Feb. 13, 1923. 1,444,894

C. WINKELMANN

STRIP FOLDER FOR SEWING MACHINES

Filed Mar. 24, 1921 2 sheets-sheet 1

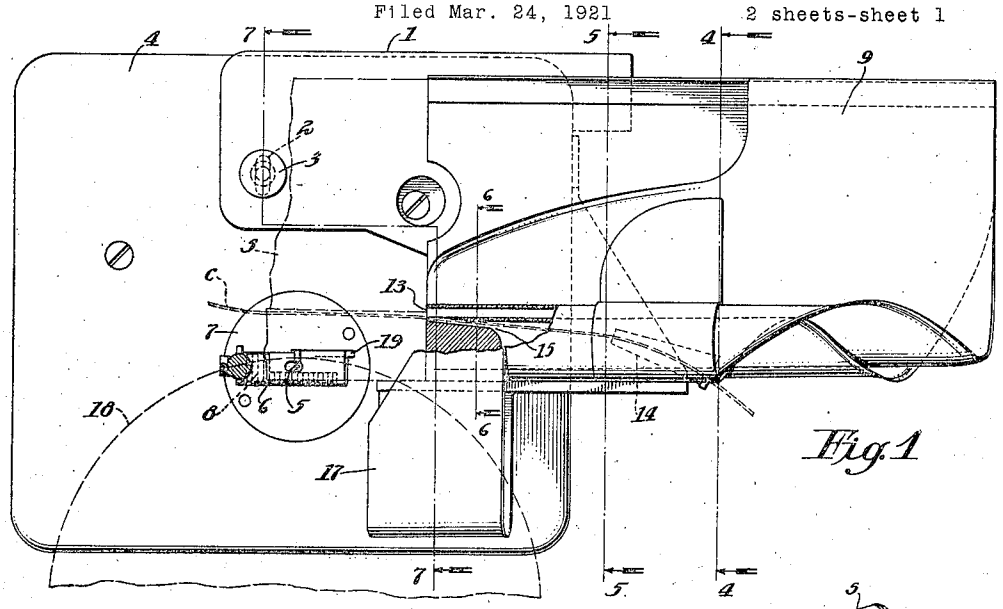


Fig. 1

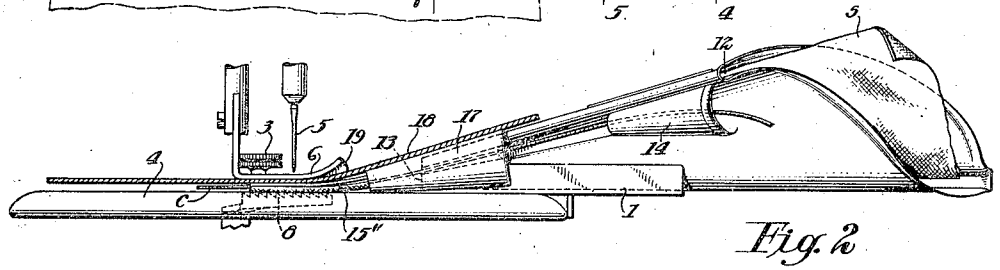


Fig. 2

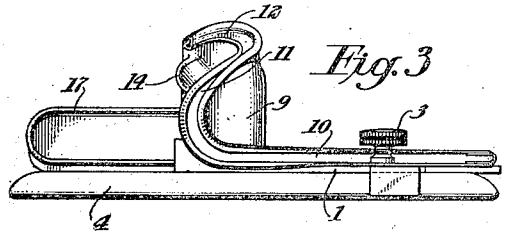


Fig. 3

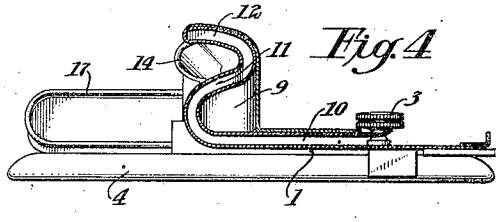


Fig. 4

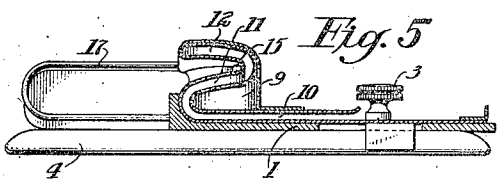


Fig. 5

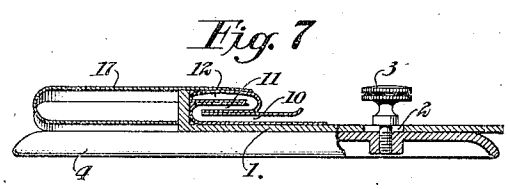


Fig. 7

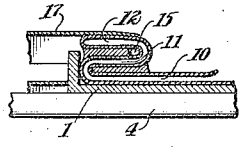


Fig. 6

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STRIP FOLDER FOR SEWING MACHINES

