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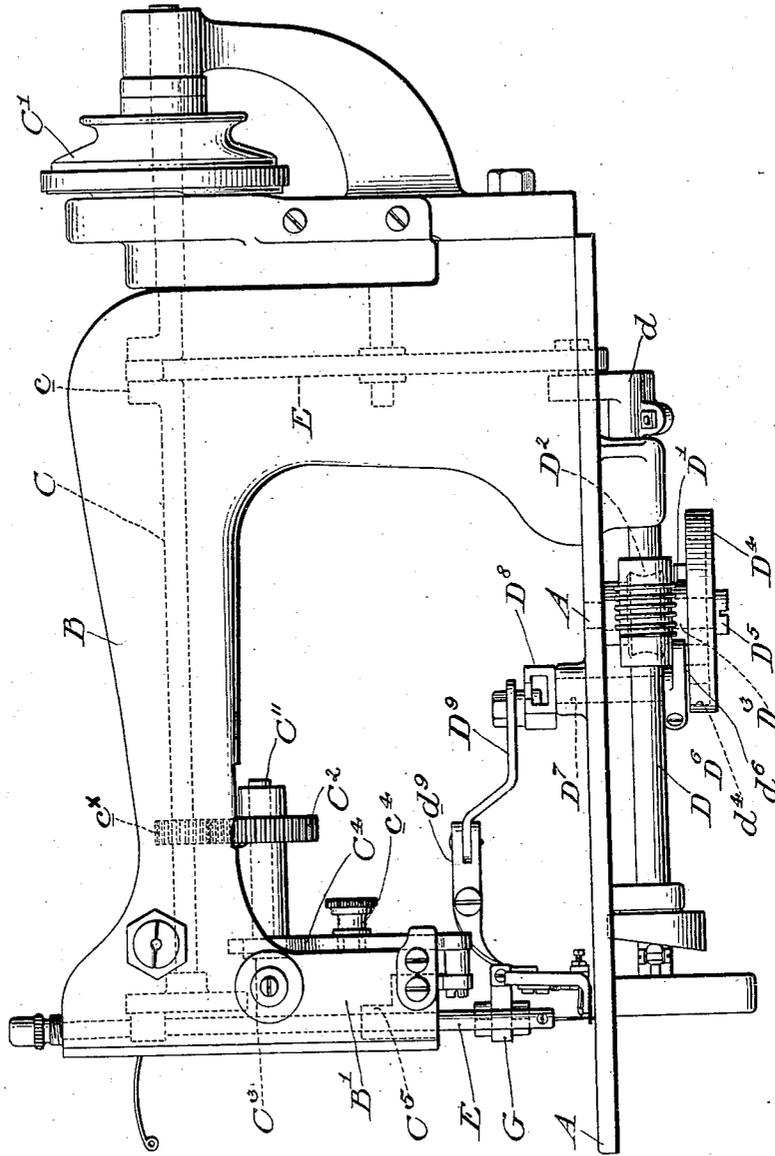
PATENTED APR. 14, 1908.

L. A. WILKINSON & J. C. GOODWIN.  
SEWING MACHINE.

APPLICATION FILED AUG. 13, 1906.

3 SHEETS—SHEET 1.

Fig. 1.



WITNESSES:  
Norman W. Elliott,  
Ernest H. Hobbs.

INVENTORS:  
Lafayette A. Wilkinson and  
Julius C. Goodwin  
BY  
J. O. Williams  
ATTORNEY.

