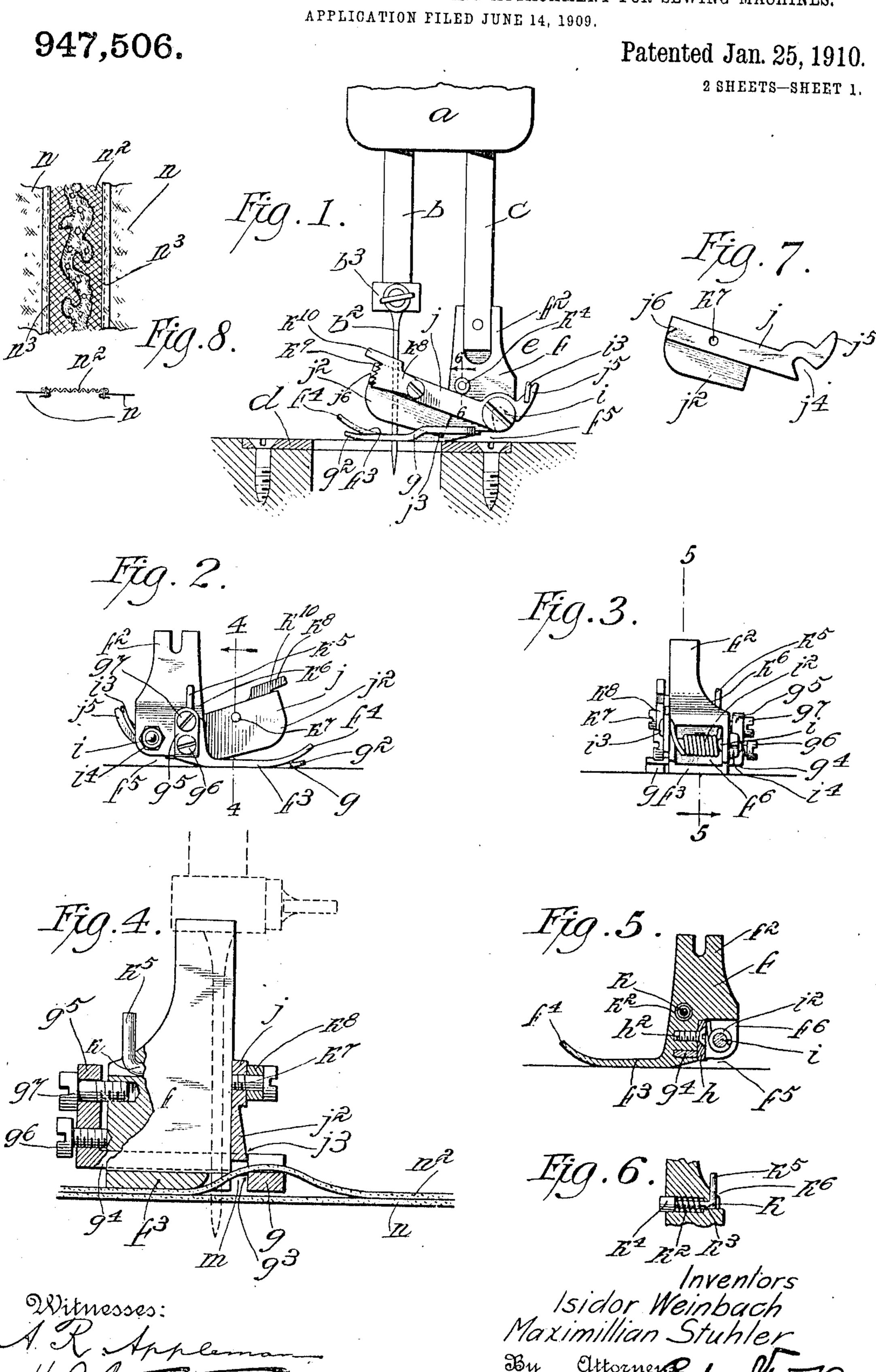
I. WEINBACH & M. STUHLER.