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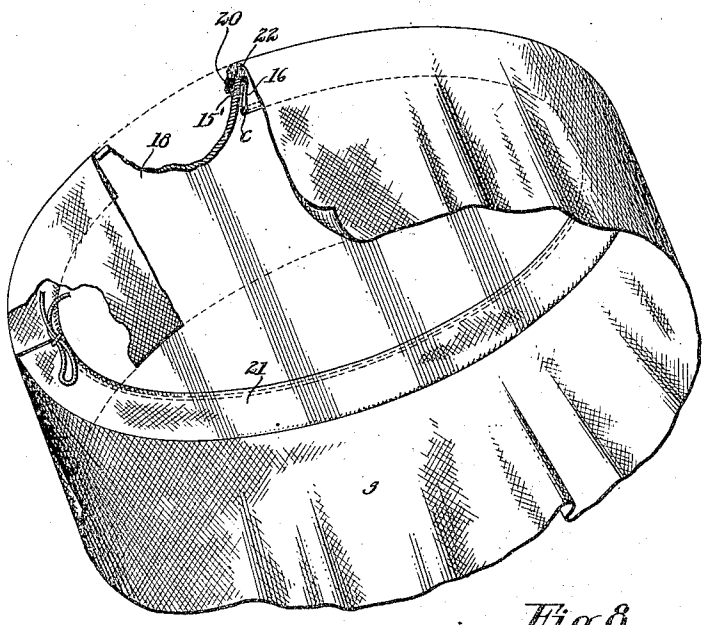
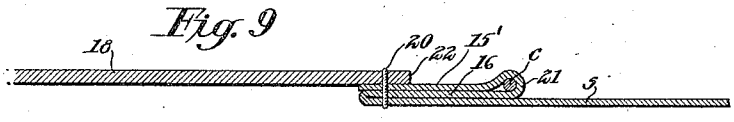


Fig. 8

Fig. 9



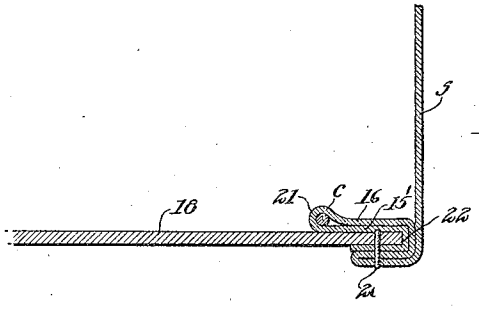


Fig. 10

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Patented Feb. 13, 1923. 1,444,894

UNITED STATES PATENT OFFICE.

CHARLES WINKELMANN, OF NORTH BERGEN, NEW JERSEY, ASSIGNOR TO THE SINGER MANUFACTURING COMPANY, OF ELIZABETH, NEW JERSEY, A CORPORATION OF NEW JERSEY.

STRIP FOLDER FOR SEWING MACHINES.