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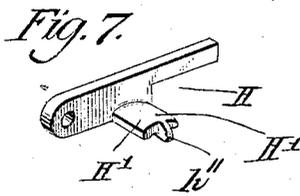
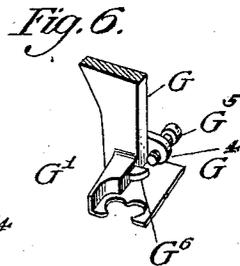
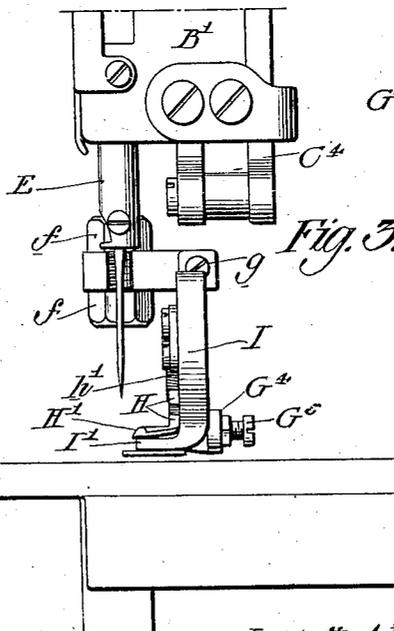
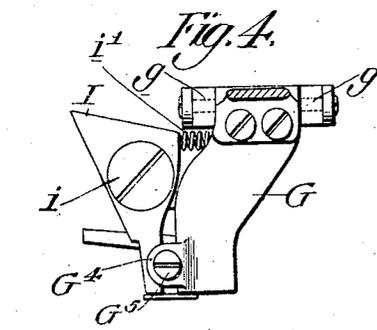
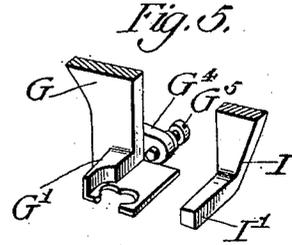
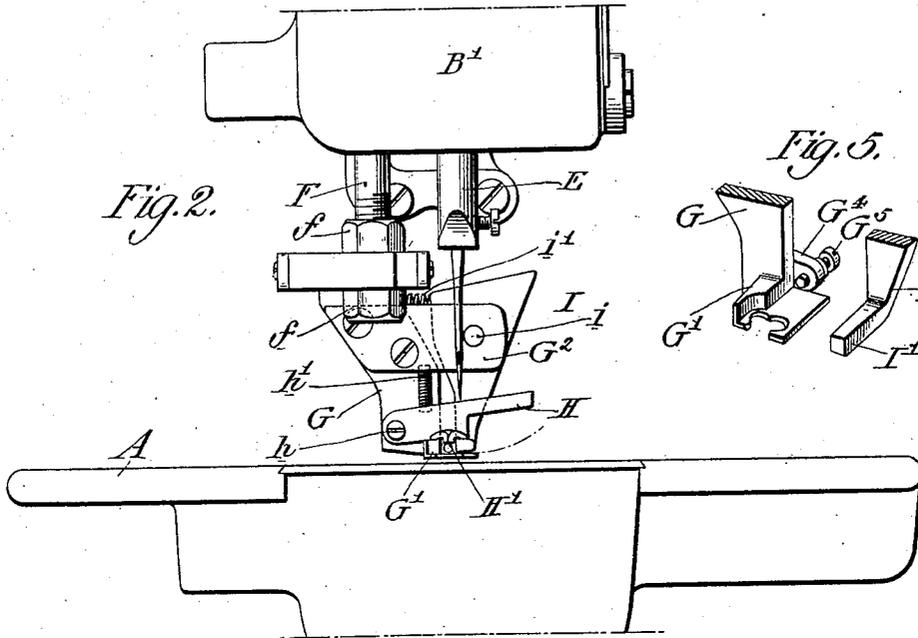
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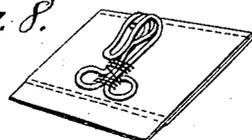
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3 SHEETS—SHEET 2.



WITNESSES:  
 Norman W. Elliott  
 Ernest H. Hobbs.

Fig. 8.



INVENTORS:  
 Lafayette A. Wilkinson and  
 Julius C. Goodwin

BY  
 [Signature]  
 ATTORNEY.