COMBINATION PRESSURE FOOT AND TRIMMING ATTACHMENT FOR SEWING MACHINES.



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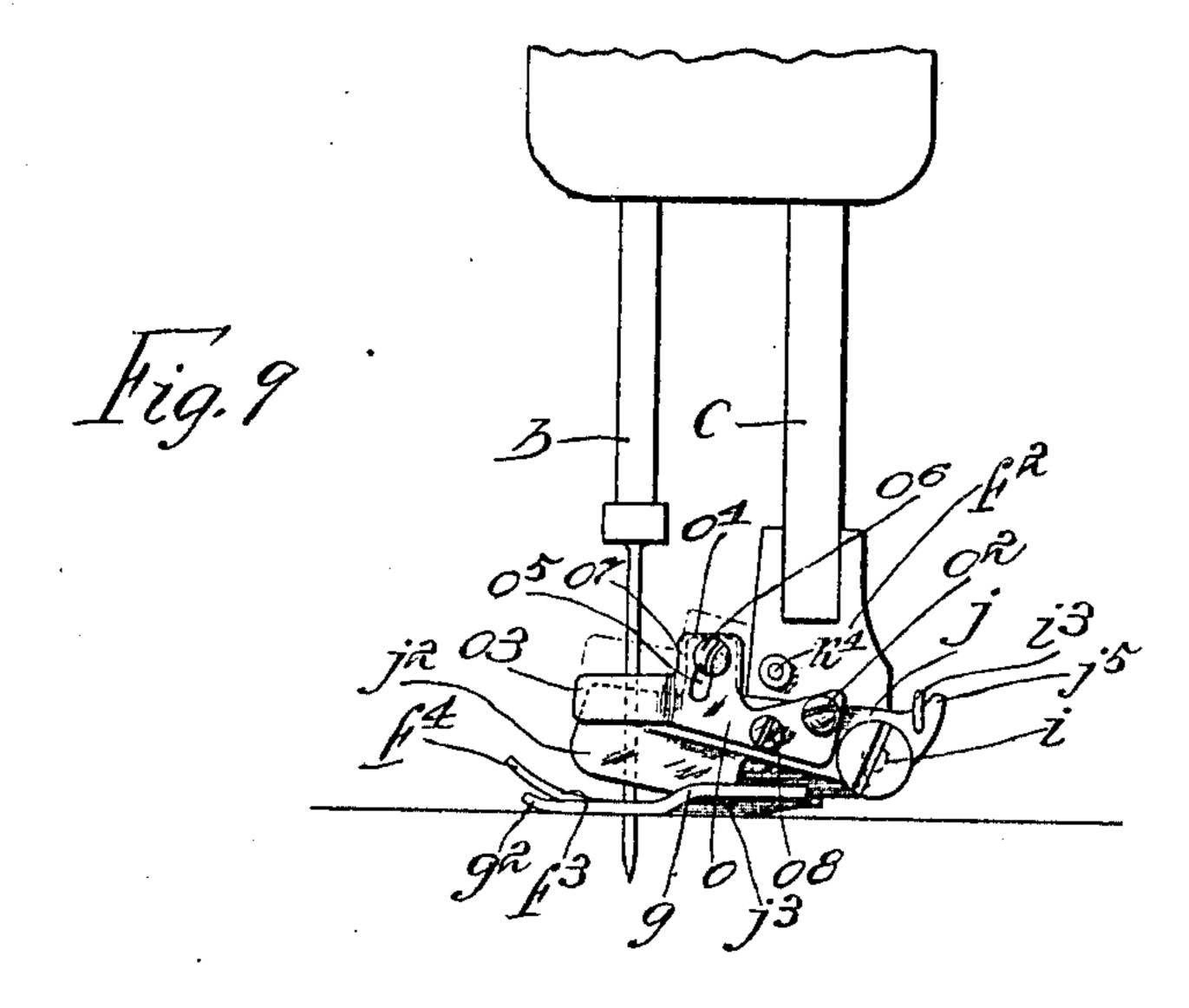


Fig. 10

Fig.11

Sig.11

Sig.11

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COMBINATION PRESSURE-FOOT AND TRIMMING ATTACHMENT FOR SEWING-MACHINES.

