D. W. BARMON.

SPACE MARKING DEVICE.

APPLICATION FILED OCT. 1, 1912. RENEWED OCT. 25, 1917.

1,249,301.

Patented Dec. 11, 1917.

Fig. 3.

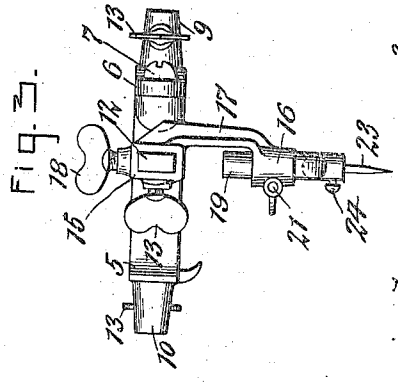


Fig. 4.

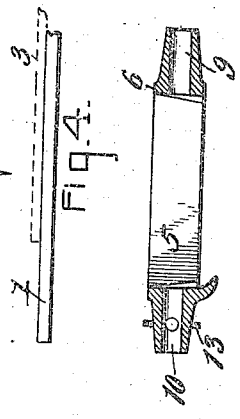


Fig. 5.

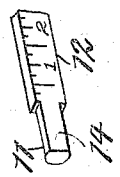


Fig. 1.

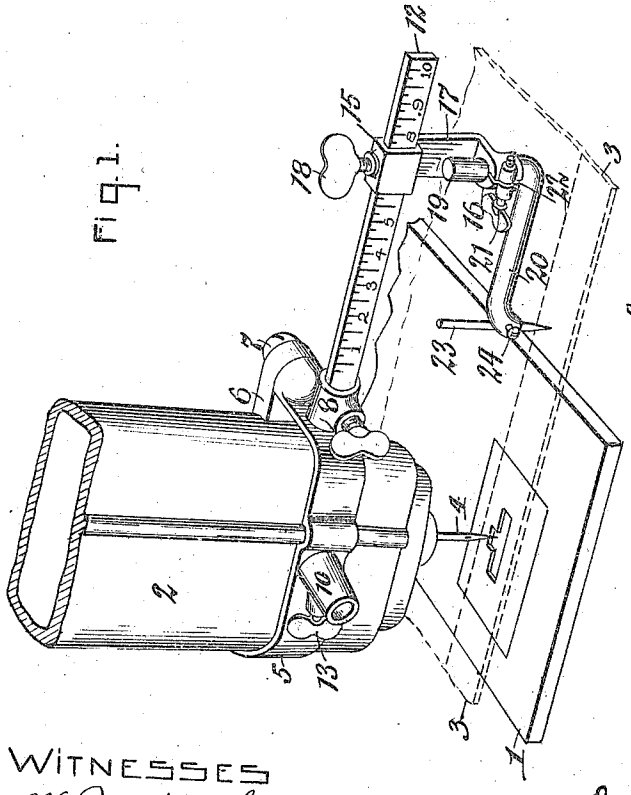


Fig. 2.

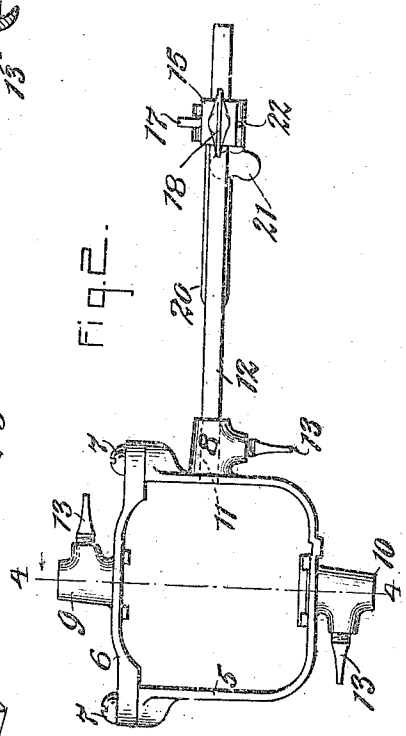
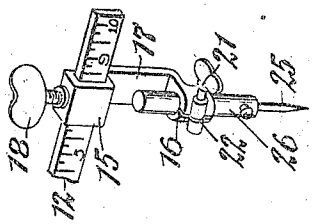


Fig. 6.



