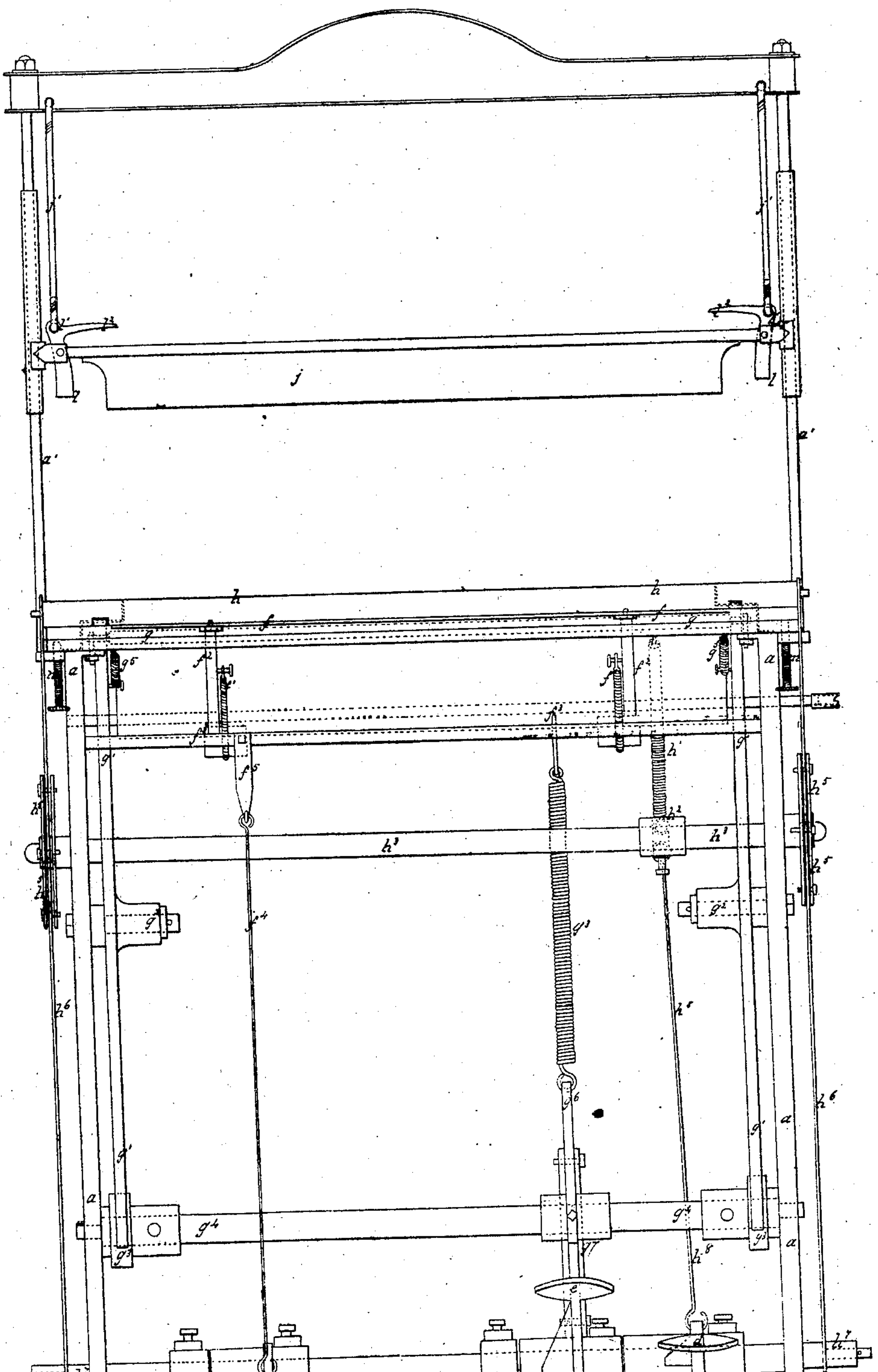
W. H. Morrison. Sheet 1-3 Sheets.

Manufacture of Bonnet & Cap Fronts

No. 25847 Patented Oct. 18. 1859.

Fig. 1



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W. H. Morrison. Sheet 3, 3 Sheets.

Manufacture of Bonnet & Cap Fronts.

No. 25,847. Patented Oct. 18, 1859.

Fig. 3.

