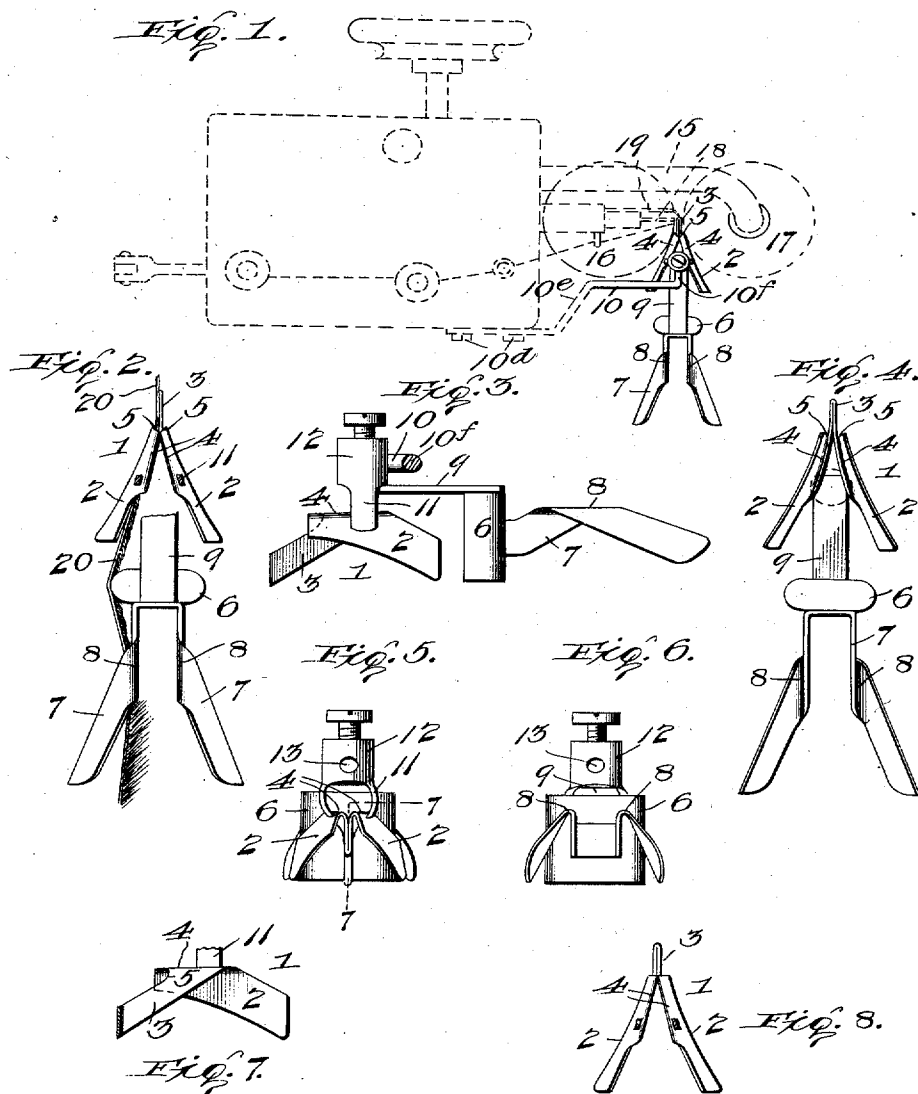


C. H. CUNNINGHAM.
GUIDE FOR FUR OR CARPET SEWING MACHINES.

APPLICATION FILED MAR. 29, 1904.

NO MODEL.

2 SHEETS—SHEET 1.



WITNESSES:
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2 SHEETS—SHEET 2.

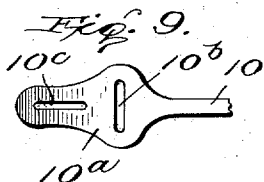


Fig. 10.

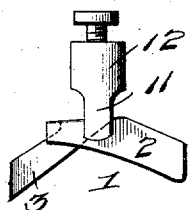


Fig. 11.

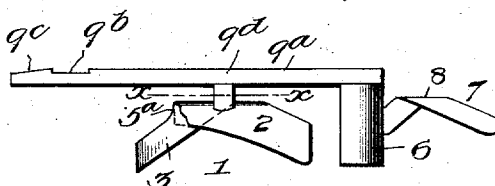


Fig. 12.

