J. A. WAGENER.

Braid Guide for Sewing Machines.

No. 43,355. Patented June 28, 1864.

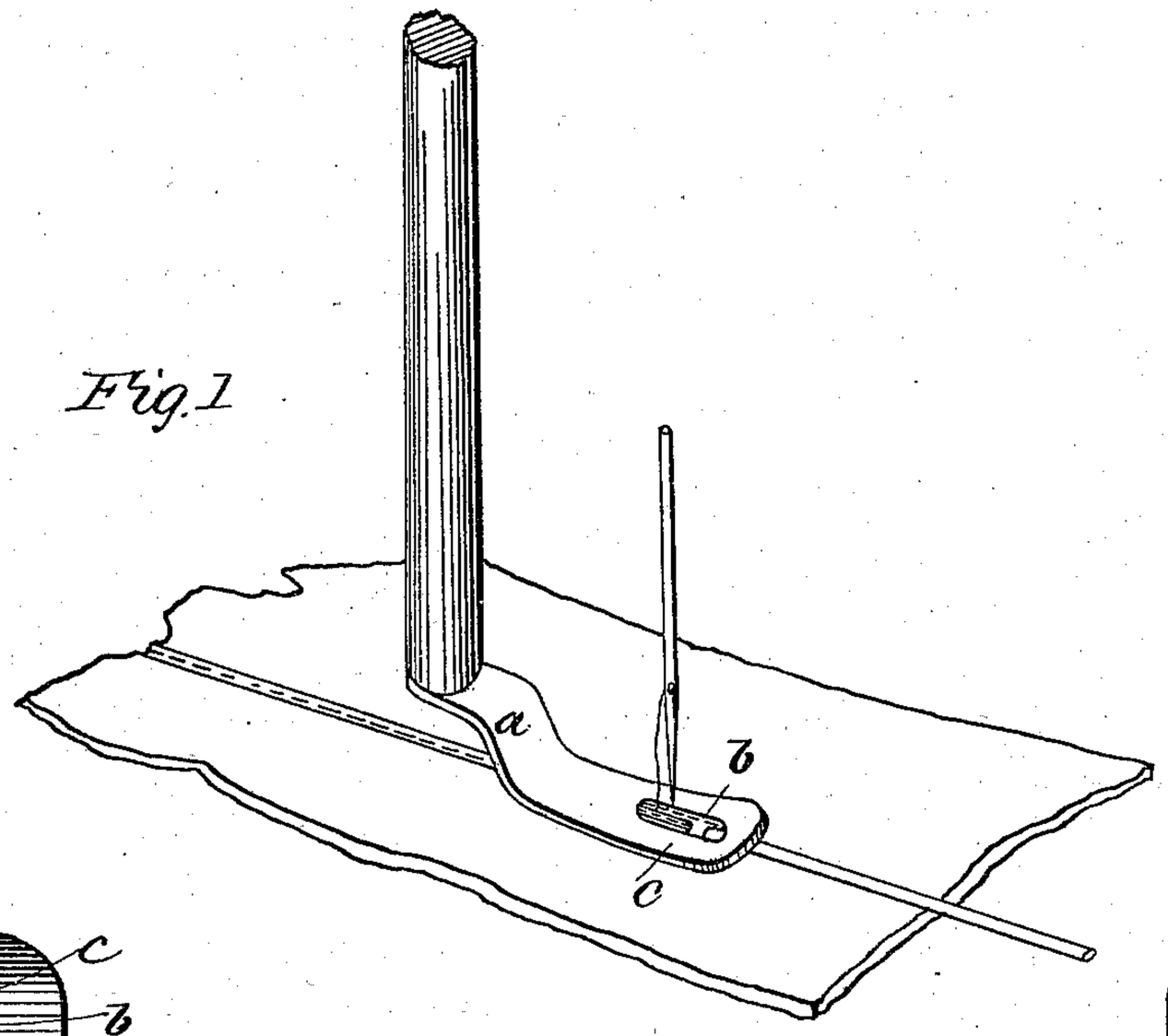

Fig. 1

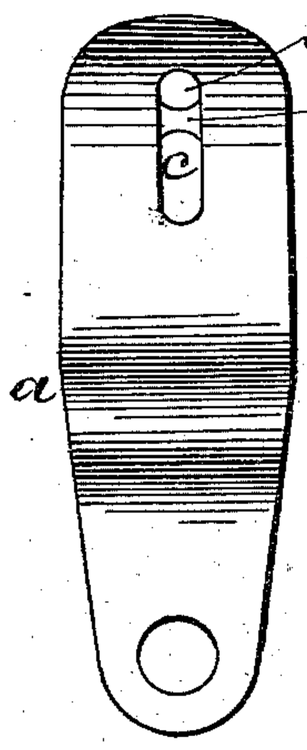

Fig. 2

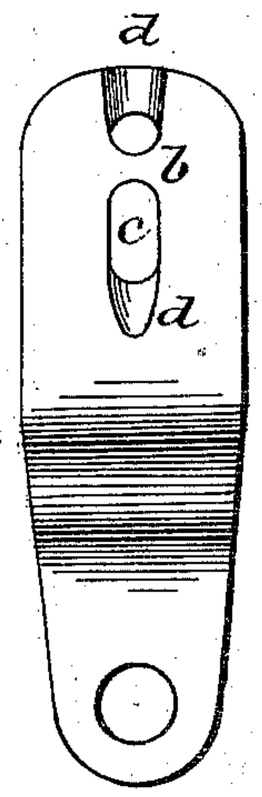

Fig. 3

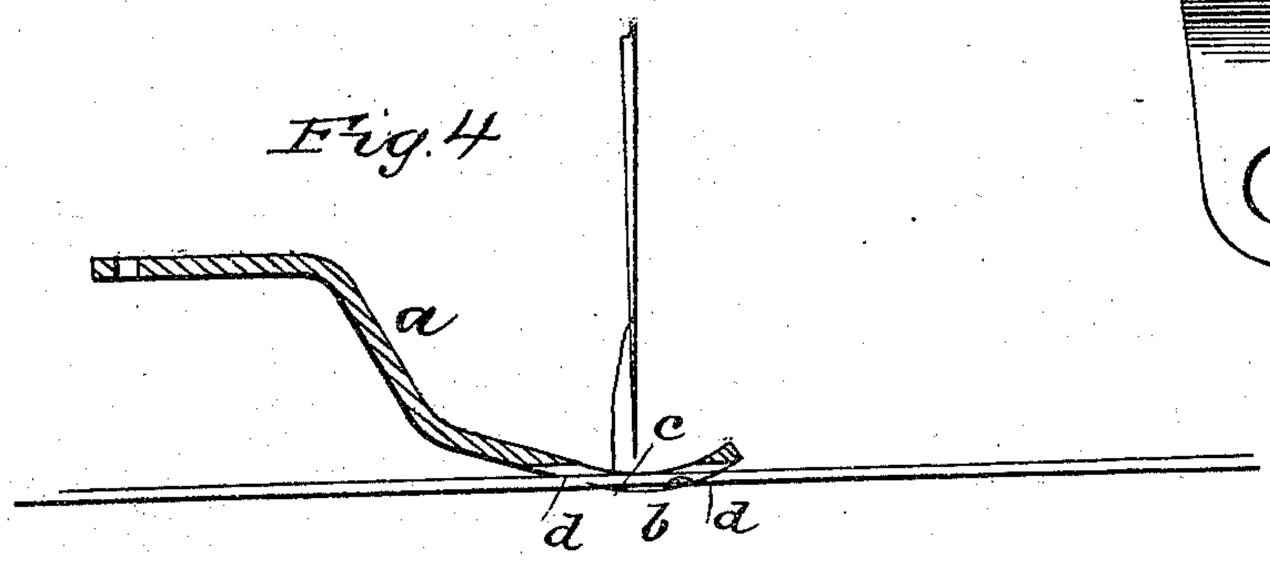

Fig. 4

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JEPTHA A. WAGENER, OF NEW YORK, N. Y.

IMPROVEMENT IN BRAID-GUIDES FOR SEWING-MACHINES.

Specification forming part of Letters Patent No. **43,355**, dated June 28, 1864.

To all whom it may concern:

Be it known that I, JEPTHA A. WAGENER, of the city, county, and State of New York, have invented a new and Improved Braider for Sewing-Machines; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, making a part of this specification, in which—

Figure 1 is a perspective view of the improved braider, showing its operation. Fig. 2 is a top view of the braider. Fig. 3 is a bottom or under side view of the same. Fig. 4 is a vertical longitudinal section, showing the braider in position for operation.

Similar letters of reference indicate corresponding parts in the several figures.

The object of my invention is to sew braid or cord upon the surfaces of fabrics by machinery in a more perfect manner than hitherto, employing for the purpose a small instrument, which, while it serves a practical purpose as a pressure-pad for keeping the fabric down upon the bed of the sewing-machine, will also properly guide, smooth, and direct the braid under the needle and keep the braid down closely upon the work, as will be hereinafter described.

To enable others skilled in the art to make and use my invention, I will proceed to describe its construction and operation.

