

- [54] COMBINATION SEWING MACHINE HOUSING AND CARRYING CASE
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- [51] Int. Cl. D05b 77/00
- [58] Field of Search..... 112/258, 260, 217.1; 312/208; D70/1

[56] **References Cited**

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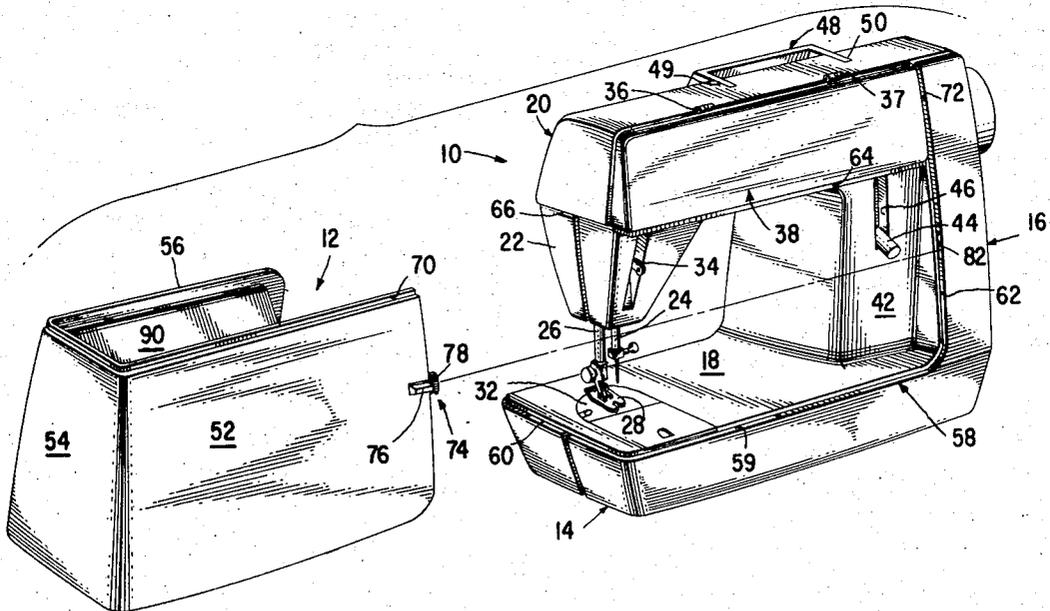
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[57] **ABSTRACT**

A sewing machine housing having a base with a work support, a standard upstanding at one end of the base, a bracket arm extending from the upper end of the standard, overlaying the work support, and terminating in a sewing head. A one-piece jacket is provided for concealing the sewing instrumentalities and the work support. The jacket has a front panel, a rear panel and an end panel integral with the front and rear panels so that the front and rear panels each have one free end with a latch member provided thereon. The free ends of the front and rear panels are slidably positioned relative to the bed and arm into abutting relationship with the standard and the latch members engage slots in the standard to lock the jacket in place. A storage compartment is provided on the interior of the jacket. A pivotable handle on top of the bracket arm allows the frame with the jacket in the installed position to be carried.