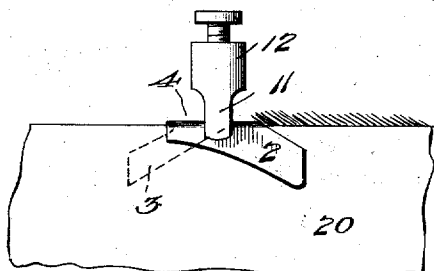


Fig. 13.

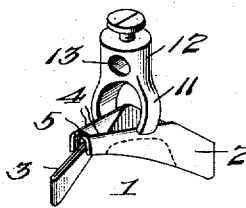


Fig. 14.

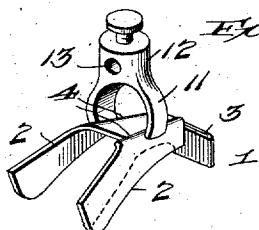
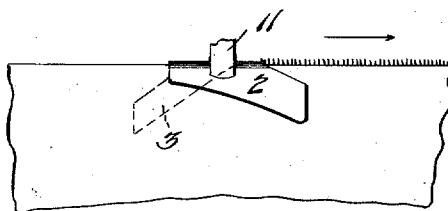


Fig. 15.



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UNITED STATES PATENT OFFICE.

CLARA H. CUNNINGHAM, OF WASHINGTON, DISTRICT OF COLUMBIA,
ASSIGNOR OF ONE-HALF TO JOSEPH R. EDSON, OF WASHINGTON,
DISTRICT OF COLUMBIA.

GUIDE FOR FUR OR CARPET SEWING MACHINES.

SPECIFICATION forming part of Letters Patent No. 770,678, dated September 20, 1904.

Application filed March 29, 1904. Serial No. 200,594. (No model.)

To all whom it may concern:

Be it known that I, CLARA H. CUNNINGHAM, a citizen of the United States, residing at Washington, in the District of Columbia, have invented certain new and useful Improvements in Guides for Fur or Carpet Sewing Machines; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to certain improvements in guides for sewing-machines, especially machines designed for sewing furs, carpets, and the like.

The object of the invention is to provide a device which can be readily combined with either type of said machines and which will serve to guide the material to be sewed and to place the fur or hair fibers or pile in such position in relation to the edge of said material as will enable the operator to sew without interruption—that is to say, the device will place the fur or pile in proper position out of the way of the needle, and the operator will only have to feed the material to the device and to the needle with practically no more interruption than is usual in sewing two pieces of ordinary cloth or the like.

It will be understood that my device will automatically turn the fur or hair fibers or pile in and down, so as to be practically away from the seam and out of the path of the needle, and that it will do this and permit the material to be fed to the machine as fast as the latter can sew it, thus, as in the case of furs, avoiding the slow and tedious method of stopping the machine or suspending the sewing to turn the hair or fur in by hand, usually with an instrument called "pliers," whereby only two or three inches can be sewed at one continuous operation.

I am aware that devices have been heretofore invented for sewing carpets and other devices for sewing furs; but I am not aware of any practical guiding device which can be used for sewing furs or carpets with a continuous

feed—that is, carpets having a long pile, such as Axminster, velvet, &c.

In carrying out my invention I provide a main guide consisting of two wings which diverge from front to rear. From the upper edges of these wings spring two arches which curve upwardly, inwardly, and downwardly and connect with a tongue which extends forwardly and downwardly to a point preferably in front of the wings. The tongue, which is arranged in a central position with reference to the divergent wings, extends downwardly and forwardly to a point preferably in front of the guide. The rear edge of each arch curves from rear to front upwardly, forwardly, inwardly, and downwardly until it disappears as the rear and lower edge of the tongue, and said rear edge curves from front to rear upwardly, rearwardly, outwardly, and downwardly until it disappears as the upper edge of a wing. In other words, starting from the apex of the arch, which in plan stands at an incline to the line of feed or longitudinal axis of the guide, one portion melts away in the upper edge of the wing and the other portion in the lower edge of the tongue. From a point preferably within the front end of the guide the tongue diverges from front to rear until it joins the arches. At its forward end the outer faces of the tongue are preferably parallel and as thin as practicable to permit the two pieces being sewed to come together preparatory to being sewed. This constitutes the primary part of my invention and which when suitably mounted and held in place with respect to the operative parts of a sewing-machine is all that is requisite to provide a practical guide which will automatically turn fur or fur fibers or pile away from the edge of the material being sewed and out of the way of the needle.

