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Warzecha

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[54] SEAMSTRESS PIN

[76] Inventor: **James J. Warzecha,** 405 4th Ave., N.E., St. Cloud, Minn.

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[52] **U.S. Cl.** ..... **24/150 DP**
[51] **Int. Cl.** **A44b 9/02**
[58] **Field of Search** ..... 24/150 P, 150 DP, 24/150 A, 137, 138

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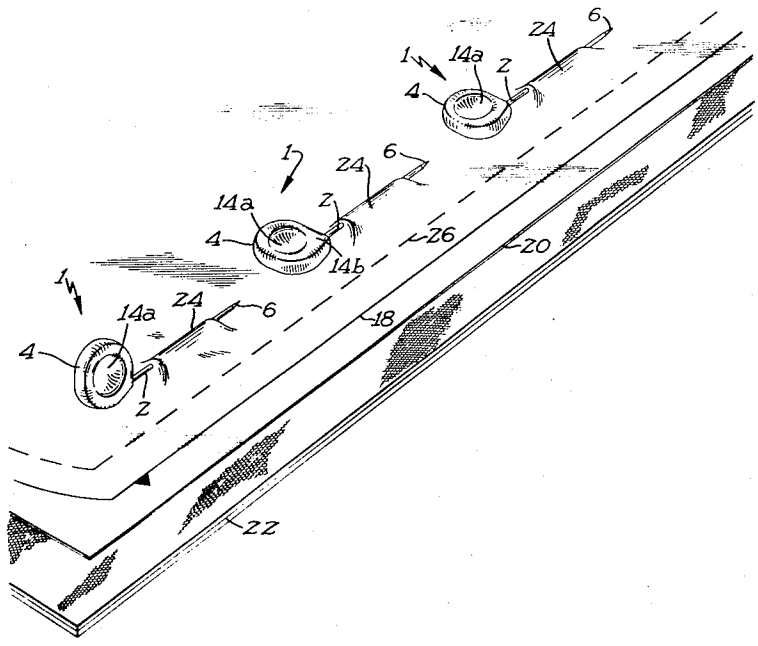
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Primary Examiner—Donald A. Griffin
Attorney—Williamson, Palmatier & Bains, H. Dale Palmatier, Herman H. Bains and Malcolm L. Moore

[57] **ABSTRACT**

An improved seamstress pin adapted for controlled and easy insertion in fabric by the attachment of an elongated, pointed shank at its base end to an enlarged, disc-shaped pin head at a vertical location between the center of the head and a curvilinear, fabric engaging base wall of the head. The shank is horizontally centered in the pin head at a distance above the fabric engaging base wall of the head which is equal to one-half the thickness of the head measured between its side walls so that the head may be pivoted to a horizontal position with one of its side walls lying against the fabric without changing the elevation of the pin shank above the work surface on which the fabric is resting.

