(No Model.)

J. F. CANNON & W. C. VON BUCHWALD.

SEWING MACHINE.

No. 288,008. Patented Nov. 6, 1883.

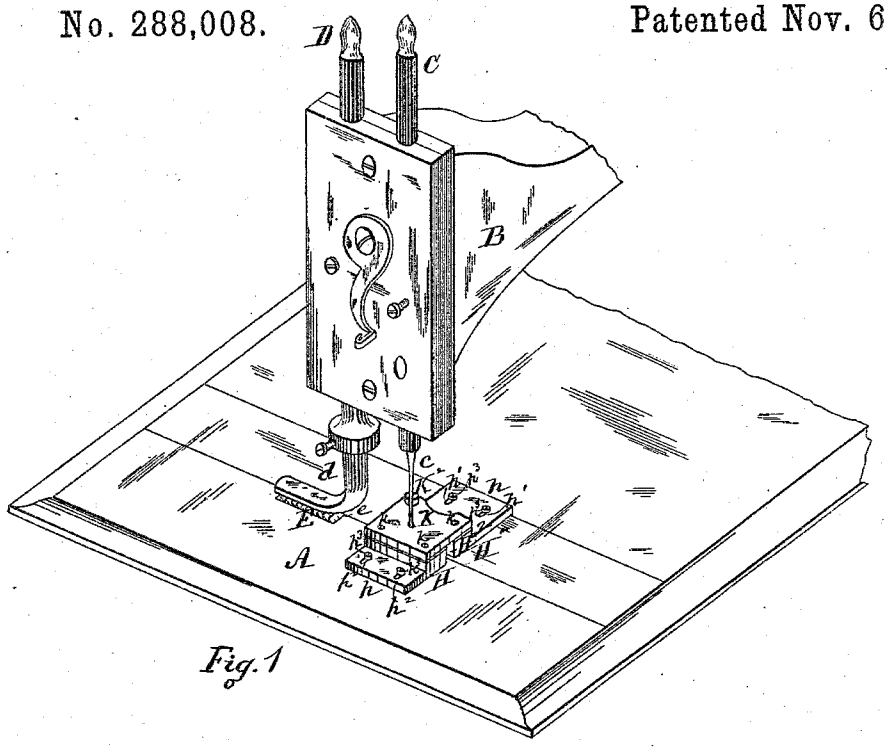

Fig. 1

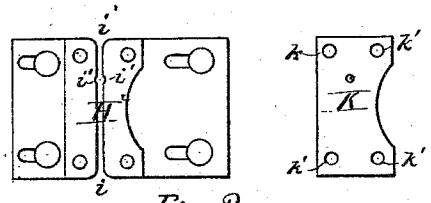

Fig. 2

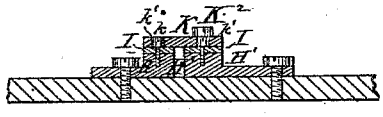

Fig. 3

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UNITED STATES PATENT OFFICE.

JAMES F. CANNON AND WILLIAM C. VON BUCHWALD, OF PHILADELPHIA, PENNSYLVANIA.

SEWING-MACHINE.

SPECIFICATION forming part of Letters Patent No. 288,008, dated November 6, 1883.

Application filed February 20, 1883. (No model.)

To all whom it may concern:

Be it known that we, JAMES F. CANNON and WILLIAM C. VON BUCHWALD, citizens of the United States, residing at Philadelphia, in the county of Philadelphia and State of Pennsylvania, have invented certain new and useful Improvements in Sewing-Machines; and we do hereby declare the following to be a full, clear, and exact description of the invention, reference being had to the accompanying drawings, which form part of this specification, in which—

Figure 1 is a perspective view of our improvement; Figs. 2 and 3, a plan view and section, respectively, of parts of the same.

Our invention has relation to a sewing-machine for sewing together two or three or more strands of round cord to produce a flat braid, and has for its object the provision of means whereby the separate strands of cord are held in position one above the other below the needle, so that the latter will penetrate all of the cords at one stroke, securing them together and forming a flat braid.

It has for its further object the provision of means whereby cords of different sizes, or more or less cords of any desired size, may be held in position below and operated upon by the needle to form a braid of more or less width or thickness.

A still further object of our invention, which is applicable to other uses than those above described, is the provision of a novel arrangement of feed mechanism whereby a device for guiding or manipulating the material to be operated upon may be placed directly beneath the needle-bar and without interfering or coming in contact with said feed mechanism, the arrangement being such that the manipulating or guiding device may be removed and replaced by another of different construction, or adjusted in any desired manner, without regard to or change of the feed mechanism.