In applying fur or fur fibers to my guide, the skins having been placed with their fur sides together, or face to face, their upper edges are so placed as to bear against the inside of those portions of the divergent wings which are in rear of the arches, so that as fur moves against the arches or as the arches

move against pile the fur or pile will be turned in and down, the skin with its fur or a carpet with its pile being gradually drawn together by the wings and compressed between the wings and the tongue, the tongue serving to hold the fur or pile away from the edge of the skin or carpet. As fur or hair rarely projects from the skin at right angles to its face, the skins are preferably so placed in the guide that the fur will extend from the skin toward the front of the guide. As the edges of the skins are drawn forward by the feed-rolls or in a carpet-sewing machine as the machine is propelled forward on the edge of the carpet the fur in the former case and the pile in the latter case will be turned inward and downward by the upwardly, inwardly, downwardly, and forwardly curved rear edge of the arch, thereby forcing the fur or pile inwardly and downwardly and in such position delivering it to and against the opposite sides of the tongue, whereby it is held until the edges of the material have been sewed. For sewing furs the front end of the guide is preferably cut away inwardly and rearwardly on each side and the upper edge of the tongue joins the arch at the point where the inwardly and rearwardly cut-away portion terminates. The object of this construction is to enable the forward ends of the divergent wings to be brought near together in order to hold the skins together and in condition to be sewed by the juxtaposed needle and at the same time to prevent avoidable friction between the material being sewed and the inner faces of the front portions of the wings and the sides of the tongue. This cutting away of the arch in front and having the upper edge of the tongue connect with the arch at a point inside of the forward end of the guide and the downward and forward extension of the tongue permit the feed-rolls to be brought nearer to the guide, and thereby reduce the desired length of the tongue to prevent the escape of fur, &c., from its hold before the sewing has been completed. In sewing carpets the machine moves and the carpet is stationary, whereas in sewing furs the fur or skin moves and the machine is stationary; but in using my device in sewing either furs or carpets the front or forward end of my guide is the end that is nearer the needle.

I have said that the divergent wings and the tongue are connected by an arch; but I wish it to be understood that the arch is not of any particular form, but may be of any form, provided its shape gives a smooth bearing for the fur or pile. The curvature of the rear edge of each arch from its apex to the lower edge of the tongue on one side and to the upper edge of the wing on the opposite side may be segments of circles of different radii. In fact, there might be quite an angle at the apex and still obtain good results. From the top edge of the rear portion of the divergent wings to

the top of the arch may be quite short; but it must be sufficient to produce an inclined surface from front to rear, so as to bring the requisite pressure upon the fur or pile, and thus force it inward and downward as the fur moves against the arch or the arch moves against the pile. In fact, the curvature between the wings and the tongue may become so short in the front of the guide as to form quite a sharp angle.

It will be understood that in order to get the best results in using the guide without a spreader I place a finger between the skins to spread the same apart at a point in rear of the arches in order to cause the fur to come in contact with the outer and most rearward extended portions of the arches. I have provided a spreader or deflector to perform this function of a finger of the operator. This spreader or deflector is placed in the position with reference to the guide which the finger occupies when serving as a spreader. The transverse diameter of the spreader is such as to throw the fur or pile against the inner faces of the divergent wings. The spreader can be held in position by any suitable support, such as a bracket, extending rearwardly from the guide, or a branch of the bracket which supports the main guide may also support the spreader. If desired, the main guide and the spreader may be used in connection with a supplemental guide consisting of two rearwardly-extending arms which are curved or bent upon themselves to form supplemental arches for turning the fur or pile in and down preparatory to its passage over the spreaders or deflectors and thence into the main guide.

From the foregoing it appears that the device includes—

First. Means for turning the fur or pile, this means being the "rear edge" of the "arch," which, as described, is "at an incline to the line of movement of the pile," and the rear edge of the tongue 3, which is a continuation of the rear edge of this arch. This means acts continuously, not intermittently.

Second. Means for holding the "turned" fur or pile until the sewing is accomplished, this means being the face of the tongue 3, against which the fur or pile is held by suitable means, such as the adjacent and parallel part 1. The construction is such that the turned fur or pile is held in restraint until the stitching is laid, the stitching mechanism being situated so close to the front end of the tongue 3 or of the part 1 as to take the work at substantially the point at which it is delivered from the space between the tongue 3 and part 1 or from the tongue 3, thus affording no opportunity for the turned fur or pile to raise. The turning and holding means is, as shown, duplicated, so as to coincidentally act upon two bodies of material, and the two means are convergently arranged, so as to draw these two bodies together just in advance

of the sewing, while leaving them separated at the feed end of the device in order that the turning of the fur or pile may be freely performed.

