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Peets

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[54] **SEWING MACHINE CABINET**

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[52] **U.S. Cl.** **112/217.1**

[51] **Int. Cl.** **D05b 75/00**

[58] **Field of Search** 112/217.1, 258, 260

[56] **References Cited**

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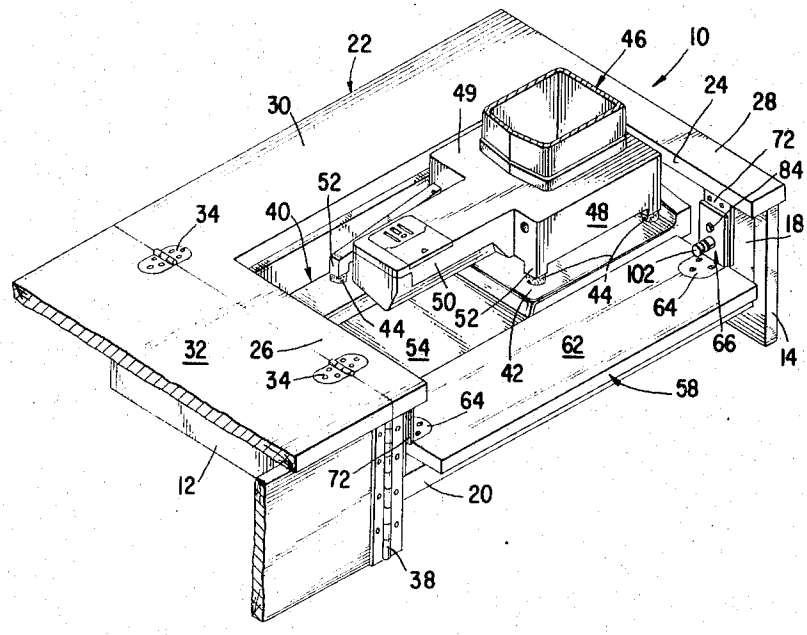
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[57] **ABSTRACT**

A sewing machine cabinet adapted for use with free arm type sewing machines having a sewing machine support platform including a recessed lower support surface. The cabinet includes a front rail pivotable 180 degrees between a flat bed position in which the top surface of the rail is coextensive with the top of the cabinet and a second position in which the bottom surface of the rail is coextensive with the lower work support surface. A pair of brackets are secured to opposite sides of the bottom surface of the rail and are journaled on studs supported on brackets on opposite sides of the cabinet. A spring biased plunger device is provided on at least one side for locking the rail in either the flat bed or cylinder bed position.

