No. 688,961. Patented Dec. 17, 1901.

J. I. McDONALD.

TEMPLET FOR THE MANUFACTURE OF CUFFS, &c.

(Application filed Nov. 10, 1900.)

(No Model.) 3 Sheets—Sheet 1.

Fig. 1.

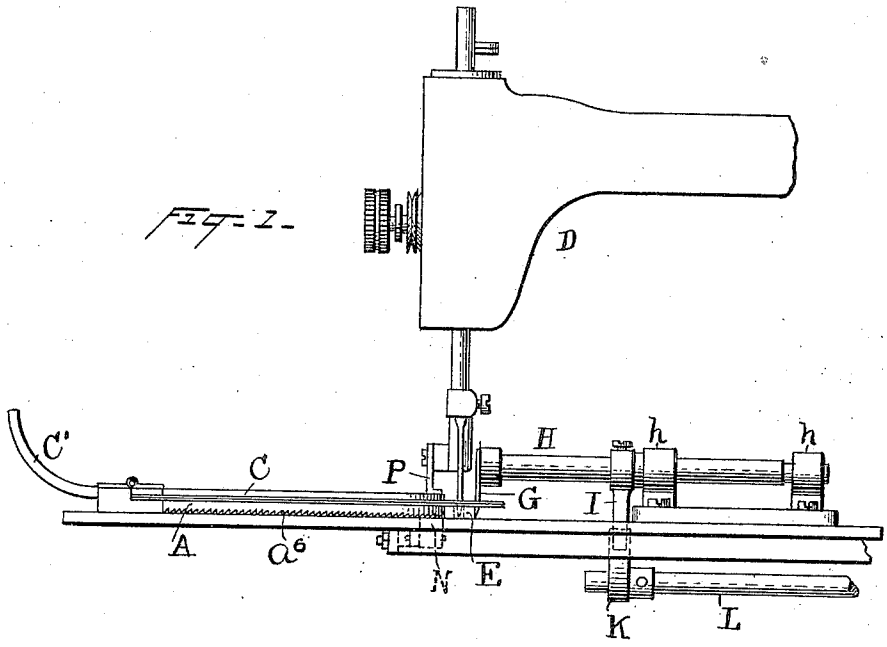
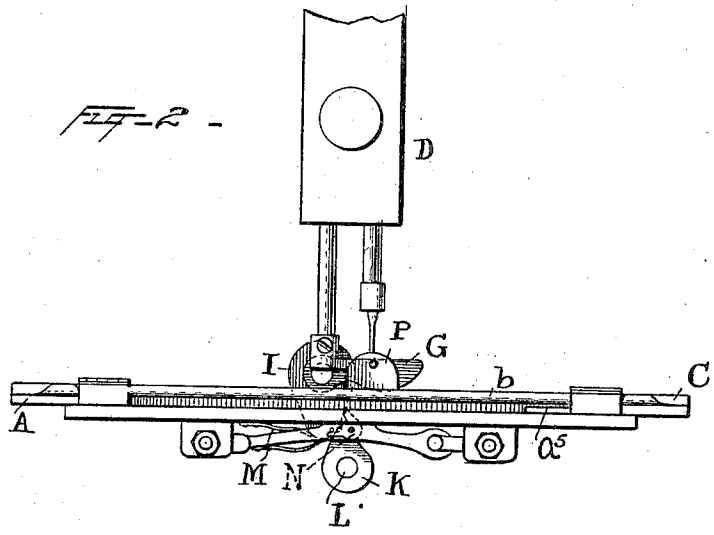


Fig. 2.



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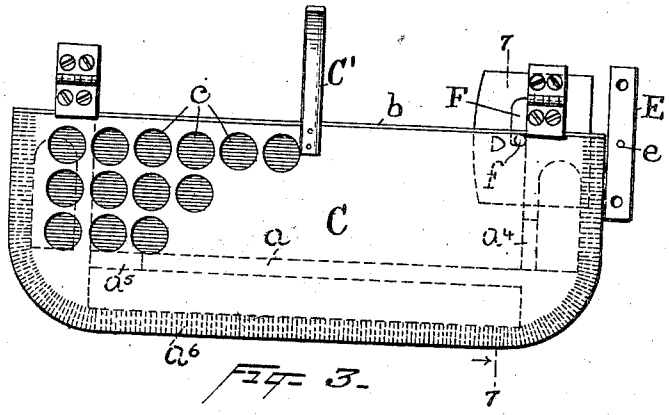


Fig. 3.

