

(No Model.)

S. G. PILLING.

GUIDING AND TENSION DEVICE FOR SEWING MACHINES.

No. 461,369.

Patented Oct. 13, 1891.

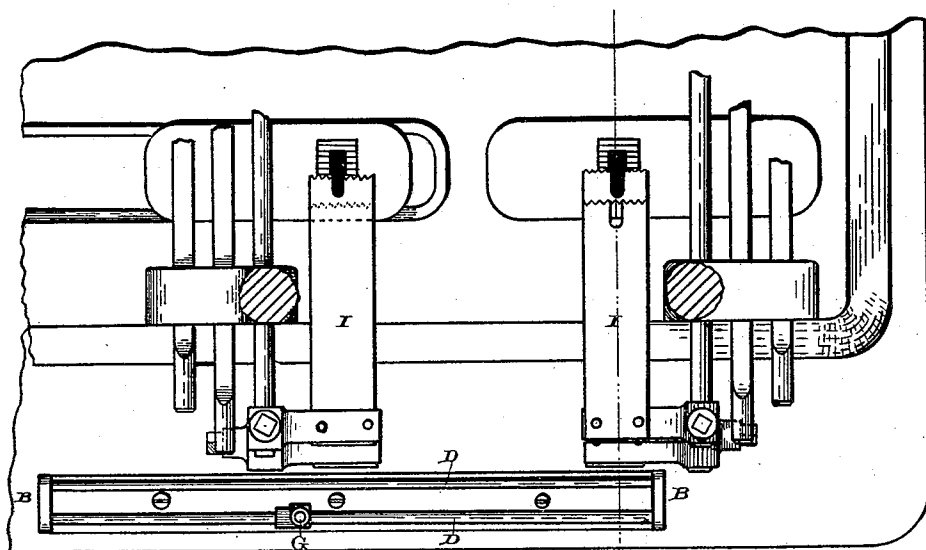


Fig. 1.

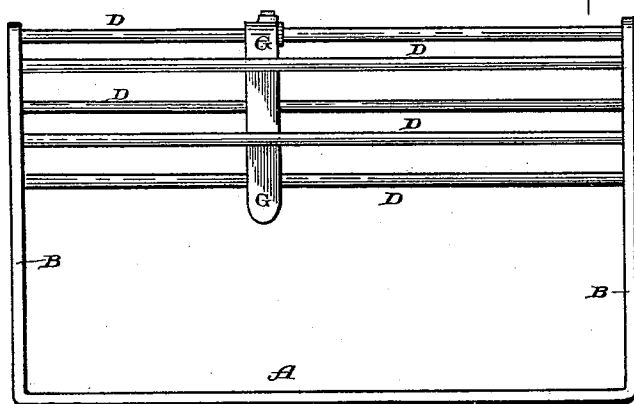


Fig. 2.

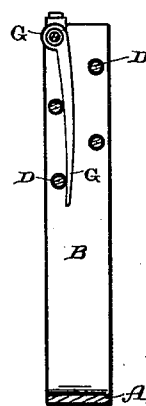


Fig. 3.

WITNESSES:

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GUIDING AND TENSION DEVICE FOR SEWING-MACHINES.

SPECIFICATION forming part of Letters Patent No. 461,369, dated October 13, 1891.

Application filed June 25, 1890. Serial No. 356,708. (No model.)

To all whom it may concern:

Be it known that I, SAMUEL G. PILLING, of Cincinnati, in the county of Hamilton and State of Ohio, have invented certain new and useful Improvements in Guides and Tension Devices for Sewing-Machines; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it pertains to make and use it, reference being had to the accompanying drawings, which form part of this specification.

My invention relates to an improvement in guides and tension devices for sewing-machines; and it consists in the construction and combination of parts, which will be fully described hereinafter.