5 Claims, 6 Drawing Figures



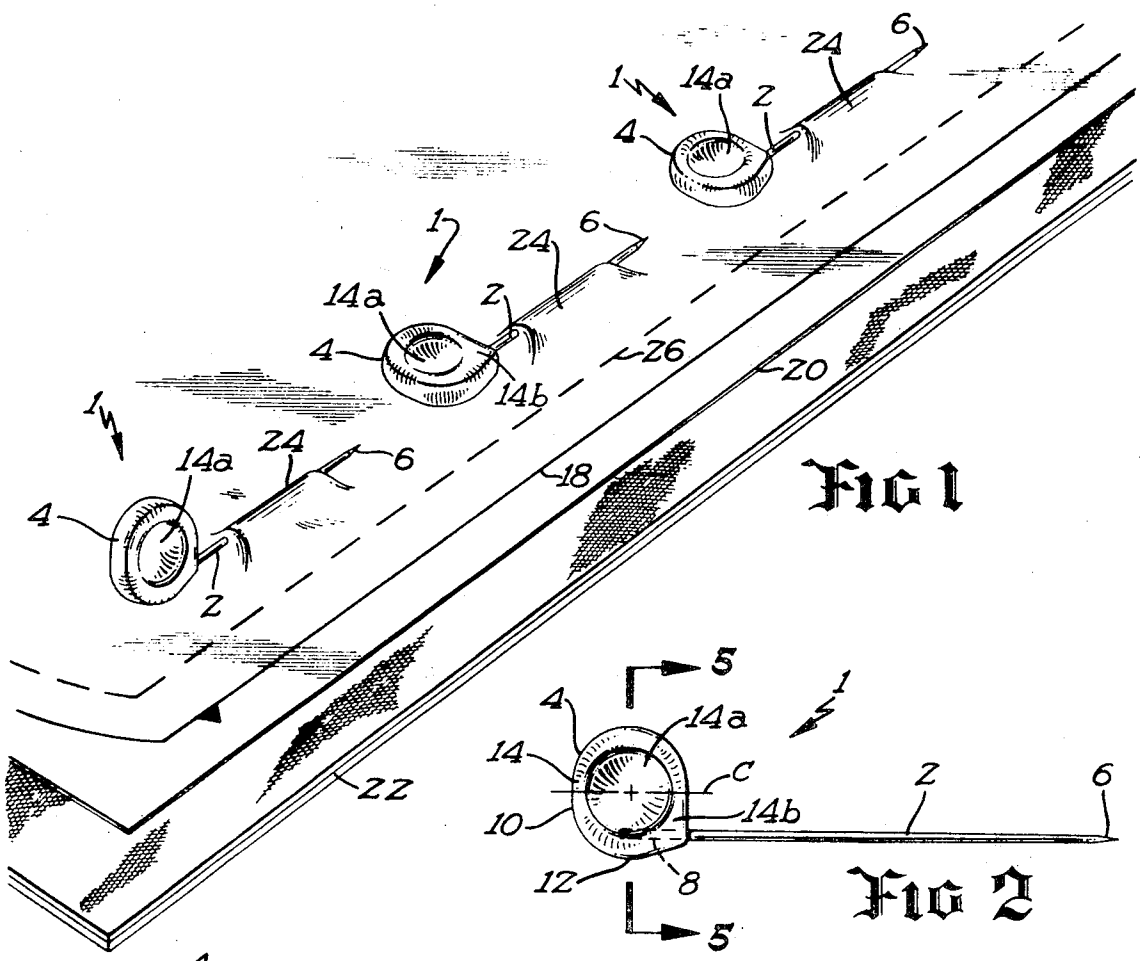


Fig 1

Fig 2

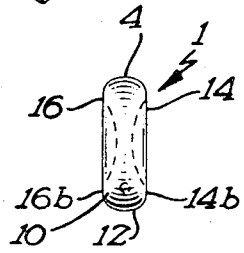


Fig 3

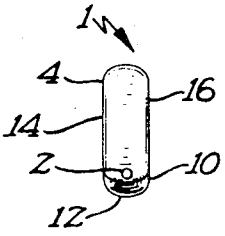


Fig 4

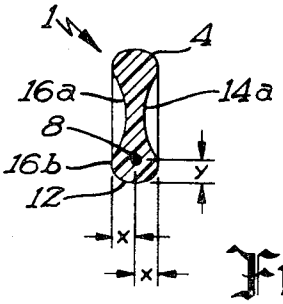


Fig 5

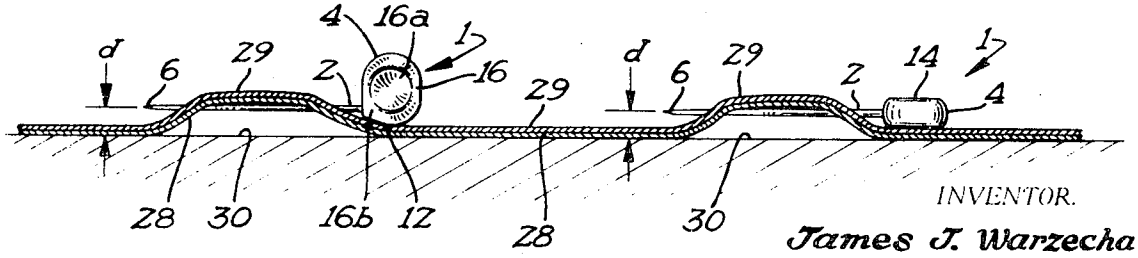


Fig 6

INVENTOR.
James J. Warzecha
BY Williamson, Palmatier & Bains
ATTORNEYS

SEAMSTRESS PIN

BRIEF SUMMARY OF THE INVENTION

This invention is directed to a seamstress pin particularly characterized by an enlarged pin head which is shaped and attached to an elongated, pointed shank in such a way as to provide fully controlled gripping and manipulation of the pin when inserting it in fabric without unduly wrinkling or bunching the fabric during insertion of the pin. The particular shape of the pin head, and location on the head pin where the pin shank engages it permits the pin to be rotated to a position wherein the enlarged head presents a minimum obstruction to parts of a sewing machine after the pin is set in fabric without changing the pressure contact of the pin with the fabric.

