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B. T. ENDLICH
PATTERN TRACING BOARD

2,652,267

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Fig. 1.

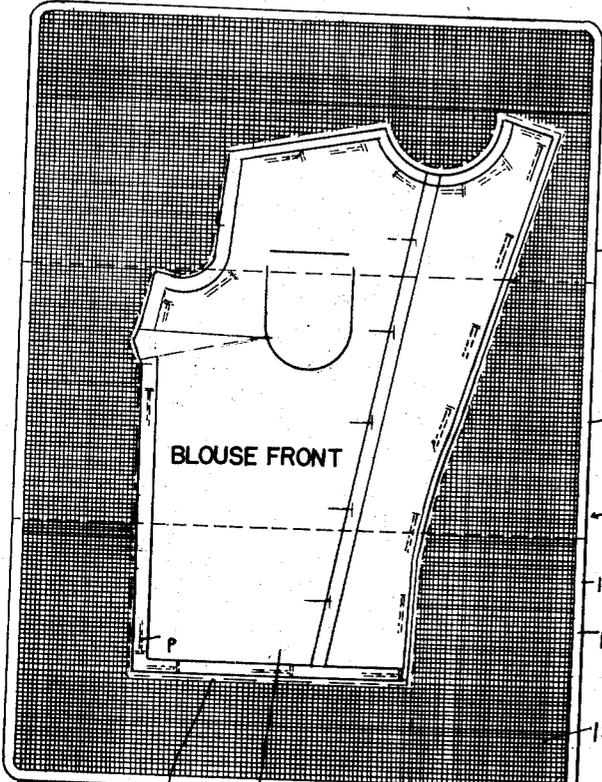


Fig. 5. Fig. 6.

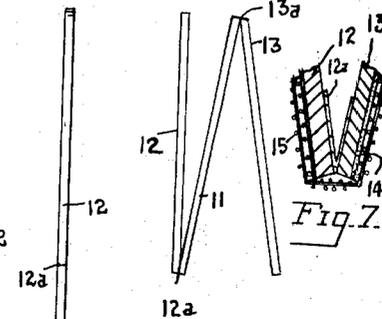


Fig. 12.

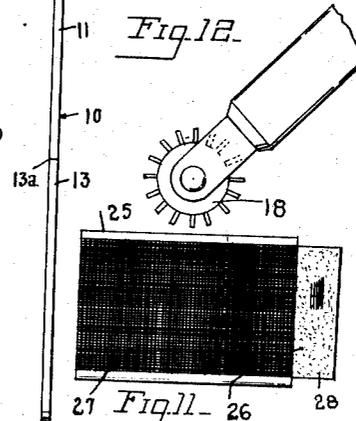


Fig. 2.

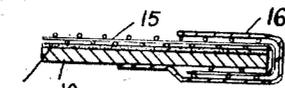
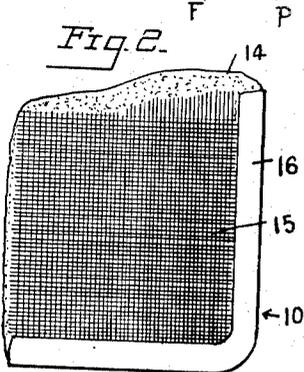


Fig. 3.

Fig. 4.



Fig. 10.

Fig. 14.

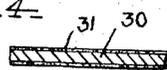


Fig. 8.

Fig. 15.

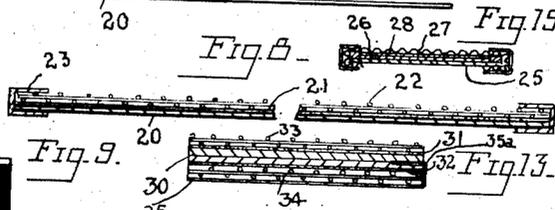
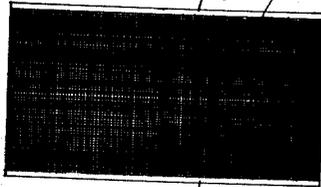


Fig. 9.

Fig. 13.



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2,652,267

PATTERN TRACING BOARD

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3 Claims. (Cl. 282—28)

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This invention relates to an improved board means for accurately tracing sewing lines and assembling details from garment, millinery or other clothes making patterns to the goods or fabrics used for making the garment or other product so that errors in such tracing may be avoided, the thread and needle operations now required for marking these sewing and assembling details dispensed with, and providing inexperienced workers with a simple and accurate means for controlling the transfer of the sewing and assembling lines from a pattern to the fabric or goods used.