5 An embodiment of my invention is shown in the accompanying drawings, which, with the numerals of reference marked thereon, form a part of this specification, and in which—

10 Figure 1 is a plan view in full lines of my invention and in dotted lines portions of a fur-sewing machine with my improved guiding device applied thereto and in position for use. Fig. 2 is a plan view of my guide with the supporting-arm broken away and a piece
15 of fur in position on one side. Fig. 3 is a side elevation. Fig. 4 is a view of the guide in an inverted position. Fig. 5 is a front elevation. Fig. 6 is a rear elevation. Fig. 7 is a detached longitudinal sectional view on the line 7 7 of Fig. 5. Fig. 8 is a section on the line *xx* of Fig. 11. Fig. 9 is a detail showing the attaching end of a bracket for supporting the device. Fig. 10 is a side elevation of the main guides detached from the
25 supplemental guides and deflectors. Fig. 11 shows a modification of the construction of the front of the main guides and of the manner of joining the tongue thereto. Fig. 12 is a side view showing the application of one of the main guides to a piece of fur, the tongue being indicated in dotted lines bearing against the fur side of the skin. Figs. 13 and 14 show, respectively, front and rear perspective views of the main guides; and Fig. 15 shows the
30 main guides applied to a carpet, the arrow indicating the direction in which the guides move.

Referring to the accompanying drawings, in which like numerals refer to like parts in
40 all of the figures, 1 is the main guide having wings 2, which extend from front to rear on divergent lines and are connected to a tongue 3 by arches 4. The rear edges of these arches curve upwardly, forwardly, inwardly, and
45 downwardly—i. e., the rear edge of the arch in plan is at an incline to the line of feed or the longitudinal axis of the guide and thence becomes the lower edge of the tongue 3. The bifurcated portions of the tongue
50 may be curved or straight from the point where they leave the arches to the point where they come together to form the thin portion at the front end of the main guide or which projects in front thereof. The forward
55 edges of the arches 4 are preferably cut away, as seen at 5, for sewing fur to permit the front ends of the wings to come nearer together upon the material being sewed and also to carry the upper edge of the tongue back of the front
60 ends of the wings in order to provide more room for and to reduce friction between the wings and tongue and the fur or carpet. The tongue extends downwardly and forwardly, so that its upper edge shall extend below the plane
65 of the edge of the fur or carpet, and thus

permit the needle to be brought close to the front of the guide. It will be understood that the nearer the front of the guide when the material to be sewed issues from or leaves the guide is to the needle the less surface longi-
70 tudinally of the fur or pile will have to be held down and out of the path of the needle.

The spreader or deflector 6 and its rearwardly-extended supplemental guide 7, having arches 8, are supported in position by an
75 arm 9 from the main guide or by a branch of the bracket 10, which supports the main guide by means of a yoke 11, having a boss 12, provided with an opening 13 to receive an arm or bracket 10, said boss having a set-screw
80 or other analogous device tapped into the boss, so as to bear upon the bracket 10 and hold the guide in position. It is evident that other means may be provided for holding the
85 guide in place, with or without the deflectors or spreaders and the supplemental guide, and that it may be adjustably attached directly to a machine or to a bracket attached to a machine. When the front of the guide is placed
90 in position between the feed-rolls of a fur-sewing machine there is very little space between the front of the tongue and the needle—say about one-eighth of an inch—and perhaps not more than about one-fourth or one-third
95 of an inch in the front of the wings.

The dotted lines in Fig. 1 of the drawings indicate a machine well known in the art and adapted for sewing fur, and as this machine forms no part of my invention and no claim is made thereto a detailed description thereof
100 is not necessary.

15 is the arm fixed to the machine in the usual way, and 16 and 17 are the feed-rolls, 18 the needle, and 19 the looper, these parts also being of the usual or any well-known
105 construction and with which the present invention is designed to cooperate.

In Fig. 2 I have shown a piece of fur 20 on one side of the guide. This piece extends through the supplemental guide, thence over
110 the spreader, thence through the main guide to a point in front of the tongue. When two skins are in the guide and in position to be sewed, the edges of the backs of the skins appear to view in front of the guide. Hence
115 the part of the skin in front of the guide is shown without fur and as extending partly over the tongue. As one means of providing for the adjustment of the guide, the arm 10 may be flattened, as at 10^a, and provided with
120 slots 10^b and 10^c for the reception of the securing means 10^d, by which it may be affixed in position on the machine, the slots permitting of the necessary adjustment of the arm to bring the device into its proper relation to the
125 feed-rolls, &c. If an arm is employed, it may be of any construction applicable to the purpose, in this case being shown as provided with an offset 10^e and a portion 10^f. The supplemental guiding-arms may be soldered
130

or otherwise suitably attached to the spreaders, although it is obvious that they might be otherwise supported in place. The wings of the main guide are made to preferably diverge from the front to the rear thereof.