5 Claims, 3 Drawing Figures



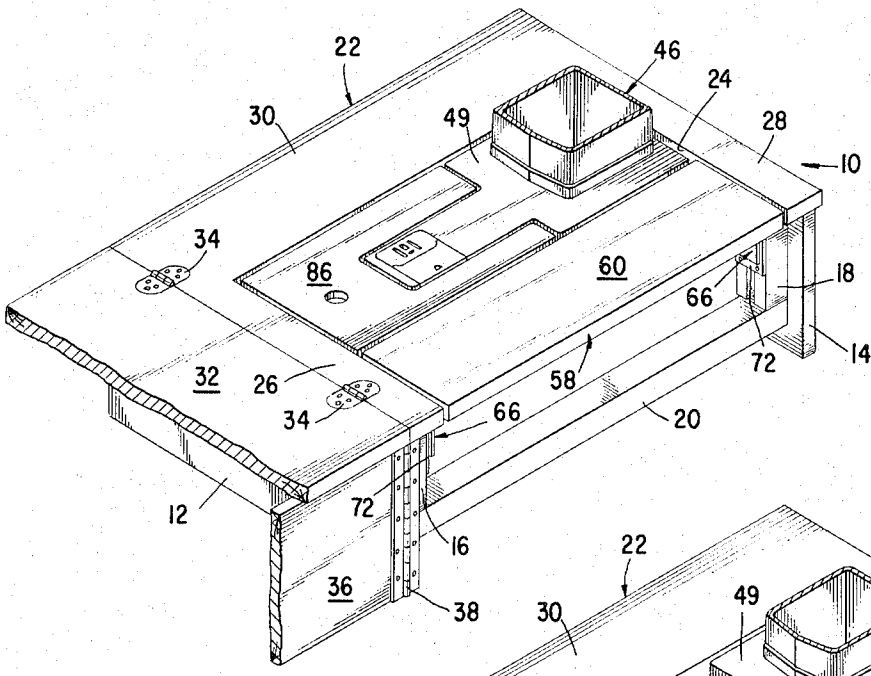


Fig. 1

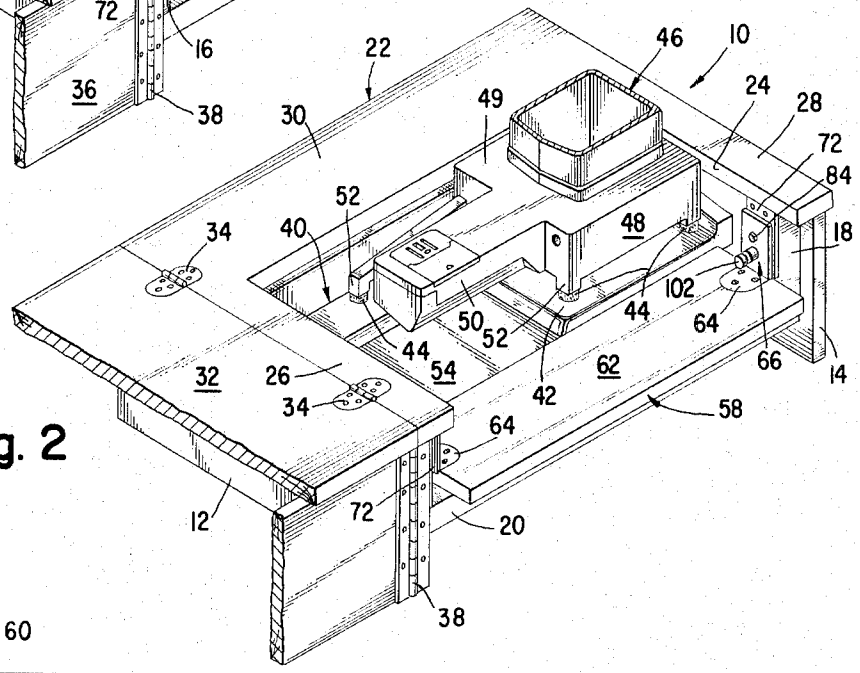


Fig. 2

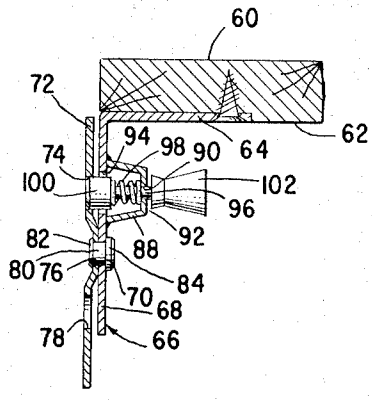


Fig. 3

SEWING MACHINE CABINET

BACKGROUND OF THE INVENTION

This invention relates to sewing machine cabinets, and more particularly to a cabinet capable of providing one level sewing in conjunction with a free arm type sewing machine in both a flat bed and cylinder bed mode of operation of the machine.

Sewing machines adapted for use in both a flat bed mode of operation adapted to support flat work panels and a cylinder bed mode of operation adapted to accommodate tubular work pieces have the obvious advantage of flexibility not found in a machine capable of sewing in only one of these modes. This type of sewing machine has generally been used by supporting it on a table, which may be convenient for tubular bed mode of operation, but requires a special bed extension when used in the flat bed mode. Beds of this type are shown in U.S. Pat. Nos. 3,188,993 and 3,344,762. However, even with the special bed extensions the work support surface of the sewing machine in the flat bed mode is of necessity a limited area, and it is inconvenient when so used. The problem with prior art cabinets for mounting sewing machines convertible between the flat bed and cylinder bed modes is that in order to convert the cylinder bed mode from flat bed mode when the top surface of the cabinet is coextensive with the sewing machine work surface, it is necessary to raise the sewing machine to the cylinder bed mode so that a tubular work piece may freely pass about the free end of the bed. The problem with moving the sewing machine is that the sewing level during cylinder bed differs from the sewing level during flat bed. Surveys have shown that a sewer is most confortable when the bed of the machine is located at a certain distance above the floor or above the level of the chair in which the operator sits. In the prior art designs, a cabinet in which the machine sat at this most convenient position during one of the modes compromised the convenience in the other mode. Thus, the prior art cabinets do not meet the optimum condition of sewing during both modes of operation of the machines.

