April 15, 1947. J. W. FITE ET AL 2,419,064

SEWING MACHINE TABLE BOARD

Filed May 30, 1944 2 Sheets-Sheet 1

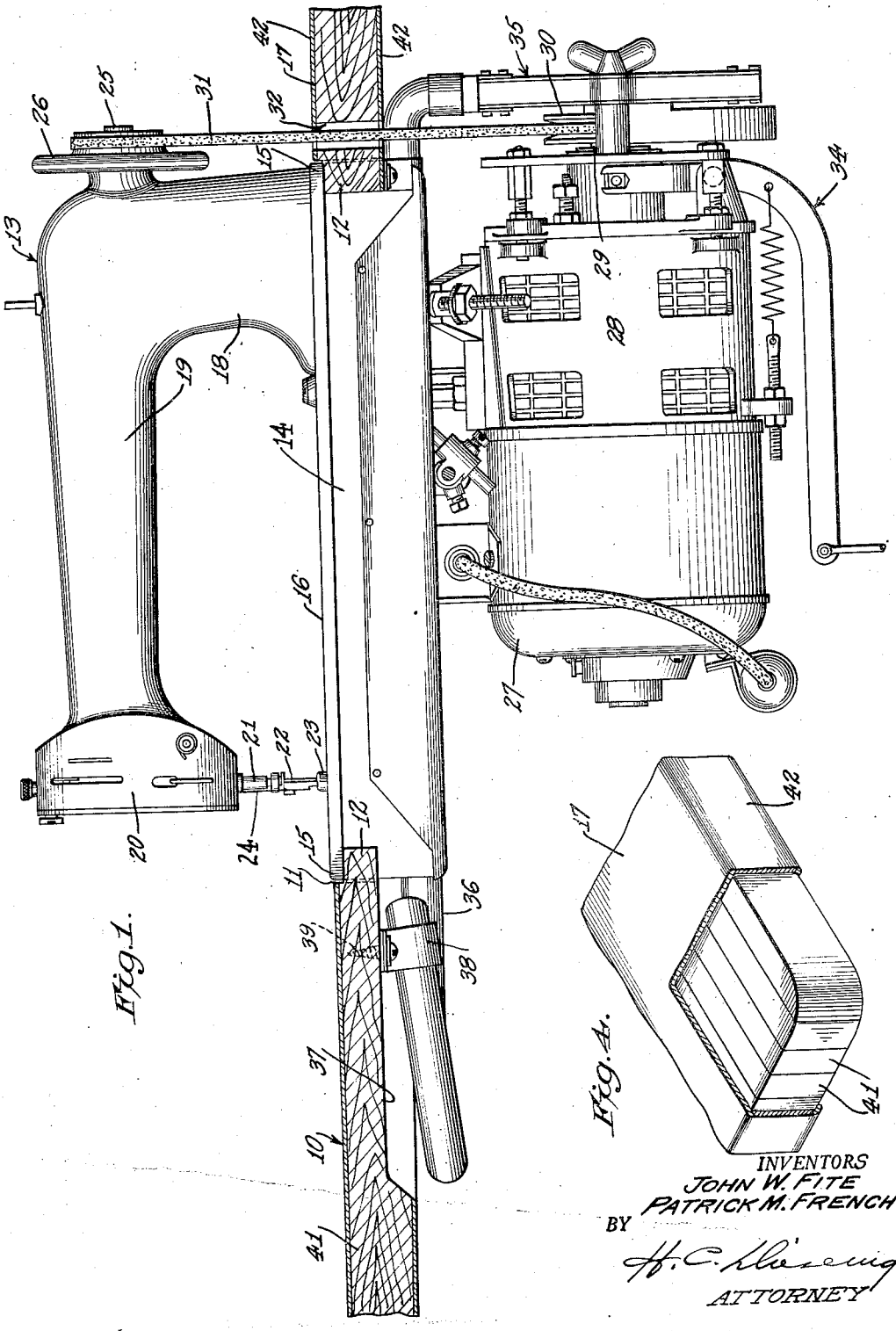


Fig. 1.

Fig. 4.