In Fig. 11 I have shown a modification of the construction of the forward end of the main guide, which consists in not cutting away the front ends (see 5^a) of the wings, as shown at 5, but in having the upper edge of the tongue run up flush with the front ends of the wings, as shown also in Fig. 15, and in substituting a bar 9^a, which has a notch 9^b, a taper 9^c, and undercut sides 9^d, to provide for the attachment of the guide to a machine for sewing carpets.

It will be understood that in sewing furs I can use my guide with or without either the cut-away portions 5 or the portions of the tongue which extend in front of the wings 2, although better results are obtained when the tongue extends in front of the wings and the wings are cut away. In using the main guide in a carpet-machine it is preferable to have the tongue extend in front of the wings and have its upper edge flush with the front edges of the wings, as shown in Figs. 11 and 15.

I am aware that changes in the form and proportion of the parts herein shown and described as an embodiment of my invention can be made without departing from the principle of my invention—as, for example, the tongue might have its free end raised and adapted to extend below, but parallel with, the edge of the skin or carpet or the wings might be cut away, as shown in dotted lines in Fig. 14.

From the above it will be seen that there has been devised a novel, simple, and cheap yet most effective device for the purpose outlined, and while the structural embodiment of the invention as herein disclosed is what is at the present time considered preferable it is evident that the same is subject to changes, variations, and modifications without departing from the spirit of the invention or sacrificing any of its advantages, and it is therefore not intended that the same shall be restricted to the details of construction herein disclosed; but the right is reserved to make such changes as come properly within the scope of the protection prayed.

It will be understood that after the material to be sewed has been placed in the guide and in position before the needle it requires no attention on the part of the operator further than to see that it is properly fed to the machine.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. A guide for a sewing-machine having rearwardly-directed divergent guide-wings and an interposed tongue extending forwardly

and downwardly in front thereof, whereby the front of the guide can be brought in close proximity to the needle.

2. A guide for a sewing-machine having arched guide-wings and an intermediate tongue, the rear edges of the arches which connect the tongue to the wings forming a continuation of the upper edges of the rear portions of the wings and of the lower edge of the tongue.

3. A guide, for a sewing-machine, having divergent guide-wings, an intermediate tongue forming a continuation of the wings, the outer faces of the tongue diverging to the rear end of the guide to form diverging channels which extend back to the rear edges of the arches which connect the tongue to the wings.

4. A guide, for a sewing-machine, having divergent guide-wings, an intermediate tongue forming a continuation of the wings, the outer faces of the tongue diverging to the rear end of the guide to form diverging channels which extend back to the rear edges of the arches which connect the tongue to the wings, in combination with a spreader.

5. A guide for a sewing-machine, having divergent guide-wings, an intermediate tongue forming a continuation of the wings, the outer faces of the tongue diverging to the rear end of the guide to form diverging channels which extend back to the rear edges of the arches which connect the tongue to the wings, in combination with a spreader and a supplemental guide having rearwardly-extended arms, each arm having an arch, substantially as shown and described.

6. In a guide for a sewing-machine, divergent wings, an intermediate tongue and pile or hair turning means extending rearwardly from the tongue, and forming a continuous connection between said wings and tongue.

7. In a guide for a sewing-machine, guide-wings, an intermediate tongue which projects downwardly and forwardly in front of said guide-wings, the upper edge of the tongue continuous with the front edges of the wings, and the lower edge continuous with the rear and upper edges of the wings.

8. In a guide for a sewing-machine, guide-wings, an intermediate tongue which projects downwardly and forwardly in front of said guide-wings, the upper edge of the tongue extending back of the front edge of the wings and the lower edge of the tongue extending rearwardly and upwardly and forming a continuation of a curved pile or hair turning surface which connects the upper rear edges of the guide-wings with the lower edge of the tongue.

9. In a guide for a sewing-machine, guide-wings, an intermediate tongue having a curved or arched connection with said wings, the rear edge of said arched portion curving upwardly, inwardly, downwardly and forwardly from

the upper rear edge of the wings and at an incline to the longitudinal axis of the guide, whereby a continuous forwardly-inclined pile or hair turning surface is provided, said pile
5 or hair turning surface being continuous with the upper edges of the rear portions of the guide-wings and with the under surface of the tongue.