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To all whom it may concern:

Be it known that we, Isidor Weinbach and Maximillian Stuhler, citizens of the United States, and residing at Brooklyn, in the county of Kings and State of New York, have invented certain new and useful Improvements in Combination Pressure-Foot and Trimming Attachments for Sewing-Machines, of which the following is a specification, such as will enable those skilled in the art to which it appertains to make and use the same.

This invention relates to sewing machines; and the object thereof is to provide a ma-15 chine of this class with an improved combination pressure foot and trimming attachment particularly designed for use in fancy work wherein it is desired to attach one piece of goods to another by means of curved 20 or other lines of stitching, and at the same time cut or trim the attached piece of goods along the line of the stitching; a further object being to provide the pressure foot of a sewing machine with a trimming attach-25 ment for the purpose specified which is operated by the needle bar in the downward movement thereof; and with these and other objects in view the invention consists in a device of the class specified constructed as 30 hereinafter described and claimed.

The invention is fully disclosed in the following specification, of which the accompanying drawings form a part, in which the separate parts of our improvement are designated by suitable reference characters in each of the views, and in which;—

Figure 1 is a view showing a part of the end of the head portion of a sewing machine in which the needle bar and pressure foot 40 bar are mounted, and showing said parts together with our improved pressure foot and trimming device connected with the pressure foot bar, a needle connected with the needle bar, and showing also the throat plate of 45 the machine in section, Fig. 2 a side elevation of our improved pressure foot and trimming attachment detached and showing the side thereof opposite to that shown in Fig 1, Fig. 3 a rear view of the pressure foot 50 and trimming attachment as shown in Fig. 2, Fig. 4 a section on the line 4—4 of Fig. 2 and on an enlarged scale, Fig. 5 a section on the line 5—5 of Fig. 3, Fig. 6 a section on the line 6—6 of Fig. 1, Fig. 7 a side view 55 of a cutter arm and blade which forms a part of our improvement detached, Fig. 8 a

plan and end view of a strip of light fabric set into or connected with a strip of light fabric of different designs by means of our improvement, Fig. 9 a view similar to Fig. 60 1 but showing a modification, Fig. 10 a plan view of a cutter arm shown in Fig. 9 and an adjustable member connected therewith, and;—Fig. 11 a side view of said arm with the adjustable member detached therefrom. 65

In Fig. 1 of the accompanying drawings we have shown at a a part of the head of a sewing machine in which the needle bar b and pressure foot bar c are mounted and movable, and we have also shown at d the 70 throat plate of the machine, at b^2 a needle connected with the needle bar b in the usual manner, and at e our improved combination pressure foot and trimming attachment.

The pressure foot and trimming attach- 75 ment e comprise a main body part f having an upwardly directed shank member f^2 and a supplemental part f^3 which forms the pressure foot proper, and the pressure foot proper is provided with an upwardly curved 80 front end portion f^4 , and in the heel portion of the part f is a transverse recess f^5 having a central upwardly directed extension forming a supplemental recess f^6 .

The supplemental blade member g of the 85 combination pressure foot and trimming attachment comprises a forwardly directed horizontal blade member secured to the heel portion of the pressure foot proper, and ranging forwardly approximately in a horizontal plane parallel with that of said pressure foot for a part of its length, and between which and said part is the needle slot, and this slot extends backwardly between the heel portion of the part g and the corresponding part of the pressure foot and forms an opening for the supplemental blade member hereinafter described.