WITNESSES

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UNITED STATES PATENT OFFICE.

DANIEL W. BARMON, OF BUFFALO, NEW YORK, ASSIGNOR TO SPACE-MARKER COMPANY, OF BUFFALO, NEW YORK, A COPARTNERSHIP CONSISTING OF DANIEL W. BARMON, MARCUS BARMON, AND ABRAHAM M. BARMON.

SPACE-MARKING DEVICE.

1,249,301. Specification of Letters Patent. Patented Dec. 11, 1917.

Application filed October 1, 1912, Serial No. 723,343. Renewed October 25, 1917. Serial No. 198,541.

To all whom it may concern:

Be it known that I, DANIEL W. BARMON, a citizen of the United States, residing at Buffalo, in the county of Erie and State of New York, have invented new and useful Improvements in Space-Marking Devices, of which the following is a specification.

This invention relates to a space marking device which is designed to produce marks upon a garment, fabric or the like where the same is to receive a button, buttonhole or the like.

Heretofore great difficulty has been experienced in accurately spacing the buttonholes and the buttons to be attached to the garment so that they matched properly and it also involved considerable expense on account of the great care and time necessary for properly locating the buttons and buttonholes or the like, and notwithstanding the greatest care it has often been necessary to discard many garments owing to imperfections in the spacing of the buttons and buttonholes as heretofore practised. Such spacing or marking off has heretofore usually been done by one operator who prepared the same ready for other operators who did the actual sewing of the button holes or the attaching of the buttons or the like to the garments or fabric.

The purpose of this invention is to provide an improved spacing device which permits the operator to locate each working space on the garment or fabric while the sewing or fastening mechanism is operating upon the previously marked place without requiring the help of a separate operator, and which is comparatively simple and inexpensive in construction and easily adjusted and adapted for spacing different kinds of work and varying the distances between the several work places on the garment or fabric.

In the accompanying drawings: Figure 1 is a fragmentary perspective view of a sewing or button-holing machine equipped with my improved spacing device. Fig. 2 is a top plan view of the spacing device detached from the machine. Fig. 3 is a front elevation thereof. Fig. 4 is a transverse section in line 4—4, Fig. 2. Fig. 5 is a fragmentary perspective view of the supporting bar forming part of my improved spacing device. Fig. 6 is a fragmentary perspective view showing a slightly different form of holder for the awl or marker of my spacing device.

Similar characters of reference indicate corresponding parts throughout the several views.

My improved spacing device is designed to be used in connection with any machine whereby buttons are sewed on a garment, buttonholes are formed and worked, or other operations of a similar character are performed. The machine shown in Fig. 1, as an example comprises a table 1, and a sewing machine head 2 between which the garment, fabric or a similar article which is shown by dotted lines 3 is moved horizontally forward or in any other desired direction so that successive places on this article may be operated upon by the needle 4 which is mounted on the head and coöperates with the mechanism under the table in any suitable and well known manner for either attaching a button to the fabric, working a buttonhole or performing a similar operation. Inasmuch as the details of this button sewing, buttonholing or like mechanism may be of any suitable and well known construction it is not necessary to further illustrate or describe the same.

My improved spacing device which is associated with the operating mechanism of the machine is constructed as follows:

Mounted on the head of the machine is an attaching bracket or yoke which preferably comprises a U-shaped member 5 embracing three sides of the head 2 and a cross bar 6 connecting the legs of the U-shaped member and detachably connected therewith by means of screws 7, as shown. Upon tightening these screws this bracket or yoke is secured to the head of the machine so as to support the parts of my improved spacing device above the path of the garment or fabric which is being operated upon. Although I prefer this form of supporting bracket the detail construction of the same may be varied, particularly when adapting my improvements to different types or designs of sewing or fastening machines. On its front side and on its opposite lateral sides the supporting bracket is provided with a front socket 8 and two side sockets 9, 10 any one of which is adapted to receive the shank 11 on the inner end of a horizontal supporting bar 12. As shown in Figs. 1, 2 and 3 the two

side sockets 9, 10 are formed respectively on the cross bar and on the bow of the U-shaped member of the bracket while the front socket 8 is formed on the front leg of the U-shaped member, these sockets being preferably formed integrally with the parts with which they are associated. The supporting bar may be secured at its rear end either in the front socket of the bracket, as shown in Figs. 1, 2 and 3, so as to project forwardly from the head of the sewing machine and in line with the needle thereof, or substantially so, or this supporting bar may be secured with its inner end in either of the side sockets for adapting the same to the particular character of the work which is to be space marked. The supporting bar is held in one or the other of these sockets of the bracket by means of clamping or thumb screws 13 mounted on the respective sockets and adapted to engage with the side of the shank at the inner end of the supporting bar while the same is arranged within the respective socket. The body of the bar is preferably rectangular in cross section as shown in the drawings and the shank at its front end may be provided on one side with a flat face 14 for the clamping screw 13 to engage against and hold the supporting bar with its opposite flat vertical sides in an upright position. A hanger which forms a part of my improved spacing device comprises a sleeve 15 which is mounted on the supporting bar and which is capable of sliding horizontally or lengthwise thereon for purposes to be hereinafter explained, a socket 16 arranged below the supporting sleeve, and a vertical or depending arm 17 connected at its upper end with the sleeve 15 and at its lower end with the socket 16 and arranged at one side of the said sleeve and socket. The sleeve is held in position on the supporting bar by means of a thumb screw 18 working in a threaded opening of this sleeve end engaging the upper edge of the supporting bar.

On the hanger is mounted a holder and on the holder is mounted the marker whereby the mark is placed upon the fabric or garment where the same is to receive the buttonhole, or the like. The form of holder shown in Figs. 1 and 3 comprises an upper vertical cylindrical part 19 which is secured in the correspondingly shaped bore of the socket 16 of the hanger and a horizontal lower portion 20 which projects laterally from the lower end of the vertical portion. Various means may be employed for securing the upper part of the holder in the socket of the hanger but those shown in the drawings are suitable and consist of a clamping screw 21 which connects the two parts of the socket which are arranged on opposite sides of a longitudinal slit 22 therein extending from the bore to the periphery thereof. At the outer or free end of the lower horizontal part of the holder the same is provided with a vertical opening in which is secured a vertical marker 23 by means of a set screw 24 entering a threaded opening in the adjacent part of the holder and engaging with the periphery of the marker. As shown in Figs. 1 and 3, this marker is constructed in the form of an awl having its lower or pointed end facing downwardly but any other suitable form of marking device may be employed in its stead. The same result may be obtained by a lead pencil, crayon or the like as a marker whereby a color mark is produced on fabrics which will not show an awl mark. In adjusting the spacing device the holder is adjusted vertically in the hanger and the marker is adjusted vertically in the holder until the lower end of the marker is arranged the desired distance above the normal path of the garment or fabric as the same moves toward and past the sewing or fastening mechanism of the machine. The marker is also so placed relatively to the needle or fastening mechanism that the same is arranged in front of this mechanism or at the side thereof, and on a line which passes through this mechanism and which is parallel with the direction of movement of the garment or fabric as it is fed past the sewing or fastening mechanism. The hanger is also moved lengthwise on the supporting bar and then secured thereto in such a position that the marker or awl is arranged at such a distance from the needle mechanism or fastening mechanism which equals the distance between center to center at which it is desired to space apart the several buttons, buttonholes or the like which are to be attached to or formed on the garment or fabric in a row. When the space marker has been thus adjusted the operator places the garment or fabric in proper position underneath the fastening mechanism where the same is to receive the first button or buttonhole and while the machine is operating upon this part of the garment the operator lifts that part of the garment or fabric in front of the fastening mechanism sufficiently to engage the same with the lower end of the marking device or awl so as to produce a prick mark of this awl upon the garment or fabric, thereby locating the place where the next button or buttonhole is to be attached to or formed on the garment or fabric, it being understood that after this prick mark has been produced upon the garment or fabric the latter is again lowered by the operator into its normal position. After the sewing or fastening mechanism has completed the operation upon which it is engaged the operator advances the garment or fabric and brings the next marked place of the latter in register with the fastening

