J. PARTMANN & S. BALADA.

MACHINE FOR STITCHING GAS MANTLES.

APPLICATION FILED JUNE 13, 1917.

1,260,023.

Patented Mar. 19, 1918.

4 SHEETS—SHEET 1.

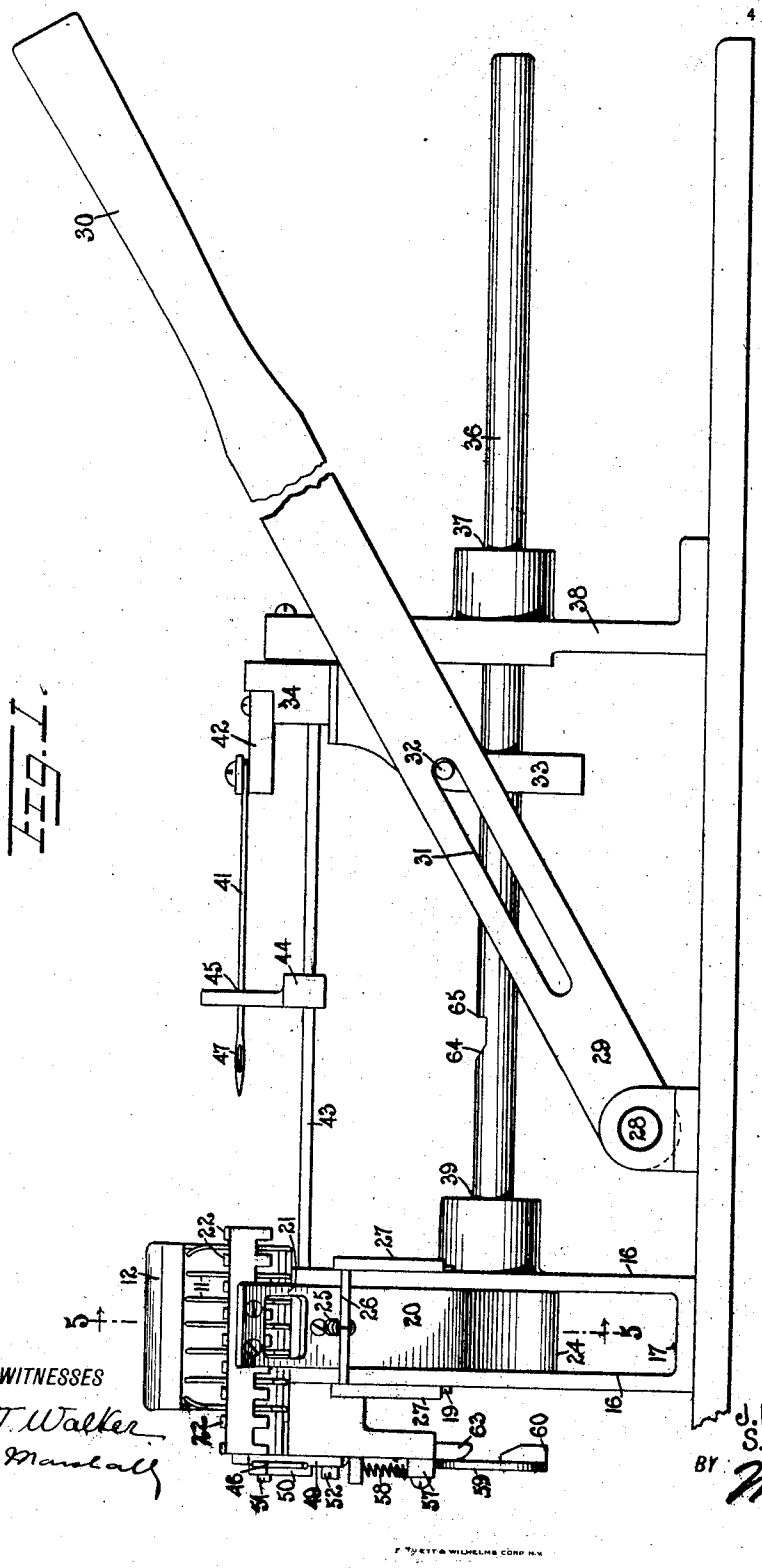


Fig. 1.