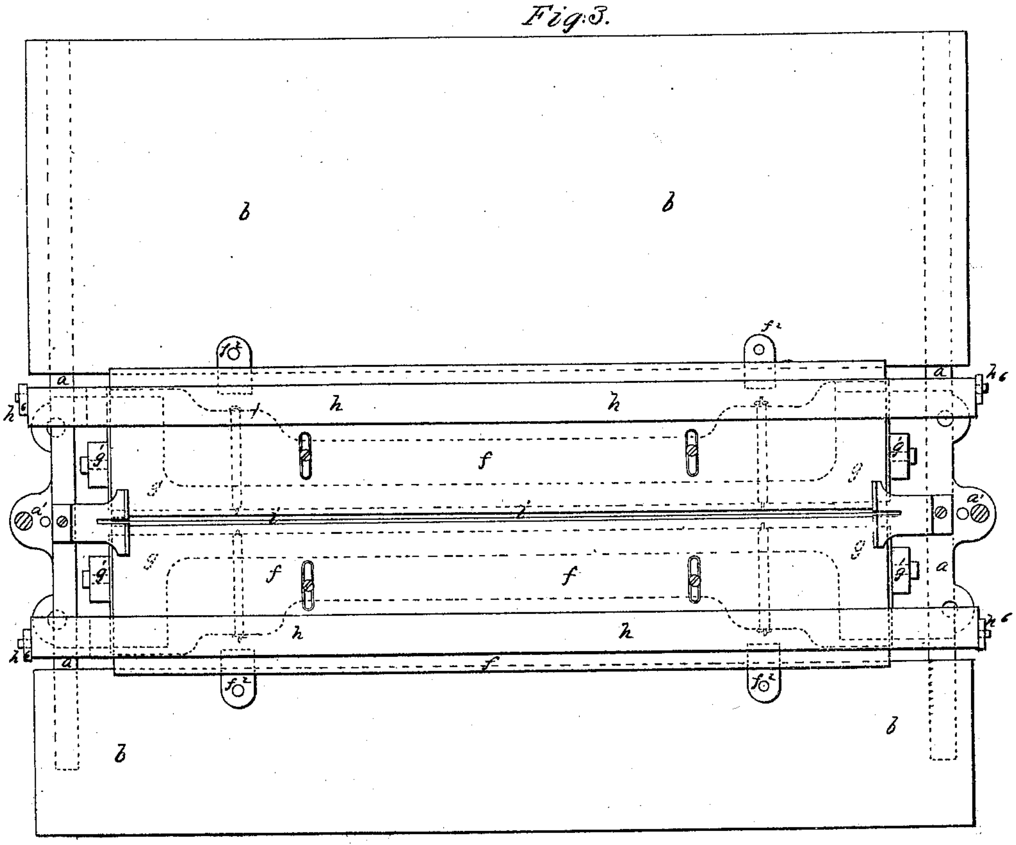


Fig. 4.

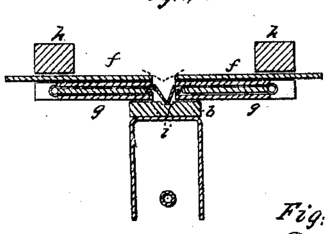


Fig. 5.

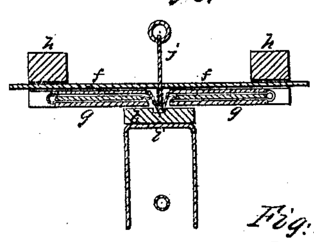


Fig. 6.

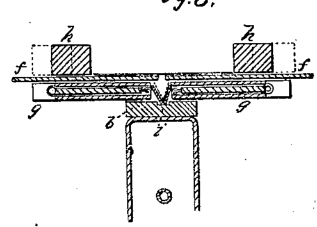


Fig. 7.

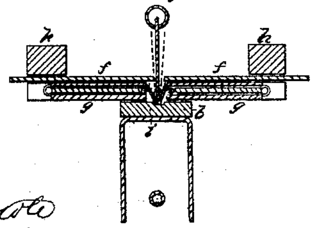
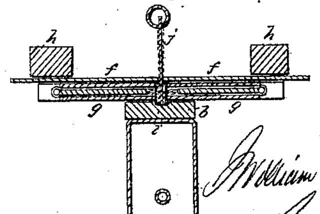


Fig. 8.