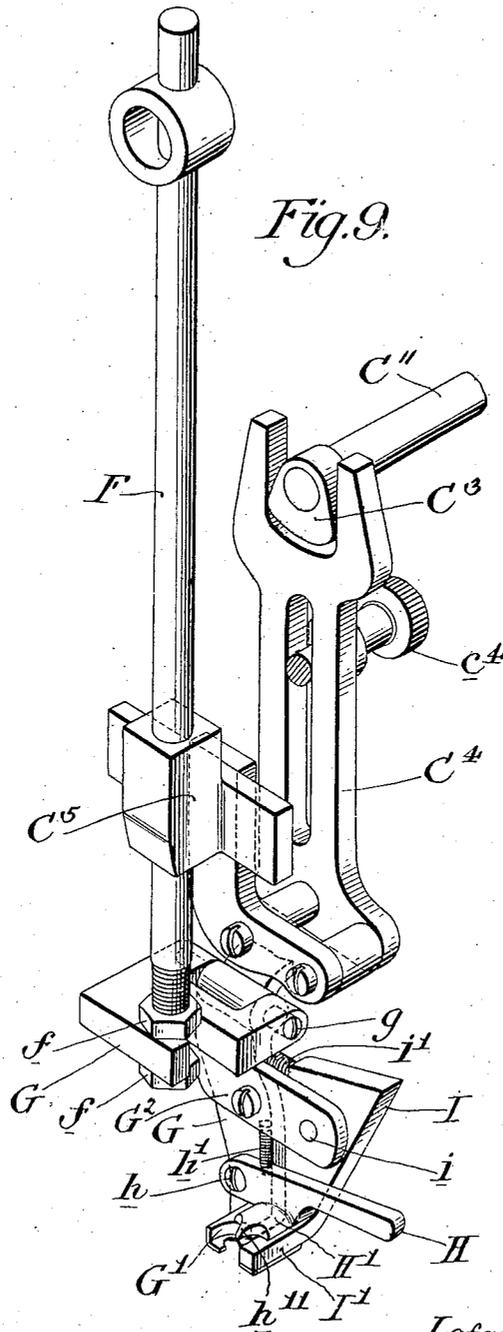
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3 SHEETS—SHEET 3.



WITNESSES:  
*Stewart*  
*H. T. Bennett.*

INVENTORS:  
*Lafayette A. Wilkinson and*  
*Julius C. Goodwin*  
BY  
*David S. Williams*  
ATTORNEY.

# UNITED STATES PATENT OFFICE.

LAFAYETTE A. WILKINSON AND JULIUS C. GOODWIN, OF PHILADELPHIA, PENNSYLVANIA.

## SEWING-MACHINE.

No. 884,629.

Specification of Letters Patent.

Patented April 14, 1908.

Application filed August 13, 1906. Serial No. 330,300.

To all whom it may concern:

Be it known that we, LAFAYETTE A. WILKINSON and JULIUS C. GOODWIN, citizens of the United States, residing at Philadelphia, Pennsylvania, have invented certain new and useful Improvements in Sewing-Machines, of which the following is a specification.

10 Our invention relates to improvements in machines for sewing hooks on garments and embodies an attachment to sewing machines by means of which hooks of varying sizes may be employed and by which a series of 15 stitches may be laid over the shank of the hook as well as through the loops thereof, thus holding the hook firmly in position and guarding the same against turning and getting out of alinement with the eye to which the hook is adapted to be fastened.

20 A further object of our invention is to provide means whereby the shank stitches may be caused to pass around the end of the hook in order that they may be drawn under by the tension of the thread and caused to firmly engage that portion of the shank directly below the end of the hook.

Our invention will be more fully understood by reference to the accompanying 30 pages of drawings in which:

Figure 1 illustrates a side elevation of a sewing machine with the attachment forming the subject matter of our invention shown in position and in line of connection with suitable cams by which our device is operated. Fig. 2 represents a front elevation of our device on a larger scale together with a portion of the frame of the sewing machine. Fig. 3 shows a side view of our attachment similar 40 to that shown in Fig. 1 but on a much larger scale and with the greater part of the body of the machine broken away. Fig. 4 illustrates a view of our attachment looking from the rear of Fig. 2. Fig. 5 is a detached perspective view of the lower parts of the supporting plate G, and lever I. Fig. 6 represents a similar view of the supporting plate G, modified so as to engage the hook from the front and rear. Fig. 7 illustrates a detached perspective view of the lever H, showing the construction of the cast-off finger. Fig. 8 represents a perspective of a hook and a piece of a garment showing the arrangement of the stitches. Fig. 9 shows a de-

tached perspective view of the presser-bar 55 and supporting-plate, together with the lever and cam for operating the same.

Referring to the reference letters of the drawings, A represents the base and B, the arm of the sewing machine, the latter of 60 which is provided with a driving shaft C, having a grooved pulley *c*<sup>1</sup>.

Below the base of the machine is a shaft D, which is rotated by the shaft C, through the medium of a fulcrumed connecting rod E 65 engaging cranks *d* and *e*, mounted respectively on the shafts D and C.

As shown to the left of Fig. 1 the arm B, has an extension B<sup>1</sup>, provided in the usual manner with bearings to receive a needle-bar E, and a presser-bar F, to the latter of 70 which our attachment is applicable. The device forming the subject matter of our invention embodies a hinged supporting-plate G, fulcrumed at points *g*, *g*, and having one 75 member adjustably fastened to the presser bar F by nuts *f*, *f*, while the other is hinged to a link and lever to be hereinafter described.