The front end of the blade member g is curved upwardly as shown at g^2 , and said 100 blade member is flat both on its top and bottom and is provided at its inner upper corner with a cutting edge g^3 , and the rear end of said blade member g is also provided with a transverse part or arm g^4 which passes 105 through a corresponding transverse recess in the heel portion of the part f and in the back wall of the recess f^5 and is held in place by a plate h through which is passed a screw h^2 as clearly shown in Fig. 5, and the transverse 110 part or arm g^4 of the blade member g is provided at the end thereof opposite said blade

member with an upwardly directed projection g^5 through which is passed a screw g^6 which bears on the inner side of the main part f of the combination pressure foot and 5 trimming attachment when said attachment is secured to the pressure foot bar c, and another screw g^{τ} is passed through the part g^{τ} and into the base portion of the pressure foot as clearly shown in Fig. 4, and by means of 10 this construction the blade g may be adjusted toward and from the pressure foot as desired.

Passing transversely through the side walls of the supplemental recess for in the 15 back of the heel portion of the part f is a bolt i on the outer end of which is detachably mounted a cutter arm j provided with a supplemental blade j^2 which ranges forwardly as shown in Fig. 1, and when said 20 arm j is in operative position the heel of the blade j^2 is always within or bearing on the inner side of the head of the blade member g as clearly shown at j^3 in Figs. 1 and 2.

The heel portion of the arm j is provided 25 with a notch or recess j^4 which opens downwardly and with a backwardly and upwardly directed projection j^5 , and the bolt iis adapted to enter the recess j^4 and forms a pivot on which the arm j turns, and said 30 arm j is also provided at its front end and on one side thereof with a tooth j^6 , and wound on the bolt i in the supplemental revided with a hook i³ adapted to engage the 35 projection j^5 of the arm j and normally holds said arm in a raised position as shown in Fig. 1, and the other end of said spring bears on the inner or back wall of the supplemental recess f^{6} in the heel of the pressure 40 foot.

Passing transversely through the bottom front part of the pressure foot is a bolt k which passes through a chamber k^2 in said bottom part of the pressure foot, and in the 45 chamber k^2 is a spring k^3 through which said bolt passes, and said bolt is provided at its outer end with a head k^4 also movable in said chamber and the inner end of said bolt is provided with an upwardly directed arm 50 k^{5} , and in the normal position of the bolt kthe head k^4 thereof projects and limits the upward movement of the arm j.

The inner side of the pressure foot is provided with an inclined or cam surface k^6 , ⁵⁵ and when the arm k^5 of the bolt k is pulled forwardly it passes down over said cam surface and draws the bolt k inwardly so that the head k^4 thereof will be within the chamber k^3 , and in this position of said bolt the ⁶⁰ arm j may be turned backwardly and raised off of its pivot pin or bolt i and entirely disconnected for repairing or other purposes and for sharpening the blade j^2 when desired.

Pivoted to the outer side of the outer end

portion of the arm j at k^7 is a plate k^8 provided at its outer end with teeth k^9 adapted to be engaged by the tooth j^{c} on the end of the arm j, and the top and outer end portion of said plate is provided with a shoulder 70 or projection k^{10} on which the lower end b^{3} of the needle bar b is adapted to strike in the downward movement of said needle bar so as to depress the arm j and operate the same as hereinafter described, and the object 75 of the plate k^8 , the outer end portion of which may be adjusted vertically, is to accommodate our improvement to needle bars of different lengths, as it will be apparent that when a short needle bar is used the 80 outer end portion of the plate k^s may be raised, and when a longer needle bar is employed the outer end portion of said plate may be depressed.

When the parts are connected in the man- 85 ner described there is a narrow longitudinal space m between the blade member \bar{g} and the upwardly curved front end portion f⁴ of the pressure foot and in which the supplemental blade j^2 operates, and the operation will be 90 readily understood in view of the foregoing description when taken in connection with the accompanying drawing and the following statement thereof.