10 10. A guide for a sewing-machine, having arched guide - wings and an intermediate tongue, the rear edges of the arches which connect the tongue to the wings forming a continuation of the upper edges of the rear portions of the wings and of the lower edges of
15 the tongue, in combination with means for supporting the guide in position before a needle.

20 11. A guide for a sewing-machine, comprising divergent wings, and an intermediate tongue with divergent sides, arches connecting the wings and tongue, the rear edges of the arches being curved in a line at an incline to the longitudinal axis of the guide, whereby the hair or pile is continuously turned in-

wardly and downwardly as it is fed to the 25 guide.

12. A guide for a sewing-machine for furs and carpets, including a turning edge for the fur or pile set obliquely to the path of the material and a contiguous holding-plate for pre- 30 venting the turned fur or pile from raising until the sewing is accomplished, substantially as described.

13. A guide for a sewing-machine for furs and carpets, including turning edges for the 35 fur or pile set obliquely to the path of the material, contiguous convergent holding-plates for preventing the turned pile from raising and plates arranged parallel to said convergent plates for holding the material against 40 said convergent plates, substantially as described.

In testimony whereof I affix my signature in presence of two witnesses.

CLARA H. CUNNINGHAM.

Witnesses:

C. E. SCHNELL,

W. CLARENCE DUVAL.

Correction in Letters Patent No. 770,678.

It is hereby certified that in Letters Patent No. 770,678, granted September 20, 1904, upon the application of Clara A. Cunningham, of Washington, District of Columbia, for an improvement in "Guides for Fur or Carpet Sewing-Machines," an error appears in the printed specification requiring correction, as follows: On page 5, after line 42, the following paragraph should be inserted, constituting the fourteenth claim:

14. A guide for a sewing-machine for furs and carpets, including turning edges for the fur or pile set obliquely to the path of the material, contiguous convergent holding plates for preventing the turned pile from raising and plates arranged parallel to said convergent plates for holding the material against said convergent plates, the said convergent plates, and their parallel plates being united by an arch of metal integral with both plates, substantially as described.

and that the said Letters Patent should be read with this correction therein that the same may conform to the record of the case in the Patent Office.

Signed and sealed this 4th day of October, A. D., 1904.

[SEAL.]

F. I. ALLEN,
Commissioner of Patents

the upper rear edge of the wings and at an incline to the longitudinal axis of the guide, whereby a continuous forwardly-inclined pile or hair turning surface is provided, said pile or hair turning surface being continuous with the upper edges of the rear portions of the guide-wings and with the under surface of the tongue.

10 A guide for a sewing-machine, having arched guide - wings and an intermediate tongue, the rear edges of the arches which connect the tongue to the wings forming a continuation of the upper edges of the rear portions of the wings and of the lower edges of the tongue, in combination with means for supporting the guide in position before a needle.

11. A guide for a sewing-machine, comprising divergent wings, and an intermediate tongue with divergent sides, arches connecting the wings and tongue, the rear edges of the arches being curved in a line at an incline to the longitudinal axis of the guide, whereby the hair or pile is continuously turned in-

wardly and downwardly as it is fed to the guide.

12. A guide for a sewing-machine for furs and carpets, including a turning edge for the fur or pile set obliquely to the path of the material and a contiguous holding-plate for preventing the turned fur or pile from raising until the sewing is accomplished, substantially as described.

13. A guide for a sewing-machine for furs and carpets, including turning edges for the fur or pile set obliquely to the path of the material, contiguous convergent holding-plates for preventing the turned pile from raising and plates arranged parallel to said convergent plates for holding the material against said convergent plates, substantially as described.

In testimony whereof I affix my signature in presence of two witnesses.

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14. A guide for a sewing-machine for furs and carpets, including turning edges for the fur or pile set obliquely to the path of the material, contiguous convergent holding plates for preventing the turned pile from raising and plates arranged parallel to said convergent plates for holding the material against said convergent plates, the said convergent plates, and their parallel plates being united by an arch of metal integral with both plates, substantially as described.

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14. A guide for a sewing-machine for furs and carpets, including turning edges for the fur or pile set obliquely to the path of the material, contiguous convergent holding plates for preventing the turned pile from raising and plates arranged parallel to said convergent plates for holding the material against said convergent plates, the said convergent plates, and their parallel plates being united by an arch of metal integral with both plates, substantially as described.

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