6 Claims, 6 Drawing Figures



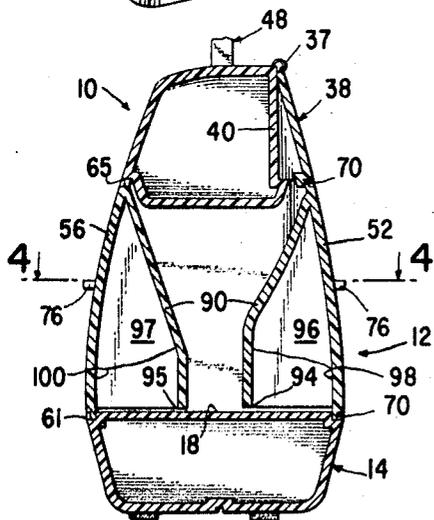
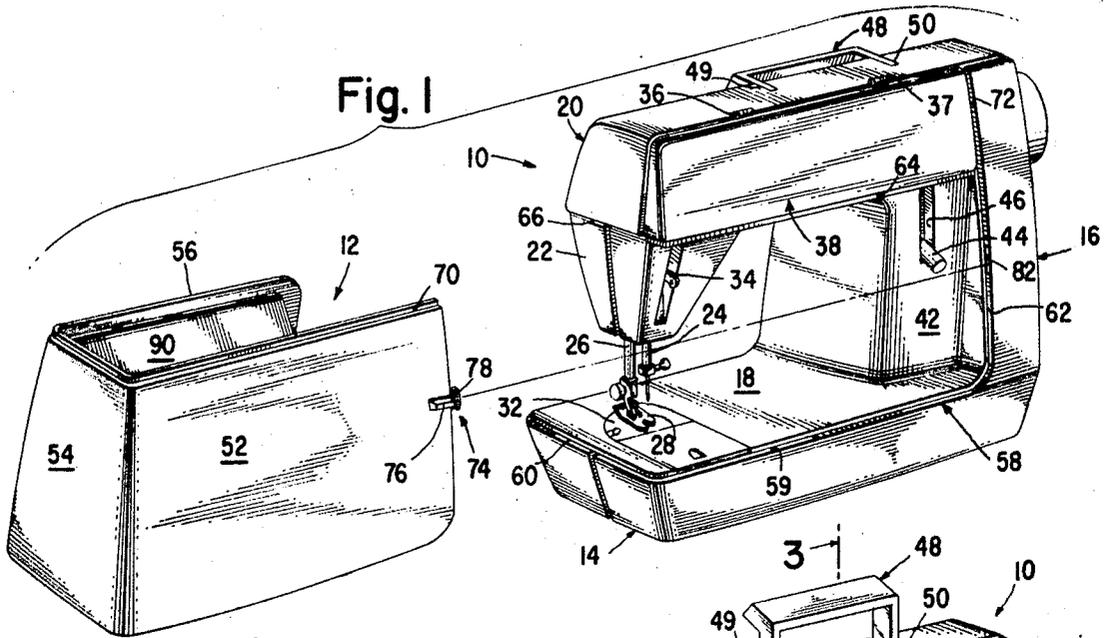


Fig. 3

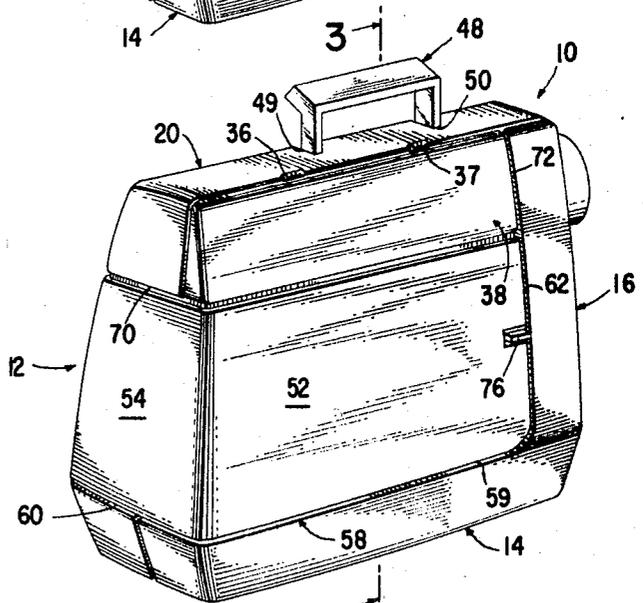


Fig. 2

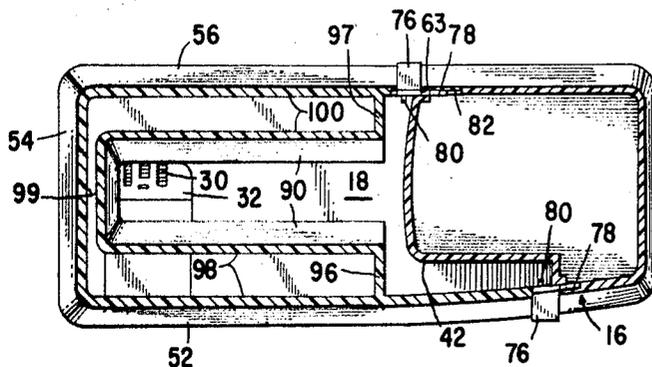


Fig. 4

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COMBINATION SEWING MACHINE HOUSING AND CARRYING CASE

BACKGROUND OF THE INVENTION

This invention relates to a sewing machine carrying case, and more particularly to a sewing machine housing and a removable jacket adapted to cooperate in an installed position with the housing to conceal the sewing instrumentalities.