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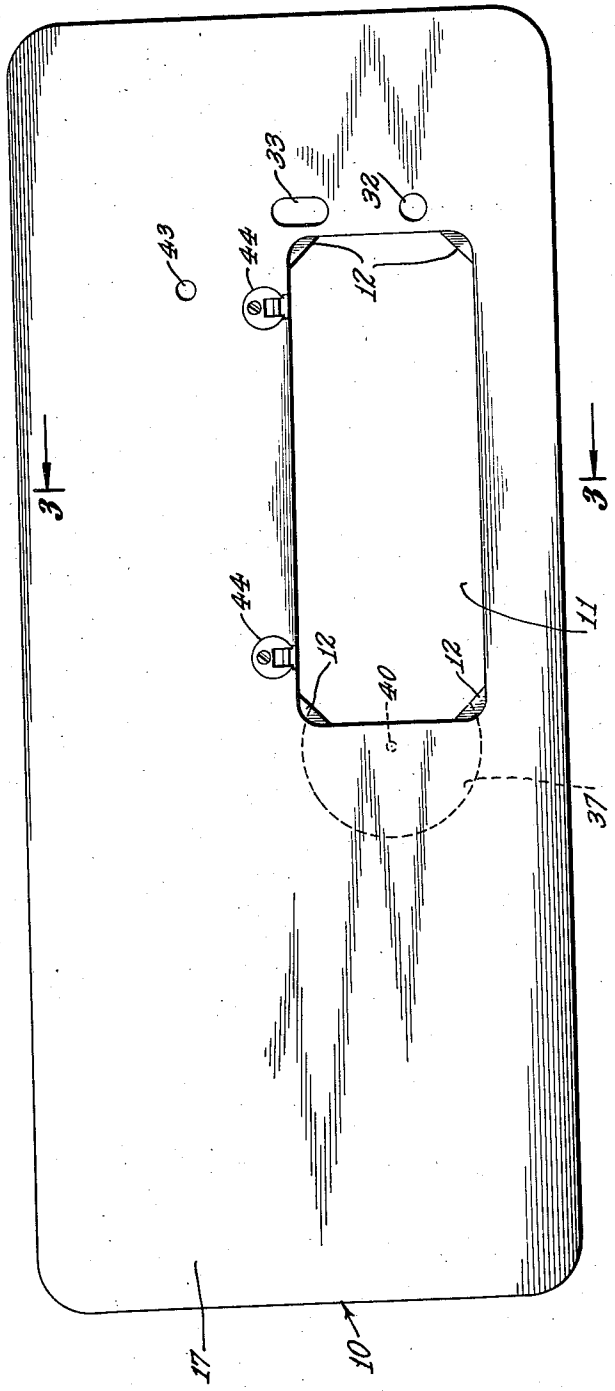


Fig. 2.

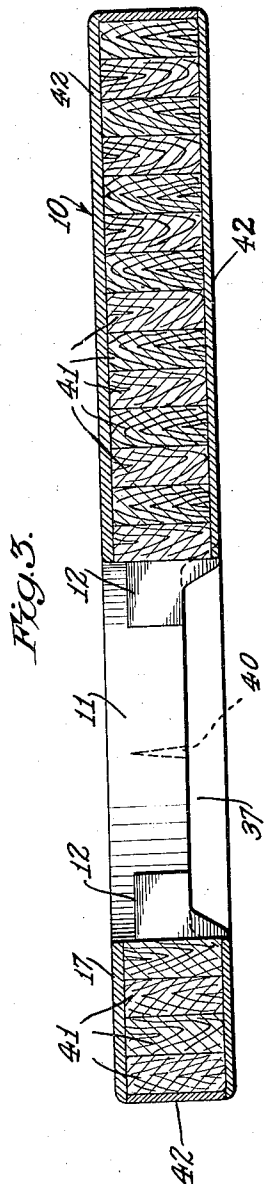


Fig. 3.

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SEWING MACHINE TABLE BOARD

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Application May 30, 1944, Serial No. 538,050

5 Claims. (Cl. 311—12)

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This invention relates to table boards and more particularly to a table board for sewing machines.

This invention has for one of its principal objects the provision of a table board having certain characteristics which make it exceptionally well suited for use with various types of sewing machines.

An important object of the invention is to provide a simple, rigid and relatively light-weight sewing machine table board that is considerably stronger and more durable than corresponding present day wood type table boards, thereby forming a more solid support for sewing machines.

Another object of the invention is to provide a table board for sewing machines, which board is relatively less expensive in initial and maintenance costs than usual all-wood boards now employed for the same purpose.

It is another object of this invention to provide a sewing machine table board possessing improved wearing properties over extended periods of use.