Our improved combination pressure foot 95 and trimming attachment is connected with the bar c at c^2 in the usual manner, and in cess f^{6} is a spring i^{2} one end of which is pro- | Fig. 4 we have shown at n a piece of goods or fabric and at n^2 another piece of goods or fabric to be connected therewith, and 100 in Fig. 8 we have also shown a plan view of these separate pieces of fabric in which the piece n^2 is set into the piece n, and the object of this machine is to trim the edges n³ of the seams by which the two pieces of 105 fabric are connected without cutting the piece n, and in practice the fabric n is passed under the pressure foot f^3 and under the blade g, while the fabric n^2 is passed under the pressure foot f^3 and upwardly through 110 the slot or opening m and over the blade gand the machine is put in operation.

It will be understood that the machine is operated exactly as all other machines of this class, and the goods or fabric n and n^2 115 are fed beneath the pressure foot in the operation of the machine and are manipulated so as to cause the needle b^2 to follow any desired line, and at each downward movement of the needle bar b the lower end or 120head b^3 thereof strikes the cutter arm j, and said arm is forced downwardly and the blade j^2 thereof operating in connection with the edge g^3 of the blade g trims the upper fabric n^2 along the line of stitching and 125closely adjacent thereto.

The blade g may be adjusted toward or from the pressure foot f^3 by means of the screws g^7 and g^6 , and the inner end of the bolt i on which the spring i^2 is placed and 130

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on the outer end of which the cutter arm jis mounted is provided with a set nut i^4 , and the said cutter arm j and the blade j^2 carried thereby may be adjusted toward or 5 from the main part f of the device in any suitable way, and this adjustment may be accomplished by placing washers between the arm and the corresponding side of the body of the pressure foot and by remov-10 ing said washers when desired, and the proper manipulation of the nut i^4 , but this adjustment in both cases is very slight as only a very small adjustment of these parts is necessary at any time, and in most cases 15 no adjustment at all is required.

Our improved combination pressure foot and trimming attachment is not limited to the specific use thereof herein described and may be used for trimming seams of any kind ²⁰ or class, and for various other purposes as well as those herein specifically set out.

Whenever it is not desired to use the trimming attachment, the bolt k may be pulled inwardly so that it will not operate to hold the arm j in the position shown in Fig. 1, and at such times the arm j may be thrown backwardly and detached, and the device will then operate as an ordinary pressure foot.

The curving of the front end portions of 30 the pressure foot and blade g upwardly as shown and described and raising the front end portion of the pressure foot above the front end portion of said blade facilitates the operation of the device and the manipula-35 tion of the goods or fabric, and by placing the edge of the blade g at its inner upper corner and making the bottom of the blade j^2 flat as shown and described there is no danger of cutting or otherwise injuring the 40 bottom piece of fabric in the operation of the machine, and our invention is particularly adapted to accomplish the result for which it is intended, and various changes therein and modifications of the construc-45 tion described may be made, within the scope of the appended claims, without departing from the spirit of our invention or sacrificing its advantages.

In the modification shown in Figs. 9 to ⁵⁰ 11 inclusive, we substitute for the adjustable plate k^{s} on the cutter arm j a supplemental arm o which is pivoted to the rear end portion of the arm j by a screw o^2 and which ranges forwardly and is provided with an offset member o^3 in connection with which the lower end of the needle bar operates, and the supplemental arm o is provided with an upwardly directed extension o^4 in which is formed a vertically ranging slot o^5 through which is passed a screw o⁶, and the top edge portion of the arm j is provided with a raised member o' through which the screw o^6 is passed, and by means of this construction the front end portion o^3 of the supplemental arm o may be raised or low-

ered, or adjusted into any desired position in order to accommodate the operation of needle bars b of different lengths, in different styles of machines. The supplemental arm o is also provided with a screw o^{s} , and 70 by loosening the screw o^6 the screw o^8 may be manipulated so as to force the end o^3 of said arm outwardly, or by manipulating both of the screws o^6 and o^8 the end o^3 of the arm o may be drawn inwardly as will be 75 readily understood, and the front end portion o^{a} of the arm o is thus made both vertically and laterally adjustable.