In the present era of mobile population a lucrative market for light-weight portable sewing machines has been created. Ease of transport has been one major criterion applied to sewing machines designed for people on the go. The conventional design has been to incorporate a light weight sewing machine housing into a detachable cover such as is used for portable typewriters. However, these detachable covers are inherently bulky and provide an excessively large profile for convenient transportation, and require a large space for storage. One approach to the solution of this problem is disclosed in U. S. Pat. No. 3,440,986 which discloses a sewing machine housing having three flaps hinged at the lower part thereof and which may be pivoted upwardly into a closed position in which the outer edge of each of the flaps engages the bracket arm at the front, rear and end thereof. However, in the open position the flaps, which are permanently fixed by the hinges to the base of the housing, tend to interfere with and obstruct the freedom of movement of the operator. These flaps, which fold downwardly into engagement with a table or other support, provide an inconvenience to the operator when doing close detail work, especially when the machine is set upon a relatively large table. Moreover, because of the permanent fixture of the flaps to the housing a machine of the type disclosed in the aforesaid U. S. patent could not be readily installed into a sewing machine cabinet of the permanent type when this may be desirable.

SUMMARY OF THE INVENTION

The present invention provides the light weight portability required for today's market and overcomes the disadvantages of the prior art by providing a jacket of one piece construction which is adapted to cooperate with the housing of a light weight sewing machine to conceal and protect the sewing instrumentalities when the jacket is positioned in the stored condition.

It is the primary object of this invention to provide a carrying case for a light weight portable sewing machine.

It is another object of this invention to provide a portable sewing machine housing and a jacket which can be positioned relatively thereto in cooperating relationship for concealing the sewing instrumentalities and the work support.

It is a further object of this invention to provide a sewing machine which is easily converted from a working condition to a stored condition and vice versa.

It is a still further object of this invention to provide a jacket having a front panel, a rear panel and an end panel, the front and rear panels being spaced apart by the end panel at one end thereof and having free ends at the other end thereof, the dimension of the panels being such that the jacket may be positioned relatively to the sewing machine housing in abutting relationship with the bed, standard and bracket arm so as to conceal the sewing instrumentalities, the work support and the

work space between the bracket arm standard and base.

It is yet a still further object of this invention to provide a sewing machine housing and a removable jacket adapted to slide on slideways defined between the bracket arm and base of the sewing machine housing for positioning the jacket into abutting relationship with the housing in a stored position.

It is still yet another object of this invention is to provide a jacket adapted to cooperate with the housing of a light weight sewing machine in which the exterior surfaces of the jacket provide, with the external surfaces of the arm, standard and base of the sewing machine housing, a substantially continuous external surface.

Accordingly, the present invention provides a novel removable jacket adapted to cooperate in an installed position with a housing of a sewing machine to thereby conceal the sewing instrumentalities, and the sewing work area. The jacket comprises a front panel, a rear panel spaced from and interconnected at one end with one end of the front panel by an integral end panel. The other end of each of the front and rear panels is open and spaced one from the other. The housing includes a base and work support, a standard upstanding at one end of the base, a bracket arm extending from the upper end of the standard, overlaying the work support and terminating at a free end spaced above the work support. A slideway may be defined between the bracket arm and the base on each of the front and rear sides thereof for slidably receiving the front and rear panels respectively, so that the jacket may be slidably positioned in the housing with the edges of the jacket abutting respective edges of the base, bracket arm and standard. The exterior surfaces of the jacket are such that when in the installed position substantially smooth planar surfaces are provided between the exterior surfaces of the panels and the exterior surfaces of the bed, bracket arm and standard. Means for latching or locking the jacket in the installed position on the housing, and means for carrying the packaged sewing machine housing are provided. A further feature of the invention includes a storage chamber defining means within the jacket so that certain of the sewing machine accessories may be stored within the jacket when the jacket is in the installed position without the accessories or chamber interfering with the housing.

BRIEF DESCRIPTION OF THE DRAWINGS

The particular features and advantages of the invention as well as other objects will become apparent from the following description taken in connection with the accompanying drawings in which:

FIG. 1 is a perspective view of a first embodiment of the present invention showing the housing and jacket in the sewing or disassembled position;

FIG. 2 is a perspective view of the housing and jacket shown in FIG. 1 with the jacket in the installed or carrying position;

FIG. 3 is a cross sectional view taken substantially along line 3—3 of FIG. 2 with the sewing mechanism removed for purposes of clarity since any sewing mechanism may be installed within the disclosed housing;

FIG. 4 is a cross sectional view taken substantially along line 4—4 of FIG. 3;

FIG. 5 is a perspective view similar to FIG. 1 but illustrating another embodiment of the invention; and

FIG. 6 is a perspective view of the housing and jacket shown in FIG. 5 with the jacket in the installed or carrying position.