A further object of the invention is to provide a table board of the character indicated which is impervious to moisture and oil and which is not affected by climatic conditions or by changes in climatic conditions.

A still further object of the invention is to provide a sewing machine table board presenting working surfaces that will not cause snagging of material passing thereover and that is not disagreeable to the sense of touch, said working surfaces being smooth and readily cleanable.

Wooden table boards have been and still are being used quite extensively to support sewing machines and the materials that are sewn by said machines. These table boards are generally made of a hard wood, such as hard maple, especially when used in factories and other shops which manufacture clothing and the like on a commercial scale. Such boards, as a rule, have their working surfaces covered by a suitable paint or enamel. Experience has shown that it is extremely difficult to finish a hard wood table board so that it does not glare. Moreover, it has been ascertained that the usual finish, be it a paint, enamel or the like, soon wears off, leaving portions of the wood exposed which is highly undesirable for the reason that the wood will absorb any oil coming in contact therewith and stain or ruin delicate and/or expensive fabrics passing thereover. In order to properly maintain present day wooden table boards, it is necessary to refinish and/or repaint them periodically.

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Suitable woods for manufacturing hardwood table boards for sewing machines are becoming scarcer and more difficult to secure. Also, these woods are quite expensive as compared to softer woods which are readily available on the market. While hard woods are capable of withstanding a certain amount of abuse, they do oftentimes become roughened by sharp impacts and may in time present marred areas that will cause snagging of materials in the course of sewing operations. Additionally, hard wood table boards are relatively heavy as compared to softer wood boards and, further, possess only limited strength per unit cross-section area.

Sewing machine table boards fabricated in accordance with our instant invention possess a number of distinct advantages over corresponding wood-type table boards heretofore employed. The table board of our invention includes a base that may be made of one or more relatively inexpensive woods. It is to be understood that the term "wood," when used herein to denote the base of our table board, contemplates various solid and/or pressed woods. The base is preferably laminated in construction and consists of a plurality of strips of wood of suitable width and thickness, arranged in side abutting relation and glued together so as to form a planar unitary structure, having substantially parallel upper and under surfaces. A sheet of a suitable plastic is placed on at least the top surface and at times on all surfaces. We have found that a thermo setting phenolic resin plastic of the class comprising phenol-laminated products are especially well suited to accomplish the objects of this invention. These products are well known to the art and are made from phenol formaldehyde and natural or synthetic fibers including paper, wood, cotton, glass and asbestos, paper fibers being preferred and recommended. One plastic of this class which has been used with highly satisfactory results is known to the industry under the tradename, "Formica," and is manufactured by the Formica Insulation Company, having an office at Cincinnati, Ohio. The plastic is manufactured in sheet form. A sheet of the plastic material is placed upon the surface to be covered or veneered with a film of a suitable cold glue interposed therebetween. Pressure is applied to the plastic and the wood base for a sufficient period of time to obtain proper adherence between the materials. Necessary openings through the plastic and the base are provided to receive the sewing machine and/or belting or other items of equipment associated with the sewing machine.

All exposed wood surfaces are coated with an oil impervious material, aluminum paint being recommended. All joints in the plastic and material are made fluid-tight so as to prevent oil seepage to the wood portions of the completed board.

The plastic surface or surfaces of our table boards may be of any desired color and present a smooth, satiny finish of a character which minimizes light reflection and attendant glare. The danger of snagging fabrics passing over our table boards is completely eliminated. We find that boards constructed in accordance with our invention are very rigid and are stronger per unit area than the usual types of wood table boards.

One of the outstanding advantages attainable by the practice of our invention resides in the fact that these table boards are fully impervious to moisture and oil and additionally are not affected by climatic conditions or by sudden changes in climatic conditions. The possibility of warpage is obviated and the danger of the table board's becoming stained or impregnated with highly objectionable oil is fully eliminated.

The wearing qualities of our table boards are excellent. Moreover, neither the degree of smoothness nor the color of the finish is affected by wear, the plastic continuing to be substantially glare-free without regard to the extent of the wear.

We have found that our table boards for sewing machines are not unpleasant to the touch, and further, that the same are resistant to heat such as that occasioned by placing lighted cigarettes or cigars thereon.