The plate *a* is curved in such manner that when it is attached to the overhanging arm of the sewing-machine, or, rather, to the spring-bar which is applied to that arm, one end will press upon the work and the other end will be elevated some distance above it out of the way. That portion of plate *a* which impinges upon the work during the operation of sewing is curved longitudinally—*i. e.*, the heel and toe of this portion curve upward, leaving but a small portion of its surface to act upon the fabric, as shown in Fig. 4. At this bearing-point I form a little bridge, *b*, by slotting and grooving the pad longitudinally. The slot *c* is oblong, as will be seen by reference to Figs. 1 and 2, the bridge *b* being nearer one end than the other, and the groove *d* is made through the forward end of the pad on its lower side, and extends back under the rear edge of the slot, so as to form a channel, through which the cord or braid is passed over the bridge *b*, as indicated in red lines, Fig. 4. The lower surface of the bridge *b* is flush with the lower surface of the pad; but the upper surface of the bridge is depressed below the upper surface of the pad, so that this bridge is made as thin as possible to be consistent with strength, in order to allow the braid, when passed through the channel *d*, to be brought down closely upon the fabric to which it is to be stitched.

In using this braider the common pressure-pad of the sewing-machine is removed and the former applied to the spring-bar in its stead. The cord or braid is passed through the channel *d* and over the bridge *b*. All that is necessary to do now is to introduce the fabric to be braided under the braider, allow the latter to press down upon it, and start the machine, the cord or braid being drawn through the braider as fast as the work proceeds and the needle passing down between the bridge *b* and the rear end of the oblong slot.

The advantages of my braider over any other are that the braid is guided up to the needle by the sides of the oblong slot *c* and passed straight up to the needle without being drawn over or under an angular edge, which causes friction, stretches the braid, and leaves the work very uneven. In my braider the braid is as free to pass through it as the fabric is to be fed up to the needle. Consequently one material will not be stretched more than the other, and the finished work will be smooth and present a neat appearance. The bridge *b* protects the braid from being pressed and held down too tightly, and at the same time keeps the braid from working from under the pad or working out of place in the pad, while, finally, the slot above the bridge is open the full width of the braid, and thus the operator can at all times inspect the work before it leaves the pad.

It will be seen that the distinguishing characteristics of my braider are these, viz: The guiding-slot *d d*, through which the braid passes, is extended longitudinally both in front and in rear of the bridge *b*, also vertically up above the top surface of the bridge *b* to a degree almost if not quite equal to the thickness of the braid, and by reason of this a straight longitudinal channel is formed under the foot of the braider for the braid to be introduced into (directly under the foot *a*) from the front of the foot, and after the braid is thus introduced it will be so confined against lateral movement that it cannot slip out of the guide, and will pass over the bridge *b* in a

straight or in so nearly a straight line that very little, if any, of the friction usual with other braiders will be produced, inasmuch as the braid makes no angles in its passage through my braider, which is not the case in other braiders.

My braider requires no more manipulation in its use after it is applied to the machine than is necessary to thread a needle. The cost of manufacturing it is very small, and therefore it can be afforded as cheaply as any other braider known.

My braider-foot serves when used as a pressure-foot as well as a centering and controlling device to the braid or cord. It always keeps the cord or braid in proper position with respect to the needle, no matter how large or how small may be the needle-slot of the foot of the braider. Further, the braid can be introduced under the foot in a straight line, and therefore the braid does not require to be first passed in one direction and then in another in order to get it in working relation with the braider-foot. In one sense I have only to pass the braid through one straight hole or channel. Again, in most instances I can introduce the braid without handling the braider to any inconvenient extent. In fact, it might be introduced under the foot without elevating the foot. These advantages are not secured in any braider-foot which serves the twofold purpose of a braiding and pressure foot or pad.

I do not wish to be understood as claiming that I am the inventor of a braider foot or pad, *per se*, nor that I claim a bridge, *per se*, in such a foot or pad for the braid to bear against when such bridge is not at the base of the braider foot or pad and its top surface not below the highest part of the channel *d d*.

I also wish it to be understood that I do not claim passing braid through a straight channel when such channel is not combined with a pressure-foot and obtained by means of the depressed bridge and slot in the bottom of the pressure-foot; but

What I do claim as new and my invention, and desire to secure by Letters Patent, is—

1. Providing for the passage of the braiding material over a bridge, *b*, and through a channel, *d d*, which is below the top surface of the slotted portion of the braider foot or pad *a*, substantially in the manner and for the purpose described.

2. So constructing the slotted portion of the braider foot or pad *a* with a depressed bridge, *b*, and a groove or slot, *d d*, in a plane above the bridge, and an intersecting or needle slot, *c*, that the braid can be passed under the foot or pad and over the bar or bridge in a straight or nearly straight line, and also be sewed upon the cloth through the top of the foot or pad and inspected before it passes from under the foot or pad, all in the manner set forth.

3. The combination of the depressed bridge *b*, slot *d d*, and pressure-foot *a*, the whole constructed, arranged, and operating in the manner substantially as described.

JEPTHA A. WAGENER.

Witnesses:

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