DESCRIPTION OF PREFERRED EMBODIMENTS

Referring now to the accompanying drawings wherein like reference numerals denote similar parts throughout the various views, there is disclosed a sewing machine housing generally designated 10, and a jacket generally designated 12, which is adapted to cooperate with the housing as hereinafter described, and which together provide a carrying case. The housing, which is preferably of a plastic molded construction, and which may be molded in two, three or more parts comprises a base or bed 14 having a standard 16 upstanding at one end thereof. A work support surface 18 forms the top surface of the base 14 and allows the material that is to be sewn to be manipulated thereon. Extending from the upper end of the standard 16 is a bracket arm 20 which overlays the work support surface and terminates in a head 22 spaced above the work support 18. A work space is thereby defined between the bracket arm 20 and the work support surface 18 between the free or head end of the housing and standard 16.

Within the head 22 of the bracket arm, mounted for endwise reciprocation, is a needle 24 which cooperates in a known manner with a loop taker (not shown) mounted within the base. Also mounted within the head of the bracket arm is a presser bar 26 having a presser foot 28 mounted on the free end thereof. The pressure foot is adapted to cooperate in the usual manner with feed teeth 30 at the top of a feed dog (not shown) which is mounted within the base and protrudes through slots in a throat plate 32 mounted on the work support to feed the work being sewn. A thread take up 34, for manipulating thread to the needle 24, is mounted within the head 22 of the bracket arm 20 and is connected to mechanism (not shown) for performing this well known function. Inasmuch as any conventional sewing mechanism can be adapted to fit within the housing 10, no such mechanism is shown in the drawings, since such mechanism is well disclosed in the art.

Pivotably secured by hinge members 36 and 37 to the bracket arm 20 is a cover member 38 which may be pivoted upwardly when the sewing machine is in use to disclose a control panel 40 forming a face of the bracket arm and which may support certain of the controls for the machine, e.g.; zigzag control, buttonholing mechanism, etc. The standard 16, in the preferred embodiments, includes a post 42 which is recessed at the front of the housing from the outer surfaces of the base and the standard. A stitch control handle 44 is provided within a slot 46 in the post 42 for varying, through conventional mechanism (not shown), the movement of the feed dog teeth 30, and therefore, the stitch length. The post 42 is recessed from the front of the standard and base so that it may provide sufficient clearance for the handle 44 when the jacket 12 is in the installed position. Pivotably mounted on the upper end of the bracket arm is a conventional carrying handle 48. The top surface of the bracket arm 20 includes a pair of spaced slots 49 and 50 so that the handle, when the sewing machine is in use, may be folded downwardly toward the rear of the machine without any portion thereof protruding above the top surface of the

bracket arm. Thus, when the cover member 38 is raised to expose the controls thereunder, there is no interference between the handle and the cover member.

The jacket 12 comprises three panel members, preferably of plastic and integrally molded as a unit. The front panel 52 is formed at one end with an end panel 54 which in turn is formed with a rear panel 56 at its other end. The front and rear panels 52 and 56 respectively, at the open or free ends thereof, are laterally spaced one from the other a distance substantially equal to the lateral width of the post 42. The size and shape of the front panel 52 conforms substantially to the opening defined between the bottom of the hinged cover member 38, the head end of the standard 16 at the location where the post 42 is recessed, and the top of the front surface of the base 14. The cover member 38 is here defined as, and will hereinafter be referred to in this embodiment as, the front of the bracket arm. The end panel 54 is shaped and sized to conform to the dimensions of a plane extending between the top of the free end surface of the base and the bottom of the bracket arm at the location at which the head 22 commences in a downwardly direction from the arm. Similarly, the shape and dimension of the rear panel 56 is such as to fill the gap defined between the bottom of the bracket arm, the top of the base, and the head of the standard at the rear of the housing.