Application filed March 24, 1921. Serial No. 455,132.

To all whom it may concern:

Be it known that I, CHARLES WINKELMANN, a citizen of the United States, residing at North Bergen, in the county of Hudson and State of New Jersey, have invented certain new and useful Improvements in Strip Folders for Sewing Machines, of which the following is a specification, reference being had therein to the accompanying drawings.

This invention relates to strip-folders for sewing machines and has for an object to provide a strip-folder of special construction adapted more particularly for use in the production of a novel hat-lining such as disclosed in my copending application Serial No. 455,133, filed herewith, and comprising a top-member and side and insert strips, the latter being preferably formed of one piece of material having at its upper edge an S-fold so presented and stitched to the top-member as to provide a casing located adjacent the edge of the top-member and adapted to receive a draw-cord to hold the casing bent inwardly to a position within the hat-lining concealing the stitching. A further object of the invention is to provide for the introduction of a cord within the casing as the latter is being formed and as the top and side members are being stitched together, whereby the hat-lining may be made complete in one operation on a sewing machine.

To the attainment of the ends in view, the folder is constructed with a base and a body formed with an S-shaped passageway having a relatively wide lower run and relatively narrow intermediate and upper runs inclined downwardly toward the delivery end of the folder. A cord-guide is preferably provided between the relatively narrow upper and intermediate runs to lead a draw-cord between the upper and intermediate plies of the S-fold formed at the edge of the strip. The folder is also preferably provided adjacent the upper run with a laterally extending supporting surface upon which the top-member of the hat-lining may rest as it is being presented together with the folded strip to the sewing mechanism of the machine with which the folder is assembled. It is preferred to provide the sewing machine with a presser-foot having an edge-guide for the top-member of the hat-lining to secure a uniform overlap between the top and folded side members.

In the accompanying drawings illustrating the preferred embodiment of the invention, Fig. 1 is a top plan view of a sewing machine work-support with the folder secured in working position thereon. Fig. 2 is a side elevation of the same. Fig. 3 is a front elevation. Figs. 4, 5, 6 and 7 are, respectively, transverse sections on the lines 4—4, 5—5, 6—6 and 7—7, Fig. 1. Fig. 8 is a perspective view of a novel hat-lining in its preferred form as produced in one operation by means of the present improvement. Fig. 9 is a section through the seam of the hat-lining as it issues from the machine and Fig. 10 is a similar view after the draw-cord has been tightened.

In its preferred embodiment, the folder comprises the base 1 formed with a slot 2 through which passes the thumb-screw 3 attaching it to the cloth-plate 4 of a sewing machine having the reciprocating needle 5, presser-foot 6 and throat-plate 7 through which the usual feed-dog 8 operates. Secured to the base 1, as by soldering, is the body 9 formed with spaced walls defining an S-shaped passageway having a relatively wide lower run 10 and relatively narrow intermediate and upper runs 11 and 12, respectively; the latter tapering downwardly toward the level of the lower run 10 at the delivery end of the folder. Positioned between the upper and intermediate runs 11 and 12 of the passageway is a cord-guide 14 which leads the cord *c* between the upper and intermediate plies 15′ and 16, respectively, of the folded side strip *s*. Associated with the cord-guide 14 is a second cord-guideway 15 formed near the delivery end of the folder. The cord-guides 14 and 15, being in substantial alinement, may, for all intents and purposes, be considered as a single cord-guide in two sections positioned between the upper and intermediate runs 12 and 11 of the folder.

Projecting laterally from the body of the folder above the base 1 and preferably just above or adjacent the upper run 12 at its delivery end, is the support 17 for the top-member 18 of the hat-lining. The support 17 is preferably inclined downwardly toward the delivery end of the folder as is the upper run 12.