Our invention consists in two upright guide-plates having slotted lateral extensions and a top plate covering or partially covering the space between the guide-plates, and secured thereto by a screw and pins, so as to be readily removable therefrom, the whole being secured to the cloth-plate of a sewing-machine of the ordinary construction, immediately below the needle-bar, in such manner as to sustain and guide a number of round cords, which, being sewed together by the needle and thread, will form a fancy braid.

It further consists in arranging the feed mechanism in front of, behind, or to either side of the needle at such distance that it will be out of contact with such guiding device, and will be altogether disconnected therefrom, and yet will perform its proper functions as well as when placed in the usual position below the needle.

Referring to the accompanying drawings, in which we have shown our invention as applied to a sewing-machine of a well-known form, A represents the cloth-plate, B the needle-arm, and C the needle-bar, having the needle *c* at its end and the usual devices for securing the needle in place at the end of the bar.

D is the presser-foot bar, having a presser-foot, *d*, secured at its end, the presser-foot, however, being turned away from the needle, or in the opposite direction from that in which it has hitherto been placed.

E represents the feed-plate, which occupies a position immediately beneath the presser-foot, and works through a slot, *e*, in the cloth-plate, in the usual manner.

The cord guiding and sustaining mechanism has a position below the needle and in front of the presser-foot, its rear end being within a short distance of the latter, and the needle working through a hole or slot in the top plate of said guide. This guide consists of two plates or blocks, H H′, having laterally-extending flanges *h h*, provided with slots h' h' h^2 h^2, through which pass screws h^3 h^3, which screw into holes in the cloth-plate, and serve to secure the blocks H H′ in position thereupon, leaving a space, H^2, between them. The guide-blocks H H′ have their inside corners rounded off, as shown at *i i*, so as to permit of the ready entrance of the material to be operated upon, and they have each a vertical groove, *i′*, upon the inside, for the passage of a needle. Upon the top of each of the blocks H is secured a plate, I, by screws *k k*. The plates I I conform to the shape of the respective blocks upon

which they are placed, and by substituting therefor plates of different thickness we increase or diminish the depth of the space H^2 between the plates, so as to accommodate cords of greater or less size or more or less number.

K represents a cap-plate, which is placed upon the top of the guide-blocks H H′ and the plates I I, the heads of the screws *k k* fitting in holes *k′ k′* in plate K, the latter being held down upon the guide by the large screw K^2 at one corner.

It will be seen that by reason of the slots in the lateral flanges of the guide-blocks the latter may be adjusted toward one another, so as to accommodate cords of different thickness. When it is desired to so adjust the guide-blocks toward one another, it will be necessary to remove the plate K and substitute a plate having screw-holes closer or farther apart. In lieu, however, of using substitute plates, the plate K may have slots in place of the screw-holes *k′ k′*, which will permit of adjusting the blocks H H′ without removing the plate; so when it is desired to increase or diminish the depth of the crevice between the guide-blocks the plates I are removed and replaced by others of different thickness.

The operation of our invention is as follows: The guide-blocks having been secured in position upon the cloth-plate, the screw K^2 is loosened sufficiently to allow the plate K to be lifted up above the screws *k k* and swung to one side. The cords from which the braid is to be formed are then placed in position, one over the other, between the guide-blocks H H′, their free ends being placed under the presser-foot. The plate K is then replaced and the machine operated in the usual manner, the needle and its thread passing through the centers of all the cords, sewing them together and forming them into a braid. As the braid is fed forward it is laid on its flat side, so as to present a greater surface to the presser-foot and feed-plate and insure a perfect and regular feed.

The peculiar arrangement of feed mechanism shown, while it is well adapted to the work of feeding in connection with the device described for forming a flat braid from a number of round cords, is also adapted to be used in connection with sewing-machine attachments of other kinds, and we do not therefore limit ourselves to the combination of such feed with the precise attachment shown.

What we claim as our invention is—

1. The combination, in a sewing-machine, of a feed mechanism comprising a presser-foot and a feed-plate set apart from the needle, with an attachment set beneath said needle and adapted to hold the material operated upon down upon the cloth-plate, substantially as described.

2. In a sewing-machine attachment, the combination of two guide-blocks, each secured directly to the bed-plate of the said machine, and adjustable toward one another, with a removable cap-plate secured to both of said blocks, substantially as described.

3. In a device for guiding material to the needle of a sewing-machine, the combination of two guide-blocks secured to the cloth-plate and adjustable toward each other, with supplemental plates secured to the tops of said guide-blocks to increase their height, and a cap-plate secured upon the top of one or both of the supplemental plates, substantially as described.

4. The combination of guide-blocks H H′, plates I I, and cap-plate K, substantially as and for the purpose described.

In testimony that we claim the foregoing we have hereunto set our hands this 16th day of February, 1883.

JAMES F. CANNON.
W. C. VON BUCHWALD.

Witnesses:
CHAS. R. HEMPHILL,
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