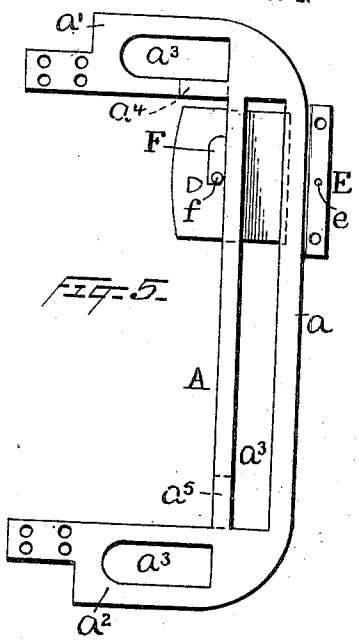


Fig. 5.

Fig. 4.

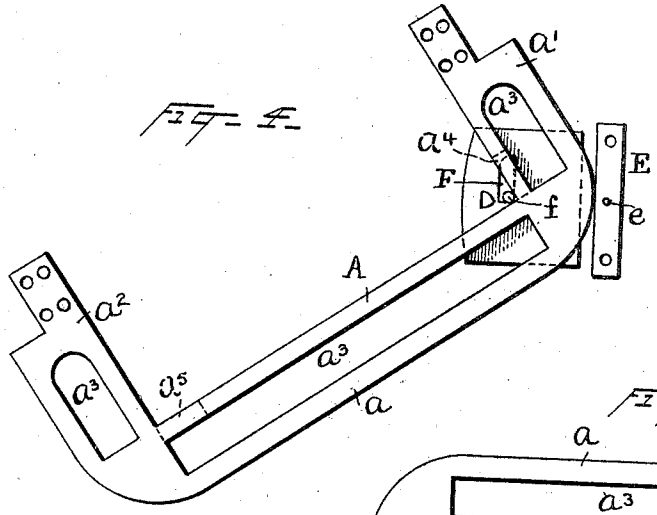


Fig. 6.

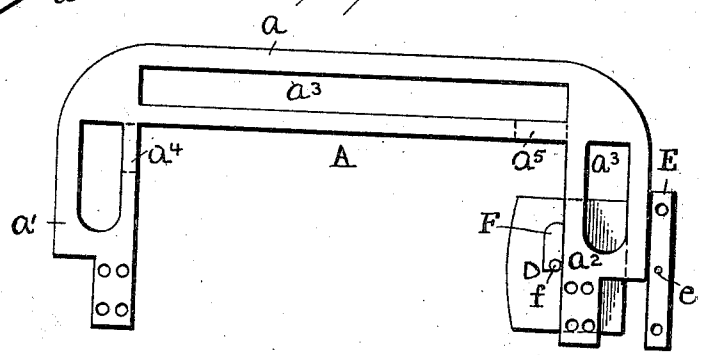
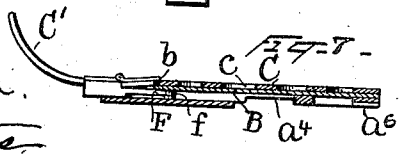


Fig. 7.



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Fig. 8.

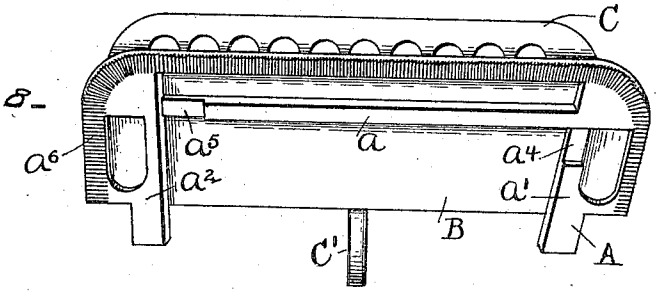


Fig. 9.

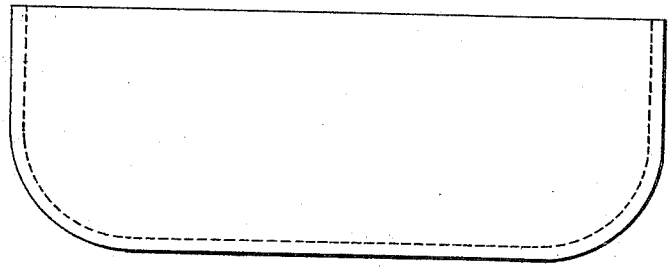
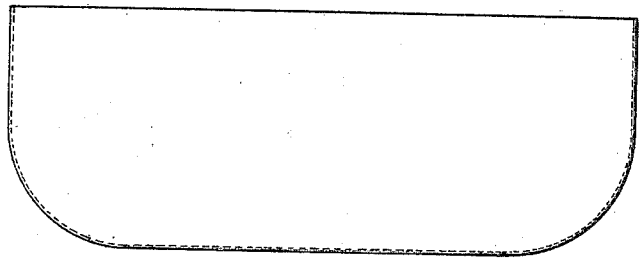


Fig. 10.