The supporting plate G, is provided at the 80 bottom with a foot G<sup>1</sup>, which is recessed at the side to form bottom and side flanges for supporting the hook or other device to be sewed in place upon a garment. In order to hold the hook in position from the top and 85 opposite side we employ two levers H and I, both of which are loosely connected to the supporting plate G, and are normally spring pressed to engage the hook. The lever H, is fulcrumed to the supporting plate G by a 90 screw *h* and is pressed downward by means of a spiral spring *h*<sup>1</sup> interposed between said lever and a projecting plate G<sup>2</sup>.

The lever H, is provided with a centrally disposed projection H<sup>1</sup> terminating in a cast-off finger *h*<sup>11</sup>, which being rounded off at the 95 top and smoothly polished serves to guide the thread over the end of the hook upon which it is adapted to rest and in so doing enables the stitches to be formed upon that 100 portion of the shank directly under the point of the hook. The lever I, which holds the hook in place with yielding pressure from the side, is provided at the bottom with an extension I<sup>1</sup>, and at the top is fulcrumed to the 105 plate G<sup>2</sup> by a screw *i*, a spring *i*<sup>1</sup> serving to keep the projection at the bottom of the lever against the side of the hook. This

spring which is placed between the supporting plate G, and the upper side of the lever I, causes the extension I<sup>1</sup> to hold the hook against side displacement while being stitched. At the back of the supporting plate G, is a lug G<sup>4</sup>, threaded to receive an adjusting screw G<sup>5</sup> which forms an adjustable stop for the hook to bear against when first inserted.

The modification illustrated in Fig. 6 shows a lug G<sup>6</sup>, placed in such a position that the upturned end of the hook may rest against it thus forming a stop which in special cases may be employed to check any forward movement of the hook while the same is being stitched in place.

Returning to the mechanism for operating the several parts of our device and as shown in Fig. 1, it will be noted that the presser-bar F, to which our attachment is secured is capable of two movements or feeds, to wit: a cross movement employed in laying the stitches and a horizontal movement adapted to change the stitching from a position in the eyes of the hook to an advanced position on the shank, which movements are accomplished by the following mechanism: On the shaft C, is fastened a pinion c<sup>x</sup>, which meshes with a gear wheel C<sup>2</sup> on a shaft C<sup>11</sup>, which shaft is journaled in a bearing projecting downward from the arm B. The shaft C<sup>11</sup>, is also provided with a cam C<sup>3</sup>, adapted to a rocking lever C<sup>4</sup>, pivoted at c<sup>4</sup>, and connected at its lower end to a box C<sup>5</sup>, forming a journal for the presser-bar F. When the shaft C<sup>11</sup> is rotated through the medium of the pinion c<sup>x</sup> and gear wheel C<sup>2</sup>, the cam C<sup>3</sup>, will at proper intervals operate the rocking lever C<sup>4</sup>, which being adjustably fulcrumed at c<sup>4</sup>, will move the box C<sup>5</sup> and presser bar F carried by it and thus bring first one and then the other of the loops of the hook into alinement with the needle. The requisite number of stitches having been formed in the loops of the hook the hook is moved to the left by the following mechanism to bring the needle in alinement with the shank where the stitching operation as will be understood is repeated.

On the shaft D, is a worm D<sup>1</sup>, which engages a worm wheel D<sup>2</sup>, on a sleeve D<sup>3</sup>, which sleeve also carries a cam D<sup>4</sup> and is secured to the base A, by a stud-bolt D<sup>5</sup>.

The cam D<sup>4</sup>, has a cam-race d<sup>4</sup>, in which runs a roller d<sup>6</sup> of the crank-lever D<sup>6</sup>. This lever is fastened to a shaft D<sup>7</sup> which extends through the base A, to a corresponding crank-lever D<sup>8</sup> which in turn is connected to a lever D<sup>9</sup> and link d<sup>9</sup> to the supporting plate G.

Having described our invention what we claim and desire to secure by Letters Patent is:

1. A hook sewing attachment for sewing machines, comprising a supporting plate fashioned to receive a hook, a lever adapted

to hold the hook in position, a mechanism for reciprocating the supporting plate to direct the stitching from one to the other of the loops of the hook, a mechanism for changing the position of the supporting plate to direct the stitching from the loops of the hook to the shank of the same and a cast off finger carried by the supporting plate and located in such a position with respect to the upturned end of the hook as to deflect the thread around the same when forming stitches upon the shank.

