June 5, 1923.

1,457,449

J. R. MOFFATT

CLOTH PLATE FOR SEWING MACHINES

Filed Sept. 12, 1921

Fig. 1.

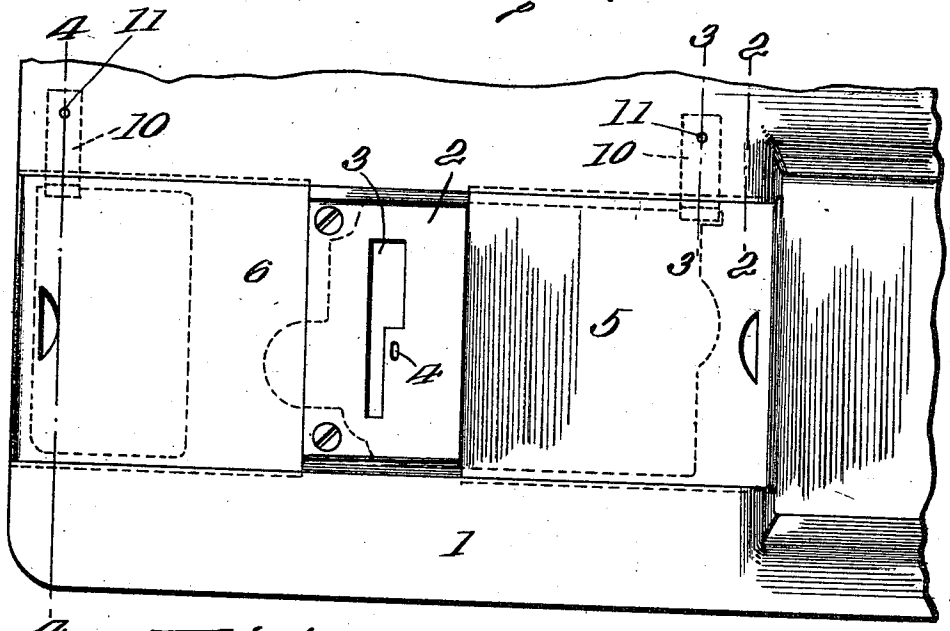


Fig. 2.

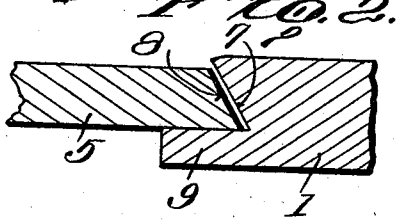


Fig. 3.

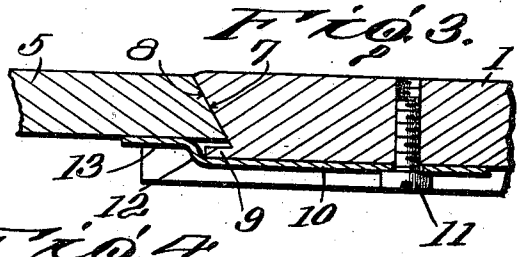


Fig. 4.

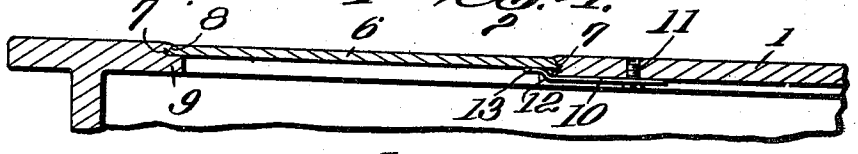


Fig. 5.

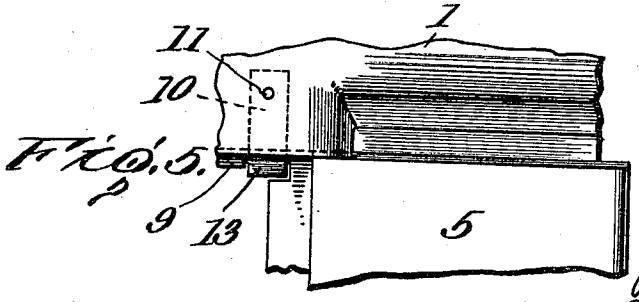
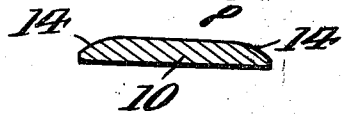


Fig. 6.



Inventor

James R. Moffatt

By - Sturtevant Mason

Attorneys

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UNITED STATES PATENT OFFICE.

JAMES R. MOFFATT, OF CHICAGO, ILLINOIS, ASSIGNOR TO UNION SPECIAL MACHINE COMPANY, OF CHICAGO, ILLINOIS, A CORPORATION OF ILLINOIS.

CLOTH PLATE FOR SEWING MACHINES.

Application filed September 12, 1921. Serial No. 500,179.

To all whom it may concern:

Be it known that I, JAMES R. MOFFATT, a citizen of the United States, residing at Chicago, in the county of Cook, State of Illinois, have invented certain new and useful Improvements in Cloth Plates for Sewing Machines, of which the following is a description, reference being had to the accompanying drawing and to the figures of reference marked thereon.

The invention relates to new and useful improvements in cloth plates for sewing machines, and more particularly to means for holding the cover plate thereof from accidental displacement.

An object of the invention is to provide a cloth plate construction wherein the cover plate is spring pressed upwardly so as to cause the inclined dovetailed walls of the sides thereof to engage and frictionally bind upon the inclined dovetailed walls along the sides of the opening closed by the cover plate.

A further object of the invention is to provide a cloth plate construction of the above character, wherein the spring means is located between the ends of the side walls along the opening so that when the cover plate is first entered into the dovetailed groove therefor, it is free from action thereon by the spring means.