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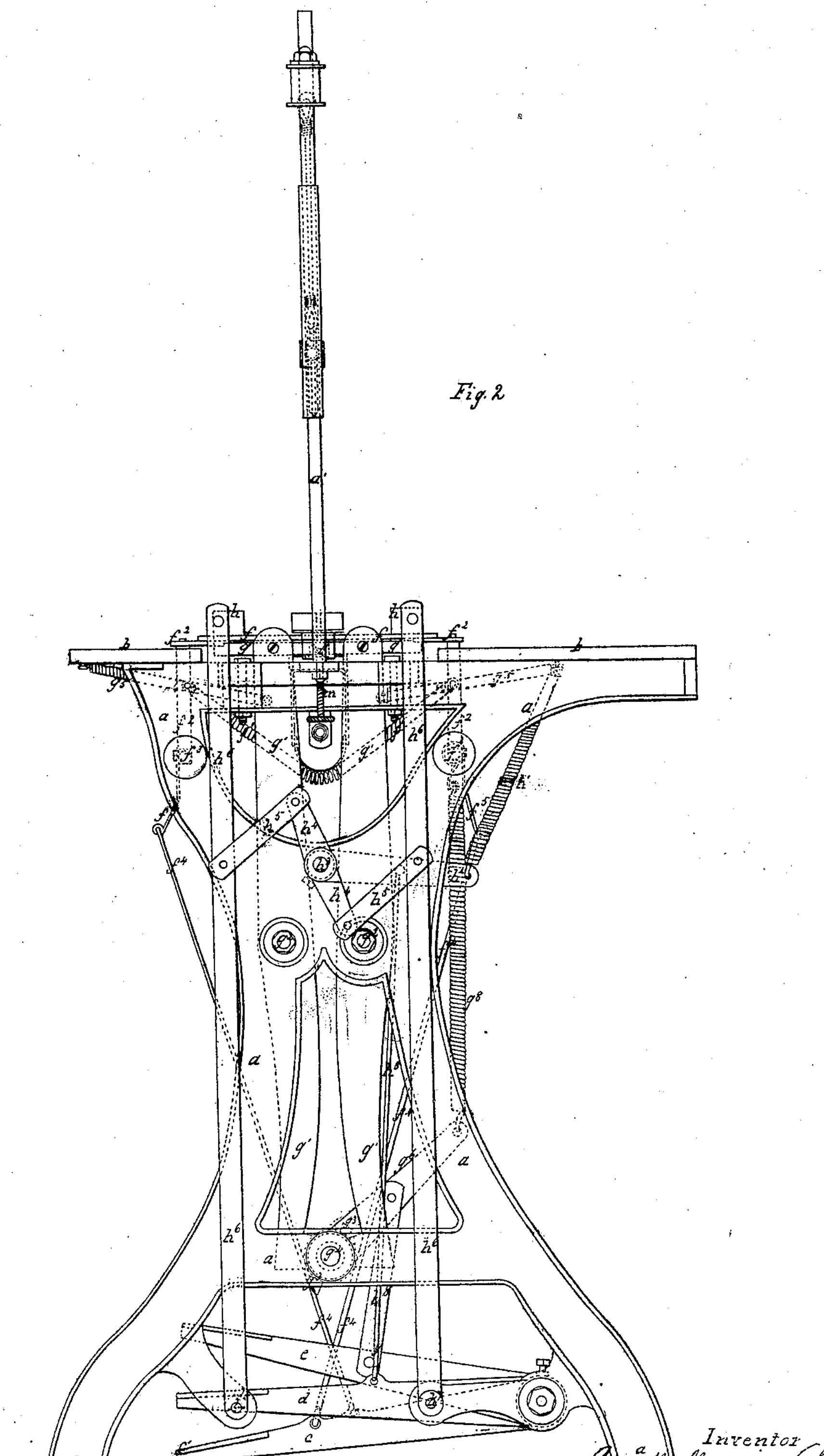
Manufacture of Bonnet & Cap Fronts.

No. 25847 Patented Oct. 18. 1859.

Fig. 2



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UNITED STATES PATENT OFFICE.

WILLIAM HENRY MORRISON, OF NOTTINGHAM, ENGLAND.

MACHINE FOR MANUFACTURING BONNET AND CAP FRONTS, &c.