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TEMPLET FOR THE MANUFACTURE OF CUFFS, &c.

SPECIFICATION forming part of Letters Patent No. 688,961, dated December 17, 1901.

Application filed November 10, 1900. Serial No. 36,108. (No model.)

To all whom it may concern:

Be it known that I, JOHN I. McDONALD, a citizen of the United States, residing at St. Joseph, in the county of Buchanan and State of Missouri, have invented certain new and useful Improvements in Templets for the Manufacture of Cuffs, &c.; and I do 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 appertains to make and use the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form a part of this specification.

My invention relates to sewing-machines; and it consists in certain means and mechanism for manufacturing cuffs and the like, as hereinafter set forth.

In the wholesale manufacture of cuffs and similar articles it is necessary to make large quantities all of the same shape and size. To accomplish this rapidly and cheaply by unskilled operatives is the object of my invention. I provide for each size and style of cuff or the like a clamping-templet, in which the several thicknesses of cloth can be firmly and smoothly held while the projecting edges of the same are being sewed together and trimmed simultaneously, the templet being fed to the sewing mechanism between guides which insure an absolute uniformity in all the articles made in that templet.

In the drawings, Figure 1 is a front elevation of a templet and a portion of the sewing and trimming mechanism as they appear when at work. Fig. 2 is an end view of the same. Fig. 3 is a plan view of the templet and the guides at the commencement of the operation. Fig. 4 shows the templet turning a corner, the frame only being shown. Fig. 5 shows the templet and guides after the corner has been turned. Fig. 6 shows the position of these parts at the conclusion of the operation. Fig. 7 is a cross-section in line 7 7, Fig. 3. Fig. 8 is a perspective view of the templet, showing its under side, the top plate being partly raised. Fig. 9 shows a cuff as it comes from the machine. Fig. 10 shows the cuff turned inside out and ready for finishing.

The templet is composed of two plates or leaves hinged together and of the exact shape of the article to be made. On the under side of the lower leaf is a projecting rib, by means of which the templet is fed and guided. For the sake of convenience in manufacture I make the lower leaf in two parts—to wit, a a frame A and a bottom plate B—firmly secured together. The frame comprises the ribs projecting below the bottom plate. It is preferably a casting having a long side bar a and two shorter end bars a' a^2 at right angles with the bar a. All the bars may have openings a^3 in them, if desired, for the sake of lightness. The edges of the bars are straight and parallel. The two outer corners of the frame are rounded off on a circular line struck from a point just inside the inside corner. Adjoining the inside corner, between the bar a and the end bar a', the latter is dressed away on its under side to about one-half of its normal thickness, forming a notch a^4. A similar notch a^5 is found in the bar a at its end adjoining the end bar a^2. A row of fine teeth a^6 is cut in the under side of the frame along its outside edge, the teeth being at right angles to the edge of the frame, as clearly shown in Fig. 8.

The bottom plate B is made of thin stiff material, such as sheet-iron, and is fastened on top of the frame A. The rear edge is turned up to form a shallow flange b, which serves as a gage for the cloth. The top plate C is hinged to the rearwardly-extending ends of the end bars a' a^2 of the frame. It shuts down just in front of the flange b and may have holes, as c, cut in it for the sake of lightness. An upwardly-curved handle C' is attached to the rear edge of the top plate, by means of which it can be readily opened.

The sewing mechanism is an ordinary sewing-machine D, on the bed-plate of which is secured a bar E, with a hole e for the needle to pass through. The thickness of the bar E is the same as that of the frame and bottom plate of the templet.

Parallel with the bar E and to the left of it is a shorter bar F, thin enough and short enough to permit the notches a^4 a^5 to pass freely over it. At one end of this bar and op-

posite the needle-hole *e* is a round pin or stud *f*, about the same in height as the thickness of the frame, so that the bottom plate B will only just touch its top. The relative heights and dimensions of these several parts are clearly shown in Fig. 7.