Extending about the periphery of the work space is a substantially contiguous step recess 58. The recess, as shown in the drawings, is provided about the periphery of the work support from the front of the head end of the standard at 59 to the head end of the work support, thereafter continuing along the periphery of the work support at 60 from the front to the rear thereof and then extending along the rear at 61 toward the standard. The step recess at the standard end of the work support extends upwardly from the work support step recess along the head end periphery of the standard on both the front at 62 and the rear at 63 toward the bracket arm at which point the step recess extends about the lower periphery of the bracket arm along the front at 64 and rear thereof at 65 and along the head end at 66 at the line of downward commencement of the head. The function of this continuous step recess about the work space is to receive the outer or free edges of the jacket when the jacket is installed in the housing such that the bottom edge of the jacket registers with the step recesses 59, 60 and 61 of the base, the top edge of the jacket registers with the step recesses 64, 65 and 66 of the bracket arm, the edge of the front panel 52 registers with the recess 62 at the front of the standard, and the edge of the rear panel 56 registers with the step recess 63 at the rear of the standard. Inasmuch as a perfect fit between the jacket and the housing is substantially impossible to accomplish using reasonable manufacturing methods, a step recess 70 is provided about the entire peripheral edge of the jacket and another recess 72 is provided along the standard at the upper end thereof from the intersection of the standard recesses 62 and 63 and the respective bracket arm step recesses 64 and 65 toward the top surface of the bracket arm. This emphasizes the joints and tends to add aesthetic appeal to the carrying case; as such, it should not be construed as a limitation of this invention. It should be noted that the front step recess 59 of the base and the front step recess 64 of the bracket arm define a front slideway for receipt of the lower and

upper edges respectively of the front panel 52, and the rear step recess 61 of the base and the rear step recess 65 of the bracket arm define a rear slideway for receipt of the lower and upper edges respectively of the rear panel 56, so that the jacket may be slidably positioned in the housing.

At the free end of each of front and rear panels there is provided a latch member generally indicated as 74 and which comprises an exterior knob member 76 interconnected to a hook member 78 at the interior of the panel by a pin 80 which is pivotably mounted in the panel. A leaf spring (not shown) normally biases the knob and hook members downwardly. A slot 82 is provided in each standard step recess 62, 63 at a location to receive the hook member 78. After the jacket is slidably positioned in the slideways into substantially abutting relationship with the standard the knobs 76 are lifted against the action of the spring whereby the hook members are disposed within the slots 82 and when the knobs 76 are released the spring biases the hooks 78 into locking relationship with the slots 82.

In order to mount within the carrying case the sewing machine accessories, such as a foot controller, interchangeable cams for the zigzag mechanism, and the like, there is provided within the jacket a wall which defines with the interior surfaces of the panels a storage compartment generally indicated as 88. In the preferred embodiments, as illustrated in FIGS. 3, 4, this compartment comprises an internal wall 90 which preferably is molded integrally with the panels. As seen in FIG. 3 the wall 90 at its top edge abuts with and is preferably integral with the three jacket panels, and diverges from the inner surface of the panel walls at the bottom of the walls so as to be spaced from the inner surface of the panels as shown at 94 and 95. Preferably the wall 90 is formed with a first or front end member 96 formed integral with the panel 52 and a second or rear end member 97 formed integral with the panel 56. The wall 90 thus extends from the end member 96 along the front panel 52, continues along the end panel 54 and then along the rear panel 56 terminating in the end member 97. Of course, the bottom edge of the wall 90 is spaced substantially parallel to said panels thereby defining three pockets 98, 99 and 100 within which the accessories may be stored. An elastic belt (not shown) may extend at the bottom of at least the pockets 98 and 100 from the respective end members 96 and 97 to the interior wall of the panel 54, and may include a latch to secure the accessories in place so as not to fall out of the pockets when the jacket is in the installed position with the pockets opening downwardly. The elastic belt and latch is a common expedient in the arts and need not be explained further. It should be understood from the drawings that the storage chamber wall 90 is configured so that it does not interfere with any portion of the housing when the jacket is in the installed position.

The modified form of the invention shown in FIGS. 5 and 6 differs from the embodiment of FIGS. 1 through 4 only in that the jacket rather than the housing includes the hinged cover member. As illustrated in FIG. 5 the jacket 112 comprises a front panel 152, an end panel 154 and a rear panel 156 integrally molded as a unit. Two hinges 136 and 137 are conventionally secured to the front panel 152 adjacent to the upper edge and hingedly mount the control panel cover member 138. To install the jacket 112 on the housing the jacket is slidably positioned in the slideways defined be-

tween the front step recess 59 of the base and front step recess 64 of the bracket arm, and the rear step recess 61 of the base and the rear step recess 65 of the bracket arm, until guide pins 176 (only one of which is shown) engage in the slots 82. The member 138 includes a cut-out 178 which is adapted to engage a latch member 180 on the top of the bracket and thereby secure the member 138 and the jacket to the housing. In all other respects this embodiment is like the embodiment of FIGS. 1 through 4.