The foregoing as well as other objects and advantages flowing from the practice of this invention will be readily apparent to persons skilled in the art by reference to the following description and annexed drawings, which respectively illustrate and described preferred embodiments of the invention, and wherein

Figure 1 is an elevation view partly in cross-section and illustrating a sewing machine and associated mechanisms mounted on a table board constructed in accordance with this invention;

Figure 2 is a plan view of one form of the table board of this invention;

Figure 3 is an enlarged vertical cross-section view of the table board of Figure 2 taken along line 3—3; and

Figure 4 is an isometric view of a corner of the table board, in enlargement, with parts broken away.

Referring now to the drawings, the invention has been illustrated as employed with a sewing machine and auxiliary equipment of the type disclosed in N. V. Christensen et al. Patent 2,400,741, entitled "Sewing machine," granted May 21, 1946. Our table board is generally denoted by numeral 10 and is provided with a rectangular opening 11 extending therethrough and having a recess or ledge 12 formed in each corner. The sewing machine represented by numeral 13 includes a combined base and housing 14 that has an integral flange 15 at each end. The base is adapted to be received in opening 11 in a manner that flanges 15 rest on ledges 12 so that the upper surface 16 of the base is substantially flush with upper surface 17 of the table board. Vertical standard 18 of the sewing machine supports an over-hanging arm 19 that carries a needle head 20 at its free end. A needle bar 21, vertically reciprocable in head 20, extends downwardly of said head and carries at its lower end a needle 22. A presser foot 23 of suitable construction is mounted at the lower end of a presser bar 24. A shaft 25 for actuating the needle bar is housed within over-hanging arm 19 and has a combined hand-wheel and pulley 26 secured thereto.

For the purpose of driving the sewing machine there may be provided beneath base 14 an electric motor 27 having associated therewith a power transmitting clutch mechanism 28 which may suitably be of the type disclosed in the above identified Christensen et al. patent. A shaft 29, adapted to be rotated through the co-action of motor 27 and clutch mechanism 28, carries a drive pulley 30 that is rotatable therewith. A spliced type belt 31 is employed to transmit rotational energy developed in pulley 30 to combined hand-wheel and pulley 26 to thereby rotate shaft 25. It will be noted that belt 31 passes over hand-wheel and pulley 26, through an opening 32 in board 10, under pulley 30 and then through a slot 33 in board 10. Means for actuating the clutch mechanism and thereby place the sewing machine in and out of service, as desired, is generally indicated by numeral 34 and is illustrated and described in detail in the aforementioned patent of Christensen et al. A blower and associated equipment for generating and transmitting a stream of air to the rotary hook (not shown) of the sewing machine is generally represented by numeral 35 and includes a conduit 36 that may be affixed in a recess 37 in the underside of the table board by a clamp 38 and a screw 39. The opening formed by screw 39 is indicated at 40 in Figure 2. In cases where conduit 36 does not terminate in recess 37, it is still generally desirable to provide such a recess in the board. A recess of this character permits an operator to gain ready access to the bobbin from the underside of the table board when, for example, the sewing machine is of the horizontal hook lock-stitch type.

Turning next particularly to Figures 2, 3 and 4 for details of construction of table board 10, it will be observed that the same includes a plurality of lengths of wood 41 that are preferably rectangular in cross-section and that are disposed in side abutting relation and glued or otherwise joined together to form a unitary wood base structure. At the time the base is fabricated, it is planed or finished in any other manner known to the art so that the upper and lower surfaces of each length of wood are coplanar, thereby presenting planar upper and lower surfaces in the base. The wood, or woods, employed in constructing the base and the dimensions of the individual lengths of the same will depend largely upon the desired rigidity and strength in the finished table board. It appears sufficient to point out that a relatively inexpensive, strong, light-weight base may be obtained by the form of construction indicated above.

A sheath 42 of plastic material of the character indicated earlier herein is applied to at least the entire upper surface of the base. It is preferred and recommended, however, that the plastic material be applied to the peripheral edges and under surface of the base, as well as to the upper surface for best results and maximum protection. As is well known to those engaged in the sewing machine art, oil for lubricating the driving mechanism that is suspended below the table board may be splattered on the under surface of the table. This oil tends to spread and migrate to the edges and top of the board with attendant difficulties. Oily de-

posits on the plastic material of this invention may, of course, be readily and completely removed. Then again, sharp impacts on the under surface of an exposed or unprotected wood base in the course of mounting or repairing the equipment disposed therebelow, may and oftentimes does damage the base. By providing a sheath of the plastic material set forth herein, which sheath is coextensive with the top, bottom and edge surfaces of the wood base, as depicted in the drawings, the many difficulties experienced in the past are obviated.