These basic objectives are realized by an improved pin structure incorporating an enlarged pin head having a curvilinear base wall, and a pointed pin shank affixed at its base end to the pin head at a vertical position between the bottom, fabric engaging arcuate surface of said base wall and the vertical center of the pin head with the pin oriented in its normal position of use for insertion of the shank in fabric. The relatively large amount of pin head surface presented above the shank is large enough to be readily gripped between a person's thumb and forefinger; and, thus, with the pin shank positioned adjacent the bottom, fabric engaging surface of the pin head, quick, controlled insertion of the pin shank in fabric may be achieved without having to excessively bunch the fabric for insertion of the point of the pin shank. The curvilinear base wall of the pin head makes rolling contact with fabric on a work surface, thereby serving as a cam surface as the head is rotated slightly in a vertical plane to elevate the pointed end of the shank for insertion through fabric.

As a particularly advantageous feature of my improved seamstress pin, the enlarged pin head is preferably given a relatively flat, disc shape so as to present a good gripping surface when oriented vertically, and so as to present a minimum obstruction to structural components of a sewing machine when rotated to a flat, horizontal position. With the base end of the pin shank centered between the side walls of the disc-shaped pin head at a distance from the bottom, fabric engaging curved surface of the head base wall which is equal to one-half the thickness of the pin head measured between its side walls, the pin head may be pivoted to the aforesaid horizontal position after being set in fabric without changing the elevation of the pin shank above the work surface on which the fabric is resting. By virtue of this particular pin shank and head structure, the pressure exerted by the pin shank and head against the fabric in which the pin is set will not change when the head is rotated to its horizontal, non-obstructing position.

As a further beneficial aspect of my seamstress pin, the enlarged, disc-shaped pin head is provided with concave surfaces in its opposed side walls so as to facilitate the gripping of the pin head between the thumb and forefinger of a seamstress.

These and other objects and advantages of my invention will become readily apparent as the following description is read in conjunction with the accompanying drawings wherein like reference numerals have been used to designate like elements throughout the several views.

BRIEF DESCRIPTION OF THE DRAWINGS

FIG. **1** is a perspective view showing several of the seamstress pins of this invention holding fabric and a pattern together;

FIG. **2** is a side elevation view of the seamstress pin of this invention;

FIG. **3** is a left, end view of the pin of FIG. **2**;

FIG. **4** is a right, end view of the pin of FIG. **2**;

FIG. **5** is a vertical section view of the seamstress pin taken along lines **5—5** of FIG. **2**; and

FIG. **6** is a side, elevation view, partically in section, showing several of the seamstress pins holding layers of fabric together for a sewing operation.

DESCRIPTION OF THE PREFERRED EMBODIMENT

The seamstress pin of this invention has been developed and constructed with a view towards providing better manipulative control over a pin as it is inserted in fabric. Although generally useful in holding any fabric materials together, the improved pin of this invention will have particular application for holding a pattern to fabric to be cut and sewed together along a seam.

The seamstress pin, generally designated by reference numeral **1**, is comprised of an elongated shank **2**, and an enlarged gripping head **4** as shown in FIGS. **2** through **5**. Shank **2** has a pointed forward end **6** for insertion through fabric, and a base end **8** which is affixed to head **4**. Shank **2** and enlarged head or handle portion **4** may be made of various materials and secured to each other in different ways. For example, both shank **2** and head **4** could be made of metal and either formed as a one piece, integral unit of assembled to each other by welding or brazing. I prefer to utilize a metal shank **2**, preformed with a pointed end **6**, and a plastic head **4**. Head **4** may be molded from various plastic materials, styrenes having been found to be particularly suitable for this purpose. Head **4** is molded directly onto shank **2** by inserting base end **8** of shank **2** in the mold for the plastic head. This process of manufacturing the seamstress pin insures a solid, tight attachment of shank **2** to head **4**.

For reasons hereinafter explained, head **4** is preferably formed to the shape of a relatively flat, disc-shaped member. At least the base wall **10** of head **4** as viewed in the upright positions of FIGS. **2** through **5**, is given a curvilinear shape to provide an arcuate bottom surface **12** which will be in contact with fabric on a work surface or table when head **4** is in an upright position. Arcuate base wall **10** will curve upwardly in a vertical plane towards pin shank **2** with disc-shaped head **4** oriented in a vertical plane in an upright position. The plane in which disc-shaped head **4** lies includes elongated shank **2**. Opposed side walls **14** and **16** of head **4** are concave over substantially the entire surface thereof extending above shank **2** in order to facilitate the gripping of head **4** between a person's thumb and forefinger. The concave surface portions of side walls **14** and **16** are designated by reference numerals **14*a*** and **16*a***, and the remaining, flat portions of side walls **14** and **16** are identified by reference numerals **14*b*** and **16*b***.