WITNESSES

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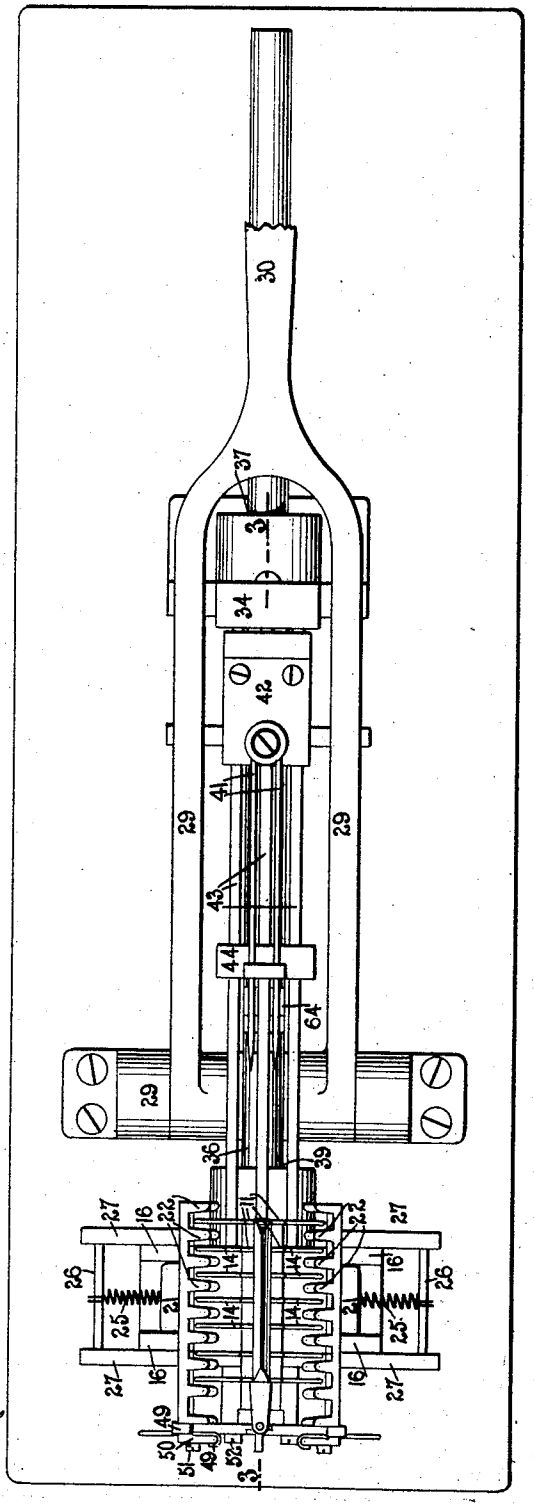
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4 SHEETS—SHEET 2.

Fig. 2.



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Fig. 3.

