

(No Model.)

J. M. GRIEST.

UNDER-BRAIDER FOR SEWING MACHINES.

No. 319,704.

Patented June 9, 1885.

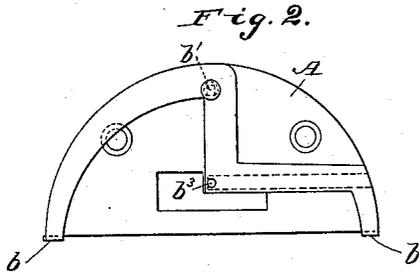
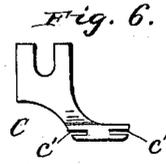
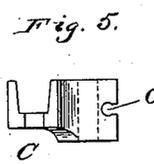
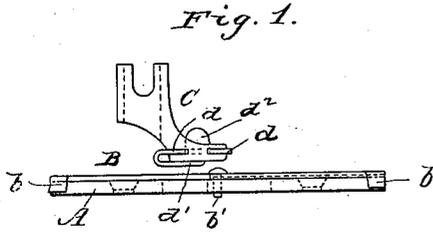


Fig. 9.

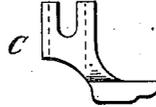
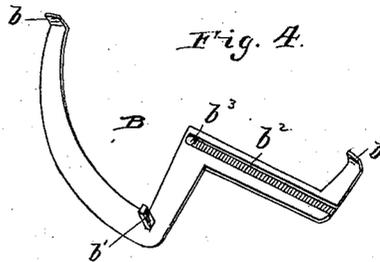
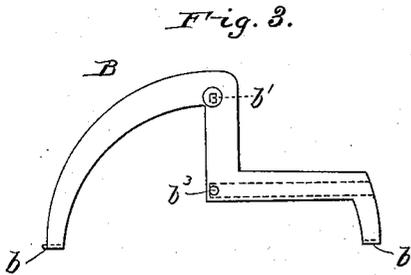
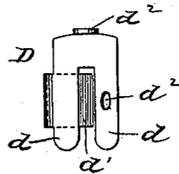


Fig. 8.



WITNESSES:

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# UNITED STATES PATENT OFFICE.

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## UNDER-BRAIDER FOR SEWING-MACHINES.

SPECIFICATION forming part of Letters Patent No. 319,704, dated June 9, 1885.

Application filed October 27, 1884. (No model.)

*To all whom it may concern:*

Be it known that I, JOHN M. GRIEST, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Under-Braiders for Sewing-Machines, of which the following is a specification, reference being had therein to the accompanying drawings.

My invention relates to that class of braiders (generally known as "under-braiders") adapted to guide the braid to the needle of a sewing-machine beneath the fabric to which it is to be stitched, the fabric to be braided being placed on the cloth-plate of the machine face downward, the design or pattern to be followed in braiding being stamped on the reverse or upper side of the fabric.

The object of my invention is to provide an under-braider which, while simple in construction, so that it may be cheaply manufactured, is efficient in operation and may be quickly and conveniently attached to or removed from the sewing-machine.

To this end my braider consists of two parts, one of which is a thin plate adapted to be removably secured to the throat-plate of the machine and having on its under side a braid-guiding passage, and the other of a presser-foot having a toe adapted to rest on the top of the braid-guiding plate, while the heel portion of said foot projects below the toe portion a sufficient distance to have its bottom on a level with the bottom of the braid-guiding plate, this peculiar shape of the presser-foot being preferably secured by means of a small plate adapted to be removably attached to the said presser-foot and having a lip extending under the rear portion of the same, thus forming a false bottom therefor.

In the drawings, Figure 1 is an edge or side view of a sewing-machine throat-plate having my braid-guiding plate attached thereto, and a side view of a presser-foot with a thickened heel portion formed by a removable plate. Fig. 2 is a plan view of a throat-plate and braid-guiding plate. Fig. 3 is a detail plan view of the braid-guiding plate, and Fig. 4 a detail perspective view of the same. Figs. 5 and 6 are plan and side views, respectively,

of the presser-foot with its heel-plate removed. Figs. 7 and 8 are detail end and plan views, respectively, of the presser-foot heel-plate removed from the foot; and Fig. 9, a side view of a modified form of presser-foot having a thickened heel formed integral with the foot.

A indicates an ordinary half-round Singer throat-plate having feed and needle openings and holes for the attaching-screws.