Specification of Letters Patent No. 25,847, dated October 18, 1859.

To all whom it may concern:

Be it known that I, WILLIAM HENRY MORRISON, of Nottingham, manufacturer, a subject of the Queen of Great Britain, have invented or discovered new and useful Improvements in Means or Apparatus Employed in the Manufacture of Bonnet and Cap Fronts, Ruches, and Such Like Articles of Millinery; and I, the said WILLIAM HENRY MORRISON, do hereby declare the nature of the said invention and in what manner the same is to be performed to be particularly described and ascertained in and by the following statement thereof—that is to say:

The improvements relate to means of folding goffered or fluted lace or net and for the application to the back or folded part thereof of bands or tapes. The band or tape, gummed or otherwise cemented, is first placed over a groove in the table and between a pair of sliding bars, in position for the edge of a blade or knife, acting as a presser, to come down thereon as operated by a treadle and give a crease or fold thereto. Above these bars there is a pair of sliding plates, which have a tendency to approach by spring or other pressure to within a short distance of each other, but are capable of being caused to separate as required by the action of a treadle, and so soon as the tape is correctly laid over the groove these plates, which had by the action of the treadle been kept back for the purpose, are allowed to approach each other, by which they prevent the tape rising with the knife. The goffered or fluted lace is then placed on this pair of sliding plates and between other adjustable bars or straight edges which are capable of simultaneous motion when operated by a treadle, so as to lay the lace uniformly over the band or tape, and when the lace or net is thus adjusted with the center of the width thereof over such slit the knife edge is again caused to descend by the action of the treadle, so as to cause such lace or net to be folded with the outer edges projecting uniformly upward and the folded edge to come on to the band or tape, when the sliding bars between the supporting plates and the table, and which are capable also of being simultaneously acted upon by a treadle, are caused to pinch between them the lace or net thus folded with the band or tape thereon. The knife edge acting as a presser is then allowed to rise out of the way, and by the action of the treadle these bars between the supporting plates and the table are again caused to pinch the band or tape on to the folded edge of the lace or net. But that the nature of these my improvements and the means which I adopt may be more fully understood I will proceed to describe the means pursued by me, aided by the accompanying drawings, in the various figures of which the same letters are employed to indicate like parts wherever they occur.

Figure 1 shows a front view, Fig. 2 an end view, and Fig. 3 a plan of apparatus according to my invention. Other figures show some of the parts in the different positions assumed during operation.

a, *a* is the main framing, *b* the table.

c, *d* and *e* are treadles to be acted upon by the foot of the operator in effecting some of the movements of the parts of the apparatus.

The "band" or tape to be applied to the folded part of the goffered or fluted lace or other fabric, after being cut the length desired, has applied to it, as is well understood, gum or other adhesive cement by which to cause it to adhere to such lace or other fabric, or when such fabric has previously been dressed by the aid of starch or other glutinous matter simply clear water may be used. It is then creased or partially folded lengthwise, and in that state it is placed over and partly between the plates *f*, *f*, which have been previously drawn asunder by the operator acting on the treadle *c*, and also over the groove *i* in the table *b*, as indicated by red line in the diagram, Fig. 4, in position for the lower edge of a blade *j*, when brought downward, to press the "band" or piece of tape with the folded edge toward the groove *i*, and then by releasing the treadle *c* the plates *f*, *f* will, by the spring pressure applied to them, simultaneously approach each other, as indicated by Fig. 5.

The blade *j* is held by its end in position yet so as to be capable of sliding vertically on stationary guides *a′*, *a′*, and it is borne with a tendency upward by means of the springs of india rubber *j′*, *j′*, while the downward pressure thereto is obtained by the hands of the operator, or it may be by a treadle acted upon by the foot and connected to the blade or knife by suitable bands or rods.