Disc-shaped head **4** is preferably very thin, its maximum thickness as measured between flat, side wall

portions 14*b* and 16*b* preferably not exceeding one-eighth of an inch. The overall height or vertical dimension of head 4 is on the order of three-eights of an inch. With head 4 in its upright position of use for insertion of shank 2 in fabric, side walls 14 and 16 will of course be oriented vertically and terminate at their lower ends at curvilinear base wall 10.

In order that elongated shank 2 may be inserted in fabric with maximum control and ease, it is positioned adjacent base wall 10 of head 4 below the vertical center C of head 4 as indicated in FIG. 2 with head 4 in an upright position. Base end 8 of shaft 2 is affixed to head 4 midway between side walls 14 and 16 at a vertical position between the bottom, fabric engaging surface 12 of head base wall 10 and the vertical center C of head 4, as is clearly indicated in FIG. 2. By virtue of this particular positioning of shank 2 relative to the upper, gripping surface of head 4 defined by concave surfaces 14*a* and 16*a*, head 4 may be firmly gripped between a person's thumb and forefinger to engage point 6 of shank 2 in fabric without having the lower extremities of the thumb and forefinger contact the work surface and interfere with the insertion of shank 2 in fabric as base wall 10 of head 4 is lowered into engagement with the fabric. The relatively large gripping area provided by surfaces 14*a* and 16*a* above shank 2 permits shank 2 to be directed downwardly to insert point 6 into fabric and then pivoted upwardly at its forward end to thrust point 6 through the fabric while lowering head 4 without having to bunch or pinch the fabric together for the insertion of shank 2 therethrough. The user simply grips concave surfaces 14*a* and 16*a* between her thumb and forefinger, angles shank 12 downwardly towards the fabric and inserts point 6 into the fabric; and then head 4 is lowered to bring base wall 10 into contact with the fabric while pivoting pointed end 6 of shank 2 upwardly and thrusting it forwardly through the fabric. During this pivoting of head 4 to raise pointed end 6 of shank 2, the user holds arcuate bottom surface 12 of base wall 10 in pressure contact with the fabric and work table and rolls or rotates head 4 in a counterclockwise direction as viewed in FIG. 2 to raise pointed end 6 of shank 2, and with it the material in which it is engaged, so that shank 2 can then be thrust upwardly and forwardly through the fabric. During this rotating operation of head 4, arcuate bottom surface 12 of base wall 10 serves as a cam surface in rolling contact with the fabric and work table to assist in the upward pivoting of the forward end of shank 2.

In FIG. 1 I have shown three of the seamstress pins being utilized to hold a pattern 18 in engagement with a layer of fabric 20 to be cut. The pattern and fabric are resting on a work table 22. With pin shank 2 in place through the fabric 20 and pattern 18, after insertion in the manner described above, there will be relatively minimal bunching of the pattern and fabric as indicated at 24 in comparison with that normally required for the insertion of a standard metal pin or even a pin with a round, glass or plastic head. With shank 2 inserted through the material in the manner shown in FIG. 1, seamstress pin 1 will be exerting pressure on the fabric at three points as it holds the pattern and fabric relatively flat and in secure engagement with each other. There are two pressure points where shank 2 passes through the material, and a third pressure point at the bottom of base wall 10 of head 4 where the head exerts downward pressure on the pattern and fabric in assisting in holding them together. The line 26 where a stitch is to be formed is indicated by dotted lines in FIG. 2.

In FIG. 6 I have shown two of the seamstress pins 1 holding two layers of fabric 28 and 29 together for a sewing operation. In order to avoid interference with enlarged pin head 4 when it is in its upright position, either when handling and cutting fabric with a pattern pinned to it as illustrated in FIG. 1, or when passing pinned material as shown at 28, 29 in FIG. 6, through a sewing machine, head 4 may be pivoted to a flat, horizontal position as illustrated in FIGS. 1 and 6. In such a flat, horizontal position, one of the side walls 14 or 16 will be lying flat in engagement with the fabric; and because of the very small thickness of disc-shaped head 4, it will present a very minimal raised obstruction when in this flat position. The ability of head 4 to be rotated to this flat position by simply rotating shank 2 while it is still in engagement with the fabric is of particular advantage in sewing machine operations. In its flat, horizontal position, disc-shaped head 4 will be so low as to avoid interference with any part of a sewing machine as materials such as that illustrated at 24 and 25 in FIG. 6 held together with one of the pins 1 are directed through the machine. Since head 4 can be pivoted to an out-of-the-way, flat position, a plurality of pins 1 can be inserted in a row in alignment with each other in the manner illustrated in FIG. 1 very closed to seam line 26 to hold fabric secure and flat along seam 26 without encountering any interference of head 4 with any part of the sewing machine as the fabric is fed through it.