A knife-blade G is arranged adjacent to the right side of the bar E, the knife-blade and bar coöperating to form a pair of shears. The knife-blade is mounted on a rock-shaft H, journaled in bearings *h* on the bed-plate of the machine and at right angles with the bar E. A rock-arm I depends through a slot in the bed-plate and is arranged to be actuated by a cam or wiper K on the main shaft L of the machine. A spring M lifts the knife after the cam has passed by the rock-arm.

The ordinary feed-dog of the feed-motion is removed and a small pivoted pawl N is substituted for it. This pawl engages with the teeth a^6 on the under side of the frame A and automatically feeds the templet from the commencement to the conclusion of the operation.

My invention is operated as follows: The templet is laid flat on a table with the handle C′ in position to be engaged by a finger actuated by a treadle, whereby the top plate C is opened. The operator carefully lays on the bottom plate B the several thicknesses of cloth (usually four) and holds their projecting edges while the top plate is lowered upon them. The templet is then placed on the bed-plate of the sewing-machine in the position shown in Fig. 3, the end bar *a′* lying with a sliding fit between the bars E and F. The projecting edges of the cloth rest on the bar E and extend somewhat beyond it. The presser-foot P of the machine is lowered upon the top plate C, thus holding it firmly closed upon the cloth. On starting the machine the pawl feeds the templet through between the guide-bars E F and the knife trims off the surplus cloth, leaving a narrow margin beyond the line of stitching. The width of this margin is absolutely uniform and can be varied by using bars E of different widths. The parts are so timed that the knife operates when the needle is down, being raised at all other times. As soon as the inside corner of the frame strikes the pin or stud *f* the straight forward motion of the templet is arrested; but the the continued action of the feed operating on the teeth along the rounded corner of the frame turns the templet around the pin *f* as a center, the notch a^4 allowing the bar *a′* to swing over the bar F, as clearly shown in Fig. 4. For the sake of clearness the top and bottom plates are omitted in Figs. 4, 5, and 6, the frame only being shown. The templet now feeds straight forward again between the bars E F until the pin *f* strikes the corner next the end bar a^2, when the templet is once more automatically given a quarter-turn, the notch a^5 allowing the bar *a* to swing over the bar E. The templet finally feeds out in the position shown in Fig. 6.

The entire operation is automatic after the templet is once started, and the device can be used by a comparatively unskilled operative. Within certain limitations any form can be produced by a similar device. The shape of the article can be varied by a proper arrangement of the guide-bars, pin, and templet.

After the cuff or other article is removed from the templet, Fig. 9, it is turned inside out, Fig. 10, and can then be stitched around the edge and finished in the usual manner.

Various modifications in the construction will suggest themselves to those skilled in the art falling within the scope of my invention and needing no explanation here.

I have described my invention as applicable to the manufacture of cuffs; but it is evidently capable of use in making many different articles of cloth, leather, or any flexible material which requires to be cut accurately to shape and stitched and trimmed along the edge.

Having thus described my invention, what I claim, and desire to secue by Letters Patent, is—

1. A templet for the manufacture of cuffs and the like, composed of a frame having a side bar, and two end bars each united at one end with one end of the side bar, all of said bars being of the same width, a bottom plate secured on the frame, and a top plate hinged to the rear ends of the end bars, the frame and plates having rounded corners concentric with the inner corners of the frame.

2. A templet for the manufacture of cuffs and the like, composed of a frame having a side bar, and two end bars each united at one end with one end of the side bar, all of said bars being of the same width, teeth cut in the under side of the frame along its outer edge, a bottom plate secured upon the frame, and a top plate hinged to shut down upon the bottom plate, in combination with stationary guides between which said bars fit and can slide.

3. The combination with a templet including a lower plate having a projecting rib on its under side, of a sewing mechanism provided with two guide-bars between which said rib can slide, the rib being dressed away at intervals to enable it to swing freely over one of said guide-bars.

4. The combination with a templet including a frame having a side bar *a* provided with a notch a^5, an end bar *a′* having a notch a^4, and an end bar a^2, of a sewing mechanism provided with a guide-bar E, and a guide-bar F having a pin *f*.

5. The combination with a sewing mechanism provided with two guides, of a clamping-templet having straight sides and ends meeting at an angle, means for feeding the templet along in contact with and between the guides, and means for arresting the forward movement of the templet when it reaches the

angle and automatically causing it to turn said angle in a circle concentric therewith.

6. The combination with a substantially U-shaped frame of uniform width and having square inner corners and rounded outer ones, of a lower plate secured upon said frame, and a cover-plate hinged to the upper side of the ends of the two arms of the frame, said plate corresponding in shape with the lower plate.

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

JOHN I. McDONALD.

Witnesses:
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F. M. FILLER.