The plastics are manufactured in sheet form of desired thickness and applied and caused to adhere to any surface of the wood base by the use of a suitable adhesive, of which the well known cold glue, generally employed for similar purposes, is recommended. A coating of the adhesive is placed between the contacting surfaces of the sheath of plastic material and of the wood base. Pressure is applied to the sheath material and the wood base for a sufficient time to obtain proper adherence between the materials. All joints formed between adjacent sections or sheets of the sheath are made fluid-tight to prevent oil and the like from passing therethrough and coming in contact with the wood base. This is accomplished by placing a suitable filler or like material at and along such joints whereby an effective seal is obtained.

Necessary openings extending through the wood base and the sheath of plastic material are provided in the finished table board. The table board depicted in Figure 2 is provided with a rectangular opening 11 for reception of the sewing machine base as explained earlier. Opening 32 and slot 33 accommodate the belt, while opening 43 is adapted to receive control devices used with the sewing machine. It will be noted that the table board of Figure 2 is provided with a pair of insert members 44 forming a part of hinges that are coupled to the sewing machine base in a manner not shown.

As has been set forth above the sheath of plastic material is applied to at least the entire upper surface of the wood base. The sheath may, if desired, be made to cover the edges and/or under surface of the wood base. All exposed wood surfaces of the final table board are coated with a suitable oil impervious substance of which aluminum paint has been found to be entirely satisfactory.

While the foregoing description has been directed to a table board having an opening 11 adapted to receive the base of a sewing machine, it will be apparent that our table board may have this opening as well as certain other openings omitted when employed with various other types of sewing machines including those adapted to be positioned on top of a table board.

From the foregoing description it is believed that the construction of the table board of this invention will be readily understood by persons skilled in the art. It is to be borne in mind, however, that various changes in the construction herein disclosed may be made without departing from the spirit of the invention or the scope of the subjoined claims.

We claim:

1. A table board for a sewing machine comprising a wood base having a substantially planar upper surface, a sheath of a plastic material coextensive with and secured in adhering relation to the upper surface of the base, at least one continuous opening extending through the base and the sheath for receiving part of the sewing machine, and a coating of an oil impervious substance on the portions of the base that are free of the plastic material.

2. A table board for a sewing machine comprising a wood base having a substantially planar upper surface, a sheath of a thermo setting plastic material comprising a phenol-laminated product, said sheath being coextensive with and secured in adhering relation to the upper surface of the base, at least one continuous opening extending through the base and the sheath for receiving part of the sewing machine, and a coating of an oil impervious substance comprising aluminum paint on the portions of the base that are free of the plastic material.

3. A table board for a sewing machine comprising a wood base having a peripheral surface and substantially planar and parallel top and bottom surfaces, a sheath of a thermo setting plastic material coextensive with and secured in adhering relation to said surfaces of the base, at least one continuous opening extending through the sheath and base for receiving part of the sewing machine, and a coating of an oil impervious substance on the portion of the base defining said opening.

4. A table board for a sewing machine comprising a plurality of lengths of wood disposed in side abutting relation and joined together to form a unitary base structure, the upper surfaces of said lengths of wood being substantially coplanar and constituting the upper surface of the base, a sheath of thermo setting plastic material comprising a phenol-laminated product, said sheath being coextensive with and secured in adhering relation to at least the upper surface of the base, at least one continuous opening extending through the base and the sheath for receiving part of the sewing machine, and a coating of an oil impervious substance comprising aluminum paint on the portions of the base that are free of the plastic material.

5. A table board for a sewing machine comprising a plurality of lengths of wood disposed in side abutting relation and joined together to form a unitary base structure having a peripheral surface and upper and lower surfaces that are substantially planar and parallel, a sheath of thermo setting plastic material coextensive with and secured in adhering relation to said surfaces of the base, at least one continuous opening extending through the sheath and base for receiving part of the sewing machine, and a coating of an oil impervious substance on the portion of the base defining said opening.

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REFERENCES CITED

The following references are of record in the file of this patent:

UNITED STATES PATENTS

Number	Name	Date
2,249,786	Leiman	Dec. 11, 1917
1,779,426	Frederick	Oct. 28, 1930
2,220,868	Stein	Nov. 5, 1940
2,277,752	Frey	Mar. 31, 1942
1,865,011	Hupp	June 28, 1932

FOREIGN PATENTS

Number	Country	Date
21,988	British	Nov. 4, 1914