Another object of the invention is to provide a pattern tracing board with a marking surface having loosely attached chalk or similar marking substance and an open mesh material disposed against this chalk charged surface so that no transfer of the chalk to any fabric or goods will take place when the sections of the garment are laid on the board against the mesh material, but will take place when a marking wheel or similar tracing tool is pressed against the pattern attached to the pattern cut sections of fabric or goods disposed on the mesh material and the sewing and assembling lines of the pattern traced by the wheel or tool will be reproduced upon the bottom side of the fabric or goods.

A further object of the invention is the provision of a board with tracing or marking areas charged with differently colored marking chalk so that the garment maker or other person using the tracing or marking board may use either a white chalk marking surface or a red or brightly colored marking surface.

With the above and other objects in view the invention comprises certain new and useful constructions and arrangements of parts, clearly described in the following specification and fully illustrated in the drawings, in which:

Fig. 1 is a plan view showing the pattern tracing or marking board in open work position and a pattern disposed thereon.

Fig. 2 is a fragmentary detail plan view showing the surface protecting open mesh material or gauze indicating a workable type of open mesh material.

Fig. 3 is an enlarged sectional view thereof.

Fig. 4 is a sectional view of the base board showing the chalk charged surface thereof, the mesh material being omitted.

Fig. 5 is an edge view of the board in open position.

Fig. 6 is an edge view showing the board partly folded.

Fig. 7 is a fragmentary sectional view showing a hinge joint of the folding board.

Fig. 8 is a sectional view of a flexible sheet providing a thin pattern tracing or marking means.

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Fig. 9 is a plan view of the flexible sheet shown on a reduced scale.

Fig. 10 is an edge view showing the sheet partly rolled.

Fig. 11 is a plan view of a tracing or marking board having a detachable section carrying a differently colored chalk marking surface.

Fig. 12 is a side view of a pattern transfer or tracing tool for use with the improved pattern tracing or marking board.

Fig. 13 is a detail sectional view showing a tracing or transfer marking board having marking surfaces on opposite sides thereof of different colors and a protecting sheet foldable to cover either marking surface.

Fig. 14 is a detail sectional view of a board having its opposite surfaces charged with a loose chalk marking substance.

Fig. 15 is a cross sectional view of Fig. 11.

Referring to the drawings which illustrate the practical embodiment of the invention, 10 designates a board constructed with a central or intermediate section 11, and outer sections 12 and 13, which are connected to the opposite sides of the central section 11, by means of flexible paper, cloth or leather hinges 12a and 13a.

Each of the sections of the board 10 is constructed of flat material having a working side or face which is absorbent. On this working face a layer of marking substance 14 is evenly laid by spraying, by painting with brush, by screening or by roller or other action.

The marking substance or material 14 may be composed of finely powdered chalk or calomine and a binder or sizing adhesive, like casein glue or other similar material, proportioned so that the substance 14 will form a layer of chalk or marking particles which will not separate from the surface of the board by gravity, but which will be detached in part only when line pressure is placed on the material disposed against the surface marking substance 14.

To prevent accidental transfer of the marking substance 14 to any fabric or garment sections disposed against the board, a sheet 15 of open mesh material or gauze is placed over and against the marking substance. Only the outer marginal edge portions of the gauze sheet 15 are secured to the board. This is done by means of a U-shaped binding strip 16 which extends along the side and end edges of the board 10, as shown in Fig. 1, and across the hinge joints between the sections thereof.

It is desirable that the gauze or open mesh sheet 15 be secured under approximately equal tension so that its threads will not drag across the marking face of the board 10 when engaged or subjected to the pressure of the tracing or marking tool used. For this purpose one side of the gauze or open mesh sheet 15 is first se-

cured, as described, to one edge of the board 10, then the opposite side of the gauze or open mesh sheet is secured to the board, then one end of the gauze sheet is secured to the board and then the other end is secured thereto.

The binding strip 15, which is coated with a suitable adhesive, is attached to the marginal edges of the gauze or open mesh sheet 15, after these marginal edges have been folded around the marginal edges of the board 10, as indicated in Fig. 8, and is then bonded directly to the back of the board 10 inwardly of the folded marginal edges of the gauze or open mesh sheet.

The pattern selected is then placed against the length of fabric or goods to be used in making the garment and the pattern pinned along its outer edges by means of pins *p*, or similar fasteners, to the length of fabric or yard goods. The fabric or yard goods is then cut out to conform to the outer contour or outline of the pattern.