SUMMARY OF THE INVENTION

The present invention overcomes these deficiencies of the prior art by providing a cabinet in which the sewing machine does not move when converting from flat bed to cylinder mode of operation. On the contrary, the present invention provides a cabinet in which the sewing machine rests on a support platform which is fixed during both the cylinder bed and flat bed mode of operation of the machine. The cabinet of the present invention has a pivotably mounted front rail pivotable from a first position in which the normally top surface of the rail is coextensive with the top of the cabinet and in conjunction with an insert provides the work surface during the flat bed mode of operation, and a second position in which the normally bottom surface of the rail is coextensive with a lower work support surface formed on the sewing machine support platform to provide a cylinder bed work surface.

Accordingly, it is a primary object of the present invention to provide, in a sewing machine cabinet, a novel and improved construction for converting a cabinet for use with a cylinder bed machine in both a cylinder bed and a flat bed mode of operation.

Another object of this invention is to provide in a sewing machine cabinet a front rail positioned between opposite sides of the cabinet and pivotably mounted to provide a work surface extension during both a flat bed and cylinder bed of operation.

A further object of this invention is the provision in a sewing machine cabinet of a front rail having first and second planar surfaces and pivotable from a first position where the first planar surface is coextensive with the top surface of the cabinet and a sewing machine mounted therein, and a second position disposed **180** degrees relative to the first position and where the second planar surface is coextensive with a lower work support surface formed on a sewing machine support platform mounted within the cabinet.

BRIEF DESCRIPTION OF THE DRAWINGS

The particular features and advantages of this 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, partly in section, of a preferred embodiment of the cabinet in the flat bed mode, illustrating a portion of a free arm or cylinder bed sewing machine mounted therein;

FIG. **2** is a perspective view of the cabinet of FIG. **1** but in the cylinder bed or free end mode; and

FIG. **3** is a cross sectional view, greatly enlarged, taken through the bracket on the right side of the cabinet, illustrated in FIG. **2.**

DESCRIPTION OF THE PREFERRED EMBODIMENT

Referring now to the accompanying drawings wherein like reference numerals denote similar parts throughout the several views, there is disclosed a preferred embodiment of a cabinet constructed in accordance with the present invention and designated generally as numeral **10.** The cabinet comprises a frame including a pair of opposite sides **12** and **14** secured to a rear panel (not shown). A pair of vertical posts **16** and **18** are conventionally secured to the inner walls of the sides and support a horizontal bar **20** to provide rigidity to the frame. Conventionally mounted on the tops of the sides and the rear panel is a top **22** having a cutout portion or opening **24** defined between side margins **26** and **28** and rear margin **30** of the top. A top flap **32** (only a portion of which is illustrated) may be pivotably mounted by conventional hinges **34** to the top **22** to provide an extended work surface during sewing and to provide an aesthetic cover for the cabinet when not in use for sewing. Likewise, a front door **36** may be provided which can be pivoted by a hinge **38** to one of the sides **12** to close the front of the cabinet during nonuse and to provide legroom within the cabinet for an operator during sewing.

As best illustrated in FIG. **2,** the cabinet includes a platform **40** having a sewing machine support surface **42** adapted to support feet **44** of a sewing machine **46.** The sewing machine may be a conventional free arm type machine having a bed **48** from whence a free arm **50** extends to one side. A sewing machine work surface **49** is formed on the top surface of the bed **48** and the arm **50.** Mounted within the free arm is a loop taker mechanism (not shown) which cooperates with the needle (also, not shown) in a conventional manner. Inasmuch as the sewing machine is conventional, only

those elements required for a clear understanding of the present invention are illustrated. The bed **48** is secured to the platform **40** by a conventional J-bolt (not shown) and rests on the platform on a plurality of legs **52** to which the feet **44** are secured. The platform **40** is provided with a work support surface **54** effective during cylinder bed or free arm operation and which may be recessed as illustrated, for purposes which will hereinafter become clear.