Having fully described our invention, what we claim as new and desire to secure 80

by Letters Patent, is:—

1. A trimming attachment for the pressure foot of a sewing machine comprising a main blade connected with the side of the heel portion of said foot and extending for- 85 wardly parallel therewith and approximately in a horizontal plane and between which and said foot is a needle slot, said blade being flat on its bottom side and being provided at its inner upper corner with a cutting edge, an 90 arm pivoted to the rear portion of the pressure foot and over said blade and provided with a supplemental blade which operates in connection therewith and in said slot, the bottom of the supplemental blade being flat 95 and smooth and the cutting edge thereof being formed by the bottom surface thereof and the side thereof adjacent to the first named blade, and a tension device for holding said arm in a raised position, said arm 100 being adapted to be depressed by the lower end of the needle bar in the downward movement thereof.

2. A trimming attachment for the pressure foot of a sewing machine comprising a 105 main blade connected with the side of the heel portion of said foot and extending forwardly parallel therewith and approximately in a horizontal plane and between which and said foot is a needle slot, said blade being 110 flat on its bottom side and being provided at its inner upper corner with a cutting edge, an arm pivoted to the rear portion of the pressure foot and over said blade and provided with a supplemental blade which op- 115 erates in connection therewith and in said slot, the bottom of the supplemental blade being flat and smooth and the cutting edge thereof being formed by the bottom surface thereof and the side thereof adjacent to the 120 first named blade, and a tension device for holding said arm in a raised position, said arm being adapted to be depressed by the lower end of the needle bar in the downward movement thereof, and the front end of the 125 pressure foot being raised above the front end of the main blade.

3. A trimming attachment for the pressure foot of a sewing machine comprising a main blade connected with the side of the 130

heel portion of the pressure foot and extending forwardly parallel therewith and approximately in a horizontal plane and between which and the pressure foot is a needle 5 slot, an arm pivoted to the rear portion of the pressure foot and over said blade and provided with a supplemental blade which operates in connection therewith and in said slot, the front ends of the pressure foot and 10 the main blade being raised and the said end of the pressure foot being raised above the said end of the main blade, and a tension device for holding said arm in a raised position, said arm being adapted to be depressed 15 by the lower end of the needle bar in the

downward movement thereof.

4. A trimming attachment for the pressure foot of a sewing machine comprising a main blade connected with the side of the 20 heel portion thereof and extending forwardly parallel therewith and approximately in a horizontal plane and the cutting edge of which is at the inner upper corner thereof, an arm pivoted to the rear portion of the 25 pressure foot over said blade and provided with a supplemental blade which operates in connection therewith and in said slot, the bottom surface of the supplemental blade being flat and smooth and the cutting edge 30 thereof being formed by said bottom surface and the side surface thereof adjacent to the main blade, and a tension device for holding said arm in a raised position, the front ends of the pressure foot and the main blade being 35 curved upwardly, and the front end of the pressure foot being raised above the front end of the main blade, and said arm being adapted to be depressed by the lower end of the needle bar in the downward movement 40 thereof.

5. A trimming attachment for the pressure foot of a sewing machine comprising a main blade connected with the side of the heel portion of said foot and extending for-45 wardly approximately parallel therewith and approximately in a horizontal plane and between which and said foot is a needle slot, a pivot device in the heel of the pressure foot, an arm pivoted on said pivot device and ⁵⁰ ranging forwardly over and between the pressure foot and the main blade and provided with a supplemental blade adapted to operate in the needle slot and in connection with the main blade, said arm being pro-⁵⁵ vided in the bottom of the rear end portion thereof with a recess which engages said pivot device to form a fulcrum for said arm, a tension device for holding said arm in a raised position, and a transversely movable

device mounted in the body portion of the pressure foot and adapted to limit the upward movement of said arm, said arm being adapted to be depressed by the needle bar in the downward movement thereof.