The board is then placed in open position, as shown in Fig. 1, on a table or other work support with the marking surfaces thereof in upper position.

The fabric *F*, with the pattern *P* still pinned or fastened to the fabric, is then placed in direct contact with the gauze or open mesh sheet 15 which spaces it out of direct contact with the marking surface of the board 10. The fabric *F* and the pattern *P* should lie as flat as possible so that no wrinkles will be present.

The sewing lines and assembling details or other interlineations of the pattern may then be traced by placing a tracing or other toothed marking wheel of conventional construction, as indicated in Fig. 12, directed in a rolling action over the sewing, tucking, cutting, and other assembling control lines or points of the pattern, or by using a pencil or pointed stylus, using sufficient manual pressure to cause the fabric or goods to engage the marking face of the board 10 through the threads or open spaces of the gauze or open mesh sheet 15. In this way all sewing lines and assembling points of the pattern may be reproduced on the bottom side of the fabric *F* which is attached by the pins *p* to the pattern *P*. When line pressure is applied by a toothed wheel or stylus to the pattern, parallel to or over the interlinear lines or sewing and assembling points of the pattern, the fabric *F* is forced into physical contact with the marking substance of the upper surface of the board 10 causing the underside of the fabric or goods to be marked with grains of the marking substance in a series of dots or a series of short dashes, depending on whether a marking wheel or stylus is used.

When all of the sewing and assembling lines and control points of the pattern have been transferred to the fabric or goods the underside of the fabric or goods will correspond in every detail to the information and sewing and assembling lines supplied by the pattern.

When it is desired to simultaneously mark two sections of a garment, as for the right and left sides of a dress, skirt, blouse, coat, etc., two lengths of the fabric or goods are attached by pins to the pattern and likewise cut out along the contour of the pattern. The outermost piece of fabric is then placed against the gauze sheet 15 with the pattern uppermost. The sewing lines and assembling details of the pattern are then transferred to the lowermost section of fabric so that it fully corresponds with the show-

ing on the pattern. The pattern is then separated from the two garment sections and the holding pins are used to retain these two fabric pieces in proper relation to each other. The marked section is then placed uppermost and the unmarked section placed in direct contact with the gauze or open mesh material. The marking wheel or stylus is applied in line pressure against the lines and control points previously traced and transferred from the pattern to the first marked section. When this retracing and transfer of the marked lines and control points of the marked fabric to the unmarked fabric is complete the two sections of the garment will have been accurately and completely traced or transferred and will correspond to the single pattern and will be ready for sewing into the required garment.

It is found that open mesh material having mesh openings of about 900 to the square inch, or less, will give satisfactory service. I do not limit myself to the type open mesh fabric or material used. It is understood that any type of fabric, textile or wire may be used and this includes cotton, linen, nylon, rayon, plastic, silk or paper woven material.

The board 10 folds so that the marking faces of the sections 11 and 12 will fold to outer positions, relative to each other, and the marking faces of the sections 11 and 13 are disposed in confronting relations to each other.

The use of this improved pattern tracing or marking board requires, absolutely, that the marking substance remain stable under all weather and service conditions and to separate from the board only when line pressure is applied against the marking substance. The foraminous sheet 15 normally separates the fabric or pattern from the marking surface and the grains of this marking substance are only transferred to the fabric when sufficient line or point pressure is applied to the fabric or thin sheet material, so that grains of the marking substance will be detached from the board by frictional pressure.

By experiment I have established that a stable marking surface may be obtained which will not flake or peel and which will retain uniform surface density for continued tracing of pattern lines upon fabric pieces. Unless there is this stability against flaking and peeling and consequent loss of marking capacity, any tracing or marking board designed for this service will be commercially and practicably useless.

Moreover, it is important that the grains of the marking substance transferred by this line pressure to the garment sections be easily removed from the fabric or from the garment after the sewing and assembling lines have served their purpose and the garment completed. If the marking substance contains any grease or wax the transferred grains will have a strong binding effect with the fabric and will resist removal by brushing. The use of wax charged papers for making colored lines on fabric pieces now leads to many objections against their use in garment making. The wax charged particles tenaciously adhere to the fibres of the fabric and cannot be removed by brushing and also resist removal by washing and by most solvents. The use of solvents is not practicable on many wash fabrics and on starched and ironed garments, and in any case breaks down the finish of the fabric. When such particles are red in color they become offensive to the eye and in all cases mar the appearance of the finished garment.