The plates f, f are by preference movable and are borne with a tendency for them to approach each other by means of springs f', f', connected at their ends to studs projecting from lever arms f^2 f^2, which are affixed to the axes f^3 and at their upper ends pass into openings formed in projections from the plates f, acting with a tendency to draw them toward each other, and these plates f, f are drawn with a tendency to separate from each other by means of the treadle c, which by means of the links or wires f^4, f^4 is connected to the arms f^5, f^5, also affixed to the axes f^3, by which when the outer end c' of the treadle c is depressed the plates or bars f will be caused to separate from each other. The "band" or tape having been thus passed through the opening between the inner edges of the plates f, f and between the bars g, g, the edges of such "band" will separate somewhat, so as to come under the plates f, f, which will then serve to prevent the band or tape from rising with the blade j when that blade is permitted to rise by the withdrawal therefrom of the hands of the operator, as indicated by the diagram Fig. 6, which figure also shows the next stage of the operations, when the length of goffered or fluted lace or other fabric (indicated by the yellow line) to which the band is to be applied is placed on the sliding plates f, f, and between the bars or straight edges h, h acting as gages, which bars h, h are adjustable, as well as being capable of a simultaneous motion toward each other when operated by the treadle d. The object of this simultaneous motion of the bars h, h toward each other is to lay the fluted lace or other fabric equally over the opening formed between the plates f, f and the band or tape. In order to effect this the bars h, h have a tendency to separate from each other by means of the spring h' acting upon the arm h^2, affixed to the axis h^3, upon which, at each end of the machine, is affixed a lever h^4, the opposite ends of which are by links h^5 connected to levers h^6, h^6, the lower ends of which turn upon fixed centers h^7, while the upper ends receive pins projecting from the ends of the bars h, and the treadle d is caused to draw the bars h, h toward each other by means of the link or wire h^8, one end of which is attached to the treadle d while the other end is attached to the arm h^2, affixed on the axis h^3. When the fluted or goffered lace or other fabric is thus adjusted with the center of the width thereof over the opening between the plates f, f, the blade j is again caused to descend, so as to cause such lace or other fabric to be folded with the outer edges projecting uniformly upward and with the folded edges laid on to or within the band or tape, as indicated by the diagram Fig. 7, when other bars g, g will be acted upon. These bars g, g are connected by pin points to the upper ends of levers g^1 at each end of the machine and turn upon centers of motion g^2, while their lower ends are capable of being acted upon by a cam or tappets g^3, affixed to the axis g^4. There are springs g^5, one end of which is affixed to the frame a, while the other ends thereof are attached to the levers g', with a tendency to keep the bars g separated. And when the parts have been brought into the position as described in respect of Fig. 7 the treadle e is operated upon, by which the link g^7, attached at one end thereto and at the other end to the arm g^6, affixed to the axis g^4, will cause that axis to make a partial rotation, by which the cam or tappets g^3 thereon will be brought to act on the lower ends of the levers g' to cause the bars g to approach each other and thereby pinch between them the lace or net folded with the tape thereon, as indicated by Fig. 8.

g^8 is a spring attached to the lever g^6 to pull the axis g^4 into its former position when the treadle e is released by the operator.

In most cases the band or tape will be found sufficiently secured to the lace or other fabric; but if desired the blade j may be withdrawn and the bars g, g again pinched thereon.

l l are levers turning upon centers of motion l', carried by the bar j, to act as stops to adjust the depth of motion of the bar j. When it is required for these stops to act, the operator depresses the ends l^2 of the lever l toward the bar or blade j, when the lower ends of such levers l will be moved slightly outward, in position to come on to the upper ends of the set screws m and thereby prevent the edge of the blade j descending quite to the bottom of the groove in the table, as that blade will be capable of doing when such levers l are not thus acted upon.

I would here state that, although in the description given of the working of apparatus according to my invention I have only mentioned goffered fabric such as used for ladies' cap and bonnet fronts, apparatus constructed according to the improvements is equally applicable in other cases where it is desired to apply bands or tapes of similar character in other articles of millinery. And in some cases in place of the band being applied to the folded fabric in the machine I only fold such fabric in the manner described in the machine, so that it may be ready to receive a band if desired, and apply such band separately afterward.

Having thus described the nature of my said invention and the means which I adopt in carrying the same into effect, I would have it understood that I do not confine myself to the precise details shown and described, as these may be varied; but

What I do claim is—

1. The application, in apparatus or machinery of the character referred to, of bars or gages *h*, *h*, operated to move simultaneously toward the lace or other fabric, substantially as explained.

2. Also I claim the adaptation of plates *f*, *f*, operating in manner and for the purpose substantially as explained, when employed in the manufacture of bonnet and cap fronts, ruches, and such like articles of millinery.

In testimony whereof I have signed my name to this specification before two subscribing witnesses.

W. H. MORRISON.

Witnesses:
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JAS. DONNISON.