It is clearly illustrated in the drawings that the exterior surfaces of the jacket panels form with the adjacent exterior surfaces of the bracket arm, standard and bed in the installed position, substantially smooth planar surfaces which, except for manufacturing tolerances and the designed in step recesses 70 and 72 of the disclosed embodiment, form a substantially continuous exterior surface. Clearly, the panels each have an exterior surface at the respective abutting joints with the arm, standard and bed such that at the respective abutting edges the panels and the housing having substantially smooth planar surfaces. The upper edge of the jacket abuts the bracket arm at the front, end and rear thereof and is contoured to provide a substantially smooth planar surface. Similarly the bottom edge of the jacket abuts the base and the free or open ends of the front and rear panels abut the standard and provide substantially smooth planar surfaces therewith.

It should be clear that numerous alterations of the structure herein disclosed will suggest themselves to those skilled in the art. For example, the abutting edges of the jacket and housing may be not only smooth and planar but may also be continuous. All such modifications which do not depart from the spirit of the invention are intended to be included within the scope of the claims.

Having thus set forth the nature of the invention, what I claim herein is:

1. A sewing machine carrying case comprising, in combination, a sewing machine housing and a removable rigid jacket adapted to cooperate in an installed position with the housing to conceal the sewing instrumentalities; said housing including a base having a work-support; a standard upstanding at one end of the base; a bracket arm extending from the upper end of said standard and overlaying said work support defining a work space between said bracket arm and work support; said bracket arm terminating at a free end spaced above said work support; means on at least the work support at the front thereof defining a front slideway and means on the work support and the bracket arm at the rear thereof defining a rear slideway; said jacket comprising a unitary structure having a front panel, a rear panel, and an end panel integral with said front and rear panels; said rear panel being spaced from and interconnected at one end with one end of said front panel by said end panel; the other end of each of said front and rear panel being open and spaced from one from the other; said rear panel having upper and lower spaced apart edges slidably receivable in said rear slideway; said front panel having upper and lower spaced apart edges, said lower edge being received in said front slideway; the exterior surface of said panels being constructed such that when said jacket is in the installed position said work space is enclosed and substantially smooth planar surfaces are formed with the exterior surface of the front panel and the adjacent ex-

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terior surfaces of said base, arm and standard, and substantially smooth planar surfaces are formed with the exterior surface of said rear panel and the adjacent exterior surface of said base, arm and standard, and substantially smooth planar surfaces are formed with the exterior surface of said end panel and the adjacent exterior surface of said bracket arm and said base; and latch means for securing said jacket to said housing.

2. A sewing machine carrying case as set forth in claim 1 wherein said front slideway defining means comprises a step recess extending along the lower front periphery of the bracket arm from the front of the standard to the free end thereof, and a step recess extending along the front periphery of the work support from the front of the standard to the free end, and wherein said rear slideway defining means comprises a step recess extending along the lower rear periphery of the bracket arm from the rear of the standard to the free end thereof, and a step recess extending along the rear periphery of the work support from the rear of the standard to the free end.

3. A sewing machine carrying case as set forth in claim 2 wherein said latch means comprises a latch member secured to the open end of each of said front and rear panels; and a slot defined in the front and rear

free end facing surface of said standard at a location to receive the corresponding latch member when the jacket is in the installed position.

4. A sewing machine carrying case as set forth in claim 2 wherein said jacket includes means defining a storage chamber within said jacket, said chamber defining means comprising at least one of said panels, said chamber being located so as not to interfere with said housing when the jacket is in the installed position.

5. A sewing machine carrying case as set forth in claim 4 wherein said chamber defining means comprises said front, end and rear panels, a wall secured to and abutting one of the top and bottom of each said panel and spaced therefrom at the other of the top and bottom of each said panel, said wall having a leading edge and trailing edge, a front end member secured to and abutting each of said front panel and said leading edge, and a rear end member secured to and abutting each of said rear panel and said trailing edge.

6. A sewing machine carrying case as set forth in claim 1 wherein said jacket includes a bracket arm front cover member, and a hinge means for pivotably mounting said cover member to said front panel in juxtaposition with the upper edge thereof.

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