The presser-foot 6 is preferably formed at one side with the edge-guiding rib 19 for the top-member 18, to maintain a uniform overlap between the top-member and lining-strip as they are sewed together by the line of stitches 20. The folder is clear of projections extending vertically above the upper run at or beyond the delivery end of the folder. The top member 18 of the hat lining is thus permitted to be fed to the stitch-forming mechanism flat against the upper fold of the lining strip as the latter issues from the folder.

It will be observed that after the work passes through the machine, the line of stitches 20, in addition to securing the folded strip *s* to the top-member 18, forms with the plies 15′ and 16 a casing 21 for the draw-cord *c* which may be tightened to bend the casing 21 inwardly around the edge 22 of the top-member and to a position within the hat-lining concealing the line of stitching 20. Thus the hat-lining is formed complete in one operation upon the sewing machine.

Having thus set forth the nature of the invention, what I claim herein is—

1. A sewing machine strip-folder comprising opposed walls defining a passageway of S-shaped cross-section, the lower run of said passageway being wider than the intermediate and upper runs, and means between the upper and intermediate runs of said passageway for guiding a cord between an outer and an intermediate fold of a strip passing through said folder, said folder at and beyond its delivery end being clear of vertical projections above its upper run.

2. A sewing machine strip-folder comprising a base and a body having spaced walls defining a passageway of S-shaped cross-section, and a work-support extending laterally from the body of said folder above the upper run of the passageway.

3. A sewing machine strip-folder comprising a base and a body having opposed walls defining a passageway of S-shaped cross-section, means between the upper and intermediate runs of said passageway for guiding a cord between the upper and intermediate folds of a strip passing through said folder, and a work-support extending laterally from the body of said folder above the upper run of the latter.

4. The combination with a sewing machine having a reciprocating needle, feeding mechanism, and a presser-foot formed with an edge-guide, of a strip-folder comprising spaced walls defining an S-shaped passageway, said folder being so associated with the needle and presser-foot that the edge-guide lies between parallel lines defined by the upper ply of the folded strip passing through the folder.

5. The combination with a sewing machine having a reciprocating needle, a throat-plate, feeding mechanism, and a presser-foot formed with an edge-guide, of a strip-folder comprising spaced walls defining an S-shaped passageway, said folder being so associated with the needle and presser-foot that the edge-guide lies between parallel lines defined by the upper ply of the folded strip passing through the folder, and a work-support extending laterally from said folder above the throat-plate of the machine.

6. The combination with a sewing machine having a reciprocating needle, a throat-plate, feeding mechanism, and a presser-foot formed with an edge-guide, of a strip-folder comprising spaced walls defining an S-shaped passageway, said folder being so associated with the needle and presser-foot that the edge-guide lies between parallel lines defined by the upper ply of the folded strip passing through the folder, a work-support extending laterally from said folder above the throat-plate of the machine, and a cord-guide between an extreme and an intermediate run of said passageway.

7. A strip-folder for sewing machines having a base and a body formed with spaced walls defining in cross-section an S-shaped passageway with closed ends, the lower run of said passageway being extended to one side beyond the intermediate and upper runs, and a work-support above the upper run and extending laterally at the other side of the intermediate and upper runs.

8. An attachment for sewing machines comprising a strip-guide having a relatively wide run for guiding the relatively wide side strip portion of a hat-lining, and other relatively narrow communicating runs for guiding a folded insert strip portion adjacent one edge of the side strip portion, a cord guide intermediate the runs for said insert strip portion, and an edge-guide disposed between the projected boundary lines of the narrow runs.

9. The combination with a sewing machine having a reciprocating needle, feeding mechanism, and a presser-foot, of an edge-guide, and a strip-folder comprising spaced walls defining an S-shaped passageway, said folder and edge-guide being so related to one another and to the needle and presser-foot that the edge-guide lies between parallel lines defined by the edges of the upper ply of the folded strip passing through the folder, and that the needle lies between parallel lines defined by the edge-guide and the free edge of the upper ply of said folded strip.

In testimony whereof, I have signed my name to this specification.

CHARLES WINKELMANN.