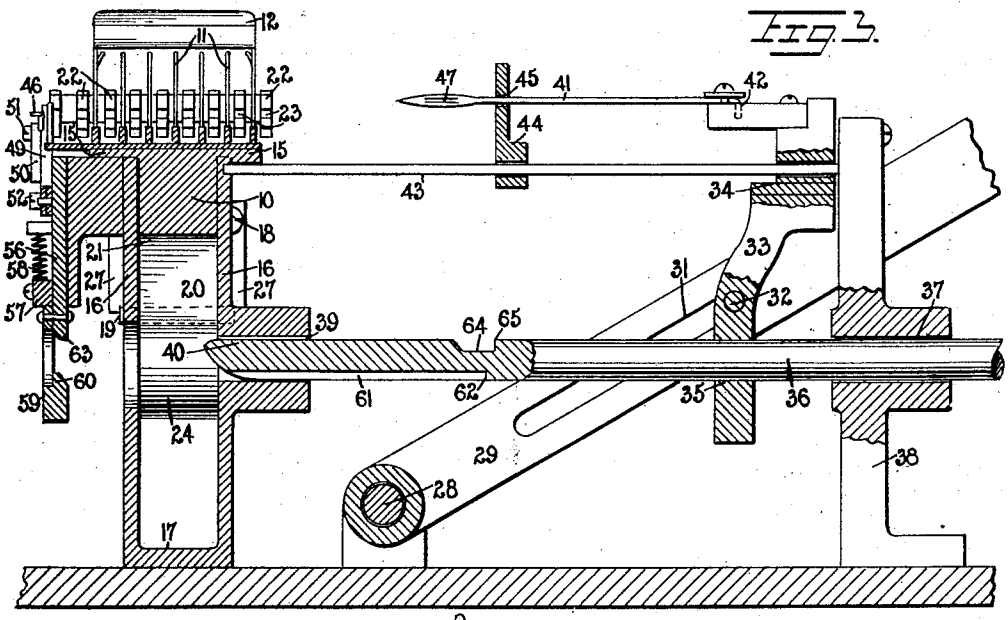
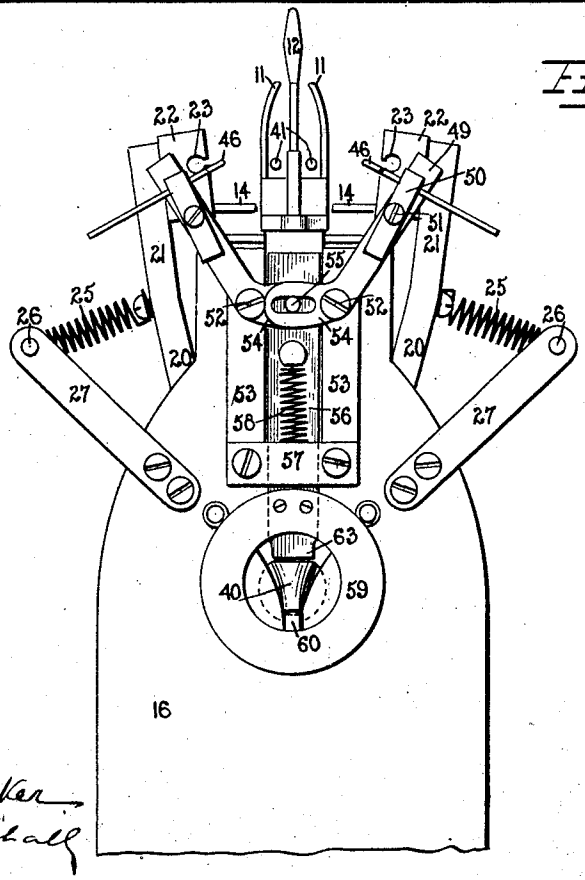


Fig. 4.



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4 SHEETS—SHEET 4.

Fig. 5.

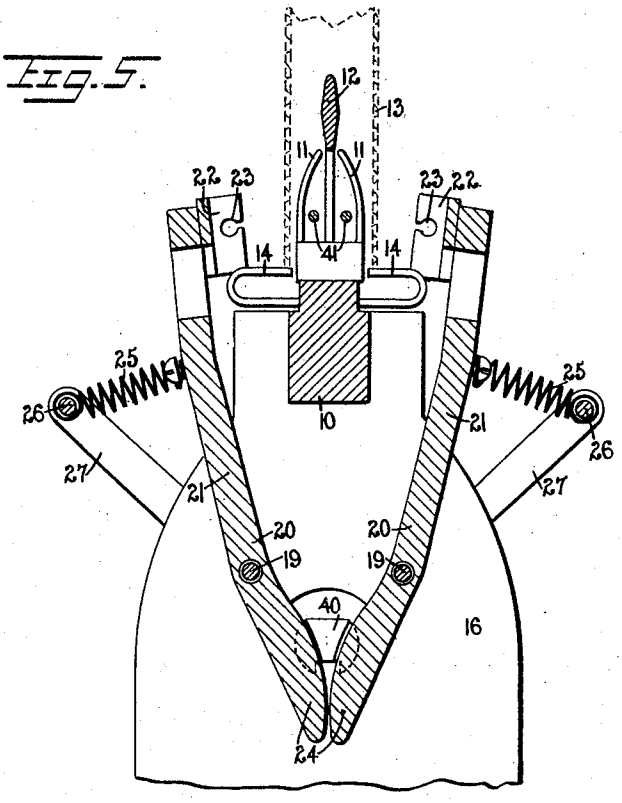
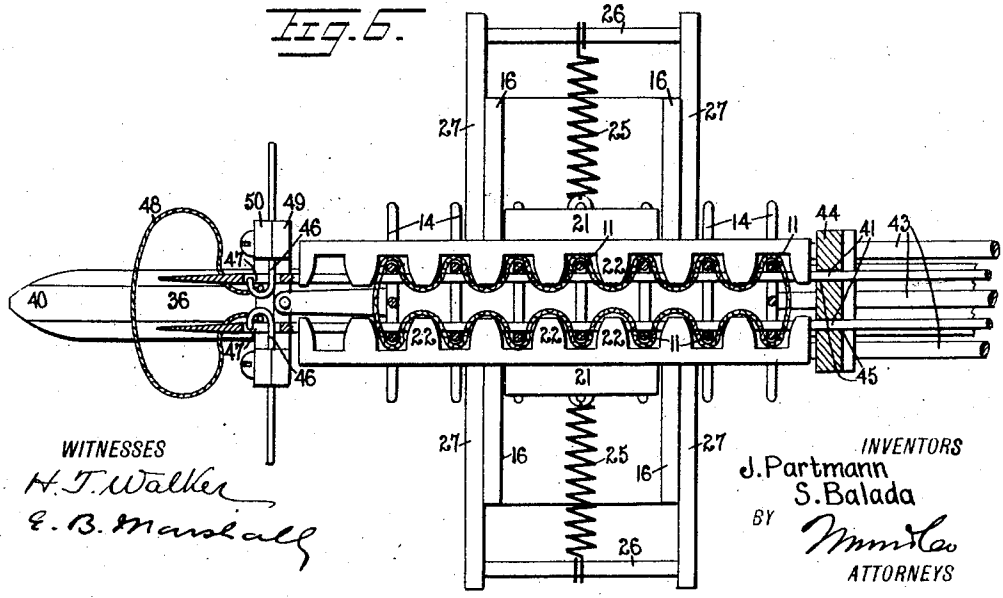