The object of my invention is to provide a guide and a tension device for sewing-machines, between and around which the goods to be sewed are passed, so as to cause a tension thereon as it is being drawn to the sewing mechanism, which will prevent the goods from being fed too rapidly and thus wrinkle, and enable the work to be smoothly formed, and which device will serve the purpose of holding the goods by hand as it passes to the machine, and to so construct the device that it can be adjusted to guide goods of various widths.

Figure 1 is a top plan view showing my invention applied to a double sewing and plaiting machine. Fig. 2 is a side view of the guide and tension device alone. Fig. 3 is a vertical cross-section of Fig. 2.

I here show my invention in connection with a plaiting-machine, and with which a device of the character hereinafter described is most needed. Yet it can be used advantageously with all classes of sewing-machines. Only the table, machine-bed, and plaiter-blades of the plaiting-machine are here shown, but which are all that is necessary to enable my invention to be fully understood. The character of plaiting-machine here shown is a double one, and in which the plaiting and sewing mechanism shown at the left of Fig. 1 is adjustable in relation to the sewing and plaiting mechanism at the right of said figure in any desired way or in substantially the same manner as shown in Hine's patent of February 25, 1890, No. 422,215, and which

needs no description in this connection, as it forms no part of the present invention.

My improvement consists of a guide and tension device which is constructed of, preferably, a U-shaped frame having a horizontal base A and vertical end supports B, between the upper ends of which a number of rods D are supported. These rods, as here shown, are preferably placed in two vertical lines and the rods in one line alternating with the rods in the other vertical line, as shown. Sliding upon one of these rods, preferably the upper one, is an adjustable slide or arm G, which forms a guide for one edge of the goods, as will hereinafter appear. The base A is secured to the table or the bed of the machine, as may be desired, and the upper rod is preferably on a horizontal line with the plaiter-blades I, between which the material being operated upon passes. The goods to be plaited or sewed pass through between and around as many or few of the bars as may be necessary to make the required tension, and over the top bars in the machine, between the plaiter-blades, while the backing passes under the tension-rod and under the plaiter-blades. In this way the backing, which is not to be plaited, but to which the goods that are to be plaited are sewed, is kept separate from the goods until they reach the point of the needle, and from which it will be seen that my invention serves the double purpose of causing a tension on the goods to be plaited to keep it separate from the backing until they reach the point of the needle. One of the vertical standards B is stationarily placed in the proper relation to the stationary sewing mechanism, so that one edge of the goods will pass to that sewing mechanism at the proper distance from the needle. The other sewing mechanism is set nearer to or farther from the stationary sewing mechanism, according to the width of goods being operated upon, and the adjustable slide G is moved so as to guide the opposite edge of the goods the proper distance from the adjustable sewing mechanism as it passes thereto. The inner ends of the plaiter-blades are bent toward each other, as shown, and are supported normally above the backing by their hangers, to which they are secured, as shown in Fig. 1. As the goods to be plaited pass between the

blades, which have their ends bent, as shown, and the backing under them, they act only upon the goods, as will be readily understood.

By means of a device of this construction
5 the goods are guided in the proper relation to the sewing mechanisms and the desired tension given them, so as to prevent the goods from being fed too rapidly to the sewing mechanisms, and which will avoid the neces-
10 sity of having some one feed the material to the machine after it has once been adjusted.

Instead of having the rods rigidly secured to the standards, as here shown, they may be loosely secured thereto, so as to revolve with
15 the goods, and in this instance suitable tension devices can be applied to their ends, so as to regulate the amount of tension that is required to revolve them.

Having thus described my invention, I
20 claim—

The combination, with a double-plaiting machine, of a tension and separating device consisting of a base adapted to be secured to the machine at one side of and parallel with the said mechanisms, vertical supports ex- 25 tending from the ends of the base, and a series of horizontal bars which connect the upper ends of the supports between which the goods to be plaited pass and under which the backing passes, whereby the two are kept 30 separate until they reach the point of the needle and a tension applied only to the goods to be plaited, substantially as set forth.

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

SAMUEL G. PILLING.

Witnesses:

A. W. DONEL,

K. MULVIHILL.