means associated with said inturned edges for locking them together.

3. A portable sewing machine and case, according to claim **1,** wherein said top portion includes a handle

which is engageable for carrying said sewing machine.

4. A case-forming attachment for sewing machines, according to claim 1, wherein said cover portions include recessed interiors and bracket means carried on said interiors for supporting sewing machine accessories.

* * * * *

UNITED STATES PATENT OFFICE
CERTIFICATE OF CORRECTION

Patent No. 3,822,659 Dated July 9, 1974

Inventor(s) Heinz Maag

It is certified that error appears in the above-identified patent and that said Letters Patent are hereby corrected as shown below:

On the Cover Sheet, in item [73] "Sweden" should read -- Switzerland --.

Signed and Sealed this

fifth Day of *August 1975*

[SEAL]

Attest:

RUTH C. MASON
Attesting Officer

C. MARSHALL DANN
Commissioner of Patents and Trademarks

UNITED STATES PATENT OFFICE
CERTIFICATE OF CORRECTION

Patent No. 3,822,659 Dated July 9, 1974

Inventor(s) Heinz Maag

It is certified that error appears in the above-identified patent and that said Letters Patent are hereby corrected as shown below:

On the Cover Sheet, insert:

-- [30] Foreign Application Priority Data

Jan. 18, 1972 Switzerland ------G 696

Signed and sealed this 3rd day of December 1974.

(SEAL)
Attest:

McCOY M. GIBSON JR.
Attesting Officer

C. MARSHALL DANN
Commissioner of Patents

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