mechanism to permit of attaching the next button or forming the next buttonhole on the garment at the respective place and while this work is proceeding the operator again lifts the garment or fabric for producing the mark for the next button or buttonhole on the same. This operation is repeated in like manner for each additional place which is to be marked on the fabric for each additional button, buttonhole or the like. It will be noted that by the use of this space marker no time of the operator is lost and that the operation of the machine is not delayed inasmuch as the operation of marking is performed by the operator while the sewing or fastening mechanism is operating upon a previously marked place of the fabric.

In order to enable the operator to accurately adjust the marking device to the proper position relatively to the fastening mechanism one or both sides of the supporting bar may be numbered or graduated lengthwise thereof, as shown in Figs. 1 and 5.

By offsetting the arm of the hanger it is possible to adjust the holder in the socket thereof more freely and it also gives the operator an unobstructed view from the front to the needle or fastening mechanism in line with the marking device so as to permit of accurately marking the goods and also feeding the same properly forward toward the fastening mechanism.

By constructing the holder of the marking device in the form of an L or crank, as shown in Fig. 1, it is possible to bring the marker comparatively close to the needle or fastening mechanism when it is desired to space the buttons or buttonholes quite close together and still permit the hanger to remain some distance from this fastening mechanism, which is necessary owing to the size of the head and the means for mounting the hanger on the machine head.

When the distance between the marks on the garment or fabric are quite far apart the marker 25 may be secured in the lower end of a holder 26 which is perfectly straight in a vertical direction which latter is in turn secured in the socket of the hanger, as shown in Fig. 6. By reversing the angular holder so that its lower part 20 projects rearwardly the range of the marking device may be lengthened and by turning the part 20 at an angle to the line of movement of the fabric it is possible to produce marks of the character described on the same on one side of the line of the needle. If desired the length of the bar 12 may also be varied.

When the character of the garment or fabric which is being operated upon requires the same to be fed toward the sewing or fastening mechanism either from the right or left hand side of the machine head the supporting bar is secured at its inner end either in the socket 9 or in the socket 10 so as to render the space marker capable of use under either of these conditions, its operation, however, being the same as when the supporting bar is arranged at the front of the machine head.

My improved space marker is not only very simple and durable in construction but the same can be easily adjusted to suit different requirements as to spacing and the same is also not liable to get out of order nor does it interfere with the ordinary operation of the machine.

I claim as my invention:

1. A space marking device of the character described comprising a bracket adapted to be secured around the head of an operating machine and provided with a plurality of sockets on different sides thereof, a supporting bar adapted to be secured in one or the other of said sockets, a hanger mounted on said bar, and a marker mounted on said hanger.

2. A space marking device of the character described comprising a normally stationary supporting bar, a hanger having a sleeve which receives said bar and is adjustable lengthwise thereof and also having an arm which depends from said sleeve vertically out of line with said bar and a socket at the lower end of said arm which is vertically in line with said sleeve and bar, a holder secured in said socket, and a marker mounted on the lower end of said holder.

3. A space marking device of the character described comprising a normally stationary supporting bar, a hanger having a sleeve which receives said bar and is adjustable lengthwise thereof, and also having an arm which depends from said sleeve vertically out of line with said bar and a socket at the lower end of said arm which is vertically in line with said sleeve and bar, a holder having an upper vertical portion which is secured in said socket and a lower horizontal portion, and a marker mounted at the free end of said horizontal portion on one side of said vertical portion.

Witness my hand this 27th day of September, 1912.

DANIEL W. BARMON.

Witnesses:
THEO. L. POPP,
ANNA HEIGIS.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."