B is my braid-guiding plate, which is formed of spring metal, and is provided at its ends with downwardly-turned lips or lugs *b*, and near its middle with a depending pin or lug, *b'*. In the under side of this plate is a braid-passage, *b<sup>2</sup>*, extending from its front edge to a hole, *b<sup>3</sup>*, which registers with the needle-hole in the throat-plate. When the device is in use, the braid is guided by the passage *b<sup>2</sup>* beneath the plate and emerges through the hole *b<sup>3</sup>*, through which the needle of the machine passes in sewing the braid to the fabric. The plate B is quickly and easily attached to the throat-plate A simply by placing one of the lugs *b* over the straight side of the throat-plate at one end thereof, inserting the pin or lug *b'* in a hole near the middle of the curved edge of said plate, and then springing the other lug *b* over the edge of the other end of the straight side of the throat-plate. By reversing this operation the plate B may be quickly removed from the throat-plate.

C is the presser-foot, the toe of which is recessed at *c* for the passage of the needle, said toe, when the device is in operative position, extending over and resting upon the plate B adjacent to the hole *b<sup>3</sup>* thereof, while the heel portion of said foot extends over the rear or square part of the feed-opening in the throat-plate A. As the presser-foot, with its toe thus resting on the braid-guiding plate B, will be prevented from properly following the downward movements of the feed-dog of the machine as the latter descends in its usual operation, it is essential, in order to secure the proper operation of the feed-dog against the presser-foot and to enable the former to have a proper hold on the work in feeding, that a thickness of material should be added to the rear portion of said foot equal to the thickness of that portion of the braid-guiding

plate B on which the toe of said foot rests. In other words, the presser-foot, in order to co-operate properly with my braid-guiding plate placed on the top of the throat-plate, must  
 5 be adapted to have its toe rest on the upper surface of said plate, while the under surface of its rear portion will be on a level with the under surface of the braid-guiding plate or the upper surface of the throat-plate. I prefer  
 10 to secure this conformation of the presser-foot by means of the forked spring-plate D, the fingers *d* of which fit closely in lateral recesses *c* in the presser-foot, said plate having a lip, *d'*, which extends beneath the rear  
 15 portion of the presser-foot, and said lip having a thickness equal to the thickness of the plate B, thus making a false bottom to the foot, the under surface of which will normally be on a level with the upper surface of the  
 20 throat-plate.

The plate D is preferably provided with an upwardly-turned lug, *d<sup>2</sup>*, against which the operator can press in placing it on or removing it from the presser-foot, and one of the  
 25 fingers *d* is provided with a needle hole, *d<sup>3</sup>*, registering with the needle-passage *c* of the presser-foot. With the plate D detached from the presser-foot the latter will be adapted for ordinary work or for holding attachments as  
 30 described in my application Serial No. 146,584, filed simultaneously herewith.

Instead of thickening the heel portion of the presser-foot, which is to co-operate with my braid-guide by means of the removable  
 35 plate just above described, it is obvious that this thickened heel portion may be formed integral with the foot, as shown in Fig. 9; but the removable plate is preferred, as it would be necessary to remove the foot shown by said  
 40 figure when the braider was not in operation to secure perfect working of the machine.

Thus by the use of the removable plate D, which may be removed from the presser-foot much more quickly than the latter may be  
 45 detached from its bar, the use of a specially-constructed presser-foot is avoided; but as a foot, made as shown in Fig. 9, is adapted for

co-operation with my braider, I do not wish to limit my invention to said detachable plate D in connection with my braid-guide and a 50 presser-foot.

I do not in this application wish to claim the presser-foot herein shown having lateral grooves at the heel and toe, as such a presser-foot is shown and claimed in my application 55 No. 146,584, hereinbefore referred to; nor do I herein claim, broadly, a plate adapted for attachment to a sewing-machine throat-plate by means of downwardly-projecting lips or lugs, as such a plate is embraced by my application 60 Serial No. 146,585, filed simultaneously herewith.

I claim as my invention—

1. A sewing-machine braiding attachment consisting of a thin metallic plate having de- 65 pending lugs by which it is adapted to be removably secured to the throat-plate, and having on its under side a braid-guiding passage combined with a co-operating presser-foot, substantially as set forth. 70

2. The combination, with a plate having a braid-guiding passage on its under side and depending lugs by which it is adapted to be removably attached to a sewing-machine throat-plate, of a presser-foot having a heel portion 75 extending below its toe portion a distance equal to the thickness of that part of the braid-guiding plate on which said toe portion rests when the device is in operation, substantially as set forth. 80

3. The combination, with a plate having a braid-guiding passage on its under side and adapted to be removably attached to a sewing-machine throat-plate, of a presser-foot and a plate adapted to be removably attached to 85 said foot and having a lip extending under the heel thereof, substantially as set forth.

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

JOHN M. GRIEST.

Witnesses:

JOSIAH SIMMS,  
 RICHARD SIMMS.