A still further object of the invention is to provide a cover plate construction of the above character wherein the spring means is in the form of a leaf spring located at one side of the opening only, and said leaf spring is so shaped on the upper surface thereof that the cover plate may readily ride over the same.

These and other objects will in part be obvious and will in part be hereinafter more fully disclosed.

In the drawings which show by way of illustration one embodiment of the invention—

Figure 1 is a plan view of a portion of a cover plate embodying my improvements;

Fig. 2 is a sectional view on the line 2—2 of Fig. 1;

Fig. 3 is a sectional view on the line 3—3 of Fig. 1;

Fig. 4 is a sectional view on the line 4—4 of Fig. 1;

Fig. 5 is a top plan view of the portion of a cloth plate with the cover plate just entering the dovetailed recess therefor, and

Fig. 6 is a transverse sectional view through the end of the leaf spring.

In the drawings I have shown a cloth plate which is indicated at 1, which cloth plate is provided with the usual throat plate 2 having a slot for the feed dog 3 and a hole for the needle 4. This throat plate may of course, be of any character, and the form shown is purely for the purpose of description. At each side of the throat plate there is an opening through the cloth plate. The opening on the right as viewed in Fig. 1 is closed by a cover plate 5. The opening on the left as viewed in said figure is closed by a cover plate 6.

The present invention has to do with means for holding the cover plate in place so as to prevent its accidental displacement. The means as applied to the two cover plates 5 and 6 is identical and the description of one will answer for the other, like reference characters being used to indicate the parts associated with the different cover plates. The side walls of the opening closed by the cover plate 6 incline toward the center plane of the opening as clearly shown in Fig. 4, where these inclined walls are indicated at 7—7. These inclined walls form a dovetailed recess. The side walls of the cover plate are likewise inclined inwardly toward the center plane to correspond with the inclined walls 7—7, and thus it is that the cover plates are dovetailed in cross section. These inclined walls of the cover plate are indicated at 8—8. Along the bottom of the inclined walls 7—7 are supporting ledges 9—9 on which the cover plate may rest as it enters the dovetailed recess. The distance between the inclined walls 8—8 of the cover plate is slightly less than the distance between the inclined walls along the side of the openings as indicated in Fig. 2.

Secured to the under side of the cloth plate is a leaf spring 10. Said spring is secured to the cloth plate by means of a screw 11. The spring 10 is bent upwardly at 12 and at its outer end is provided with a horizontal portion 13 adapted to bear against the under face of the cover plate. Said spring is rounded off at 14—14 on the upper side thereof. When the cover plate is entered into the dovetailed recess, it may be readily entered because it is of slightly less width than the dovetailed recess into which it is placed. As

it is moved forward, the forward end of the cover plate will ride over the incline 14 on the leaf spring, thus forcing the leaf spring downwardly slightly, or the cover plate will be yieldingly forced upwardly causing the inclined wall 8 of the cover plate to slide along the inclined wall 7 at the side of the opening, and this will force the cover plate laterally until the side wall at the opposite side of the cover plate makes frictional contact with the side wall of the opening opposite the spring. Thus it is that both the side walls of the cover plate will be caused by the spring to frictionally engage the respective side walls along the opening. This frictional engagement of the side walls of the opening by the cover plate serves to hold the cover plate from accidental displacement, but at the same time permits the cover plate to be withdrawn and to also permit the cover plate to be readily supported in the dovetailed recess and forced inwardly to close the opening.

It is obvious that minor changes in the details of construction may be made without departing from the spirit of the invention as set forth in the appended claims.

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

1. A cloth plate for sewing machines having an opening therethrough, a cover plate for said opening, said cloth plate being formed with supporting ledges at opposite sides of the opening, and walls extending upwardly from said ledges and forming a recess for the cover plate, said cover plate having walls at the opposite sides thereof corresponding to the walls of the recess in the cloth plate, the distance of the supporting ledge at one side of the cloth plate and from the surface of the cloth plate being greater than the thickness of the cover plate, whereby when said cover plate rests on the supporting ledge, it will fit loosely in the recess, and spring means for forcing the cover plate upwardly and causing said cover plate to frictionally engage the cloth plate.

2. A cloth plate for sewing machines having an opening therethrough, a stove plate for said opening, said cloth plate being formed with supporting ledges at opposite sides of the opening, and inclined walls extending upwardly from said ledges and forming a dove-tailed recess for the cover plate, said cover plate having inclined walls at the opposite sides thereof corresponding to the inclined walls of the dove-tailed recess in the cloth plate, the distance of the supporting ledge at one side of the cloth plate from the surface of the cloth plate being greater than the thickness of the cover plate whereby when said cover plate rests on the supporting ledges it will fit loosely in the dovetailed recess, and spring means for forcing the cover plate upwardly and causing the inclined walls thereof to frictionally engage the inclined walls of the dove-tailed recess in said cloth plate.

3. A cloth plate for sewing machines having an opening therethrough, a cover plate for said opening, said cloth plate being formed with supporting ledges at opposite sides of the opening, and inclined walls extending upwardly from said ledges and forming a dove-tailed recess for the cover plate, said cover plate having inclined walls at the opposite sides thereof corresponding to the inclined walls of the dove-tailed recess in the cloth plate, the distance of the supporting ledge at one side of the cloth plate from the surface of the cloth plate being greater than the thickness of the cover plate whereby when said cover plate rests on the supporting ledges it will fit loosely in the dove-tailed recess, and spring means for forcing the cover plate upwardly and causing the inclined walls thereof to frictionally engage the inclined walls of the dovetailed recess in said cloth plate, said spring means including a leaf spring secured to the cloth plate at one side of the opening and between the ends of the inclined wall at one side of the opening and bearing against the under face of the cover plate.

In testimony whereof, I affix my signature.

JAMES R. MOFFATT.