Positioned between the sides **12** and **14** of the cabinet is a front rail **58** having a normally top or first planar surface **60** (illustrated in FIG. **1**) in a normally bottom or second planar surface **62** (illustrated in FIG. **2**). Secured to the second surface **62** adjacent side is one leg **64** of a substantially L-shaped bracket **66.** As best seen in FIG. **3,** the other leg **68** of each bracket **66** includes a hole **70.** Secured to the inside wall of each side **12** and **14** is a second bracket **72** which includes three substantially vertical holes **74, 76,** and **78.** Mounted within the center hole **76** is a stud **80** which extends through the hole **70** in the bracket **66.** The hole **70** is slightly larger in diameter than that of the stud so that the brackets **66** are pivotably journaled on the studs. Each stud has heads **82** and **84** on the ends thereof to secure the brackets **66** and **72** together while allowing for relative turning.

The location of the axis of each stud **80** is such that the first surface of the rail **58** is coextensive with the surfaces of the top margins **26, 28** and **30,** and in conjunction with a substantially U-shaped insert **86** fitted about the free arm **50,** provides a large substantially continuous work surface for flat bed sewing. To obtain cylinder bed or free arm sewing the rail is pivoted **180** degrees about journals provided on the stud **80** and the brackets to the position shown in FIG. **2.** In this position the second surface **62** of the rail **58** forms a work surface extension of the surface **54** so that cylindrical work surfaces may be easily handled. Since one cabinet style will preferably be utilized with more than one model of the free arm sewing machines, and since the bed heights of different machines generally vary, interchangeable support platforms may be employed. In such case, the work support surface **54** may be recessed different amounts relative to the support portion **42,** so that the rail surfaces **60** and **62** will be coextensive with the respective sewing machine work surface **49** and platform support surface **54.**

In order to lock the rail in either the flat bed position of FIG. **1** or the free arm position of FIG. **2,** at least one of the brackets **66** preferably includes a hollow boss **88** having a hole **90** formed in its outer surface **92,** and an enlarged hole **94** formed in the bracket aligned with the hole **90.** The holes **90** and **94** are radially spaced from the center of the stud **80** a distance substantially equal to the spacing between the holes **76** and each of the holes **74** and **78** of the bracket **72,** so that the holes **90** and **94** may be selectively aligned with either of the holes **74** and **78.** Positioned within the boss **88** is a rod **96** about which is positioned a coil spring **98.** A peg **100,** of smaller diameter than the hole **94** but larger than holes **74** and **78** is secured to the inner rod **96.** The rod **96** extends out the surface **92** of the boss and has a knob **102** secured thereto. To lock the rail **58** in either the flat bed or free arm position the peg **100** is positioned within a respective one of the holes **74** or **78.** To release the rail for pivoting the same to the other position the knob **102** is pulled outwardly away from the bracket until the peg **100** is withdrawn from one of the holes, and when the rail is thereafter positioned in the other position the knob is released and the peg locks into the other locking hole.

Numerous alterations of the structure herein disclosed will suggest themselves to those skilled in the art. However, it is to be understood that the present disclosure relates to a preferred embodiment of the invention which is for purposes of illustration only and not to be construed as a limitation of the invention. All such modifications which do not depart from the spirit of the invention are intended to be included within the scope of the appended claims.

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

1. In a sewing machine cabinet, a frame including a top having an opening, and a pair of opposite sides supporting said top, a sewing machine support platform including a lower work support surface mounted within the opening below the surface of the top, a front rail having first and second planar surfaces positioned between said opposed sides, means for pivotably mounting said front rail to each of said sides for pivoting said rail from a first position where the first planar surface is coextensive with said top surface and a second position where the second planar surface is coextensive with said lower work support surface, and means for selectively locking said rail in each of said first and second positions.

2. In a sewing machine cabinet as recited in claim **1** wherein said means for pivotably mounting said front rail comprises a bracket secured to the rail adjacent each side, a pair of studs, means for securing a stud to each of said opposite sides, and means for journaling each bracket on a respective stud.

3. In a sewing machine cabinet as recited in claim **2** wherein each of said brackets is substantially L-shaped having one leg secured to the second planar surface of said rail, the other leg of each bracket including an aperture journaled on a respective stud.

4. In a sewing machine cabinet as recited in claim **1** wherein said second position of the rail is disposed at 180° relative to the first position.

5. In a sewing machine cabinet as recited in claim **4** wherein said sewing machine support platform includes a sewing machine support portion, said lower work support surface being recessed relative to said support portion.

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