In order that shank 2 may be maintained at the same elevation above the fabric and work surface when head 4 is pivoted from its upright position of pin insertion as shown in FIG. 2 to its flat, horizontal position as shown in FIGS. 1 and 6, shank 2 must be located at a particular position relative to side walls 14, 16 and base wall 10 of head 4. As is illustrated in FIG. 5, base end 8 of shank 2 is affixed to head 4 exactly midway between side walls 14 and 16 of base 4, the distance from the center of shank 2 to either side wall being indicated by dimension "x" in FIG. 5. The distance "y" at which the center of shank 2 is located above bottom surface 12 of base wall 10 is exactly equal to dimension *x*, or one-half the thickness of head 4 measured between side walls 14 and 16. With dimensions *x* and *y* equal, it will be apparent that shank 2 will remain at the same elevation above the fabric and work table when head 4 is pivoted from its upright, installation position to its flat, horizontal position. Reference is made to FIG. 6 wherein the distance "d" at which pin shank 2 is elevated above a work surface 30 is shown to remain the same with head 4 in either an upright, or a horizontal position. Thus, the pressure contact exerted by shank 2 and head 4 on the layers of fabric 28 and 29 remains the same whether head 4 is in an upright or a horizontal position.

Based on the foregoing description, it will be seen that my improved seamstress pin permits the attachment of a pattern to fabric with particular ease and accuracy without undue shifting or bunching or the pattern by reason of the particular shape and size of head 4 relative to shank 2, and the location of these two

components with respect to each other. Insertion of the pin in fabric, and the quick removal of the pin is greatly facilitated by enlarged, disc-shaped head 4, which may be easily and firmly gripped between a person's thumb and forefinger to maintain good control over the pin when inserting it in fabric or removing it.

I anticipate that various changes may be made in the size, shape and construction of the seamstress pin herein described without departing from the scope and spirit of my invention as defined by the following claims.

I claim:

1. A seamstress pin comprising:

an elongated shank having a pointed, fabric engaging end and a base end;

an enlarged, disc-shaped pin head lying in a common plane with said pin shank and having opposed side walls with flat surface portions thereon defining therebetween the thickness of said head, said side walls being oriented vertically when said pin head is held in an upright position of use for insertion of said shank in fabric, and said side walls terminating at one end thereof at a base wall which serves as a fabric engaging surface when said pin head is held in said upright position of use, said shank being affixed to said pin head at a location which is midway between said side walls and which is between the vertical center of said side walls and said base wall.

2. A seamstress pin as defined in claim 1 wherein:

said side walls of said pin head are concave, thereby facilitating the grasping of said pin head between the thumb and forefinger of the user when inserting said pin shank in fabric.

3. A seamstress pin as defined in claim 1 wherein:

said base wall is of curvilinear shape and extends arcuately from a bottom, fabric engaging point upwardly towards said pin shank with said pin head held in said upright position of use.

4. A seamstress pin as defined in claim 1 wherein:

the distance between said pin shank and the bottom, fabric engaging portion of said base wall measured along a line perpendicular to said pin shank is equal to one-half the thickness of said disc measured between said side walls, whereby said pin head may be pivoted to a horizontal position from said upright position with one of said side walls lying against the fabric engaged by said pin shank without changing the elevation of said pin shank above the work surface on which said fabric is resting.

5. A seamstress pin comprising:

an elongated pin shank having a pointed, fabric engaging end and a base end;

an enlarged disc-shaped pin head having a curvilinear base wall extending arcuately in a plane coplanar with said pin shank and having elongated, opposed side walls defining therebetween the thickness of said pin head, said side walls being oriented vertically when said pin head is held upright in a normal position of use for insertion of said pin shank in fabric, said base end of said pin shank being centered between said side walls and affixed to said pin head at a vertical distance above the bottom, fabric engaging surface of said base wall which is equal to one-half the thickness of said pin head measured between said side walls, whereby said pin head may be pivoted to a horizontal position with one of said side walls lying against the fabric engaged by said pin shank without changing the elevation of said pin shank above the work surface on which said fabric is resting, and said curvilinear base wall serving as a cam surface making rolling contact with fabric on a work surface to facilitate the insertion of said pin shank in fabric when said pin is held in said normal position of use.

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