2. A hook sewing attachment for sewing machines, comprising a supporting plate the bottom of which is recessed to receive a hook, a lever fulcrumed to the supporting plate and adapted to hold the hook in position, means for reciprocating the supporting plate while forming stitches between the eyes of the hook, means for changing the position of the supporting plate to direct the stitching from the loops of the hook to the shank of the same and a second lever fulcrumed to the supporting plate and provided with a cast off finger adapted to rest upon the upturned end of the hook and to guide the thread around the same when forming stitches upon the shank.

3. A hook sewing attachment for sewing machines, comprising a supporting-plate formed to receive a hook, a lever fulcrumed to the supporting plate and adapted to clamp the hook against side displacement and a second lever fulcrumed to the supporting-plate and provided with a finger adapted to rest upon the upturned end of the hook and to guide the thread around the same when forming stitches upon the shank of the hook.

4. A hook sewing attachment for sewing machines, comprising a supporting plate having a foot fashioned to receive a hook, a spring-pressed lever fulcrumed to the supporting-plate and having at its lower most end a projection adapted to clamp the side of the hook and a second spring pressed lever fulcrumed to the supporting plate and having a finger adapted to rest upon the upturned end of the hook for the purpose specified.

5. A device of the character specified comprising a supporting-plate, a mechanism for operating the same, a foot formed upon the lower most part of the supporting plate to receive a hook, a lug formed upon the back of the supporting plate provided with a screw forming an adjustable back stop for the hook, a lever fulcrumed to the supporting frame and having a depending portion forming a side clamp for the hook and a second lever fulcrumed to the supporting-plate and provided with a cast off finger adapted to rest upon the upturned end of the hook for the purpose specified.

6. A hook sewing attachment for sewing machines, comprising a supporting-plate

fashioned to receive a hook, a lever adapted to hold the hook in position, means for operating the supporting-plate and a means carried by the supporting-plate to deflect the thread when forming stitches upon the shank of the hook.

7. A hook sewing attachment for sewing machines, comprising a supporting-plate having an angular base adapted to receive a hook, a clamp adapted to hold the hook in position, a mechanism for operating the supporting plate, and a cast off finger carried by the supporting-plate and adapted to guide the thread around the upturned end of the hook when forming stitches upon the shank of the same.

8. A hook sewing attachment for sewing machines, comprising a supporting-plate adapted to receive a hook, a lever fulcrumed to the supporting plate and adapted to hold the hook in position, means for operating the supporting-plate, a second lever fulcrumed to the supporting plate, and provided with a finger adapted to rest upon the upturned end of the hook and to guide the thread around the same when forming stitches upon the shank of the hook.

9. A device of the character specified comprising a supporting-plate having a foot adapted to receive a hook, a lever fulcrumed to the supporting-plate and adapted to confine the hook against lateral movement, a second lever fulcrumed to the supporting-plate and adapted to confine the hook against vertical movement, a finger formed integral with the last mentioned lever and adapted to guide the thread around the upturned end of the hook when forming stitches upon the

shank of the same and a mechanism for operating the supporting-plate.

10. A device of the character specified comprising a supporting-plate fitted to receive a hook, a mechanism for operating the supporting-plate, a lug formed upon the lower part of the supporting plate to engage the upturned end of the hook to form a front stop, a similar lug arranged in a similar manner to form a back stop, a lever fulcrumed to the supporting-plate and acting as a clamp to engage the side of the hook, a second lever fulcrumed in a similar manner acting as a top clamp, and a cast off finger adapted to rest upon the upturned end of the hook and to guide the thread around the same when forming stitches upon the shank of the hook.

11. A machine for sewing on hooks, comprising in combination with the stitch forming mechanism, a presser-bar, a supporting plate fulcrumed thereto and adapted to receive a hook, a lever fulcrumed to the supporting-bar and acting as a side clamp for the hook, a mechanism for operating the supporting bar, and a second lever similarly fulcrumed having a cast off finger adapted to rest upon the upturned end of the hook and to guide the thread around the same when forming stitches upon the shank of the hook.

In testimony whereof we affix our signatures in presence of two witnesses.

LAFAYETTE A. WILKINSON.  
JULIUS C. GOODWIN.

Witnesses:

DAVID S. WILLIAMS,  
ARNOLD KATZ.