6. A trimming attachment for the pres-

sure foot of a sewing machine comprising a main blade connected with the side of the heel portion of said foot and extending forwardly approximately parallel therewith and approximately in a horizontal plane and 70 between which and said foot is a needle slot, a pivot device in the heel of the pressure foot, an arm pivoted on said pivot device and ranging forwardly over and between the pressure foot and the main blade and 75 provided with a supplemental blade adapted to operate in the needle slot and in connection with the main blade, said arm being provided in the bottom of the rear end portion thereof with a recess which engages 80 said pivot device to form a fulcrum for said arm, a tension device for holding said arm in a raised position, and a transversely movable device mounted in the body portion of the pressure foot and adapted to limit the 85 upward movement of said arm, said arm being adapted to be depressed by the needle bar in the downward movement thereof, and said arm being also provided at its front end portion with a vertically adjustable contact 90 device in connection with which the lower end portion of the needle bar operates.

7. A trimming attachment for the pressure foot of a sewing machine comprising a main blade connected with the side of the 95 heel portion thereof and between which and said pressure foot is a needle slot, a pivot device at the rear of the heel portion of the pressure foot, an arm provided with a recess adapted to engage said pivot device and with 100 a supplemental blade adapted to operate in the needle slot and in connection with the main blade, a tension device operating in connection with the rear end of said arm to hold the front end thereof in a raised 105 position, and a pin or bolt passing through the body portion of the pressure foot and provided with a spring which normally forces it outwardly so that the outer end thereof will limit the upward movement of 110 the front end portion of said arm, the inner end portion of said pin or bolt being provided with an upwardly directed handle member, and means whereby the turning of said handle member in a vertical plane will 115 withdraw the outer end of said bolt and allow the front end of said arm to move upwardly and backwardly, the front end portion of said arm being adapted to be depressed by the needle bar in the downward 120 movement thereof.

8. A trimming attachment for sewing machines comprising a pressure foot adapted to be connected with a machine in the usual manner, said pressure foot being provided 125 with a main blade member secured to the heel portion thereof and projecting forwardly parallel therewith and between which and said foot is a needle slot, said blade member being provided at its rear end 130

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with a transversely ranging arm, and the heel portion of the pressure foot being provided with a transverse recess through which said arm passes, and with a plate se-5 cured thereto which holds said arm in said recess, a contact arm pivoted to the rear portion of the pressure foot and over said blade and provided with a supplemental blade which operates in connection there-10 with and in said slot and which is provided with a supplemental blade which operates in connection with the main blade and a tension device for holding said contact arm in a raised position, said contact arm being 15 adapted to be depressed by the lower end of the needle bar in the downward movement thereof.

9. A trimming attachment for the pressure foot of a sewing machine comprising a main blade member secured to the heel portion thereof and projecting forwardly approximately parallel therewith, an arm pivoted to the heel portion of the pressure foot and provided with a supplemental blade adapted to operate in connection with the main blade, a tension device for normally holding said arm in a raised position, said arm being adapted to be depressed by the needle bar in the downward movement thereof and a vertical adjustable contact

arm pivoted to the first named arm and ranging forwardly and the front end portion of which is set out from said arm to form a stop or contact device in connection with which the needle bar operates.

10. A trimming attachment for the pressure foot of sewing machines comprising a main blade member secured to the heel portion thereof and projecting forwardly, an arm pivoted to the heel portion of the pressure foot and provided with a supplemental blade adapted to operate in connection with the main blade, a tension device for normally holding said arm in a raised position, said arm being adapted to be depressed by 45 the needle bar in the downward movement thereof, and a vertically and laterally adjustable contact device connected with said arm and in connection with which the needle bar operates.

In testimony that we claim the foregoing as our invention we have signed our names in presence of the subscribing witnesses this 9th day of June 1909.

ISIDOR WEINBACH. MAXIMILLIAN STUHLER.

Witnesses:

H. R. CANFIELD, C. E. MULREANY.