I have discovered by using plaster of Paris, chalk or calomine, finely ground, mixed with from three to five percent of casein glue, in finely powdered condition, or an equivalent animal vegetable glue or adhesive that a base is provided which, when combined with a correct amount of water, will provide a mixture which can be coated on the pattern tracing or marking board. To insure the best results the upper surface of the work board 10 should be absorbent, and the marking mixture then evenly spread upon the absorbent upper surface of the board by using a fine silk or other screen and a roller or brush for applying the marking substance through the screen. Air spraying may also be used. The coating is sufficient to fill the surface pores of the absorbent side of the work board 10 and to provide a thin layer of loosely adherent grains of the marking substance, which will be detached when line or point pressure is applied to a receiving fabric placed close to the board, leaving enough marking material remaining to permit the operation being repeated a considerable number of times over the same area of distribution or transfer.

The invention may also be applied to a flexible sheet, thin enough to be placed over and on the fabric with the marking face of the flexible sheet in contact with the fabric, when subjected to line or point pressure, but normally spaced by the protective sheet of fabric screen material or the foraminous sheet. In Figs. 8, 9 and 10 I show such a flexible marking sheet, indicated by the reference 20. On this tracing or marking sheet the marking substance of finely powdered and loosely adherent chalk 21 is deposited, as previously described. Over this marking surface a sheet of foraminous material, as gauze or screen, is secured by its outer edges, so that the major portion of the area of the protecting sheet 22 is relatively loose, being wholly unattached to the sheet 20. The pattern tissue is placed against the negative side of the sheet 20 and the positive side or the marking surface 21 is disposed against the upper side of the fabric, laid on a table or other flat surface, and then marking is made by a stylus or toothed wheel, as previously described.

In Fig. 11 I show a board 25, having a section 26, slidable endwise under the screen 27. The upper surface of the board 25 is provided with a white chalk marking surface, and the upper surface of the sliding section 26 is provided with a red chalk marking substance 28, or any other suitable contrasting color.

In Fig. 13 I show a board 30, having a marking substance 31 of one color on one side thereof and a marking substance 32 of another color on the opposite side thereof. A screen or open mesh fabric 33 covers the surface 31, and another screen 34 covers the surface 32. A flexible paper or fabric sheet 35 is attached at 35a to one side of the board, so that it can be disposed over either marking surface 31 or 32, when the board is inverted. In the showing of Fig. 13 this protective sheet is shown disposed under the surface 32, and when the surface 32 would be placed uppermost this protective sheet would be disposed over the surface 31.

My invention provides practical means for accurately tracing and transferring to garment fabrics the sewing and other assembling details and lines of patterns, so that garments of every description can be made by inexperienced persons and which will correctly follow the styling planned by the original designers and producers of the patterns.

My invention also provides practicable means for dispensing with the operation of stitching tailor's tack loops of thread through fabrics to establish the sewing lines and assembling details, and by providing for accurate tracing of pattern lines and points makes it possible for the garment maker to sew straight or correctly curved stitching lines. Time, labor and material are thus saved and an incentive is provided for making clothes at home because of the certainty that acceptable garments can be made by inexperienced persons using my invention.

It is understood that another base for the marking substance other than here given may be used, provided that this marking material is combined with an absorbent board to provide a loosely adherent marking surfacing material, which will remain stable and resist accidental separation of the grains of the marking material and to all transfer thereof except only by line or point pressure on fabrics placed against this material or substance.

Having described the invention, I claim as new:

1. A pattern tracing device comprising a rigid flat member having an absorbent surface, a layer of marking material applied to said absorbent surface and dried in situ, and a sheet of thin foraminous material stretched over said marking layer and supported at its edges upon the flat member so that said foraminous sheet, inwardly of its edges, is wholly free from attachment to said flat member, said foraminous material providing means for spacing the fabric to be marked from the marking layer, yet allowing the fabric to be forced by physical contact to engage the marking layer through the interstices of the foraminous sheet, whereupon the marking material will be detached from the layer and transferred to the fabric by physical pressure, the marking layer consisting of a finely grained powdered substance mixed with from 3 to 5% of a water soluble binder in sufficient water to form a slurry, which, after application to and drying on the absorbent surface, will bond thereto and provide a loosely coherent layer which is stable against flaking or peeling under normal handling conditions of the device and which marking layer substance can be readily removed from the marked fabric by brushing after such marking has served its intended purpose.

2. A pattern tracing device according to claim 1 wherein said finely grained powdered substance is chalk.

3. A pattern tracing device according to claim 1 wherein said finely grained powdered substance is plaster of Paris.

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