Fig. 6.



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UNITED STATES PATENT OFFICE.

JOHN PARTMANN, OF NEW YORK, AND SAMUEL BALADA, OF BROOKLYN, NEW YORK.

MACHINE FOR STITCHING GAS-MANTLES.

1,260,023. Specification of Letters Patent. Patented Mar. 19, 1918.

Application filed June 13, 1917. Serial No. 174,561.

To all whom it may concern:

Be it known that we, JOHN PARTMANN, a subject of the King of Hungary, and a resident of the city of New York, borough of Manhattan, county of New York, and State of New York, and SAMUEL BALADA, a subject of the King of Hungary, and a resident of the city of New York, borough of Brooklyn, county of Kings, and State of New York, have invented a new and Improved Machine for Stitching Gas-Mantles, of which the following is a full, clear, and exact description.

Our invention has for its object to provide a machine for stitching gas mantles which has hooks which are moved into needle eyes after the needles are pushed through plaits in the mantle made by plaiting members so that a thread may be disposed in the hooks to be drawn through the needle eyes when the hooks are withdrawn therefrom prior to the withdrawal of the needles from the mantle plaits, which stitches the mantle.

Additional objects of the invention will appear in the following specification, in which the preferred form of the invention is disclosed.

In the drawings similar reference characters denote similar parts in all the views, in which—

Figure 1 is a view showing a side elevation of the machine;

Fig. 2 is a plan view of Fig. 1;

Fig. 3 is a sectional view on the line 3—3 of Fig. 2;

Fig. 4 is an enlarged end view of Fig. 1;

Fig. 5 is an enlarged sectional view on the line 5—5 of Fig. 1; and

Fig. 6 is an enlarged plan view illustrating the operation of the machine, parts being broken away to show the construction.

By referring to the drawings it will be seen that on a frame member 10 there are mounted plaiting members 11, the said plaiting members being spaced apart at each side of the top of the frame member 10. Extending above the plaiting members 11 at the central line of the frame member 10 there is a guide 12 which assists in the disposal of a mantle over the plaiting members 11, the said mantle being illustrated by the dotted lines 13 in Fig. 5 of the drawings. The mantle, when it is disposed over and around the frame members 11, rests on members 14 which extend laterally from the frame member 10. The frame member 10 has flanges 15 which rest on portions 16 of a frame member 17, the said portions 16 being spaced apart, and with the frame member 10 disposed therebetween, a screw 18 being employed to hold the frame member 10 in position relatively to the portions 16 of the frame member 17. Disposed between the portions 16 of the frame member 17 and pivoted thereto at 19, there are levers 20 which have upwardly-extending arms 21 on which plaiting members 22 are mounted, the said plaiting members 22 on each of the lever arms 21 being spaced apart, as shown in Fig. 6 of the drawings. As will be seen by referring to Fig. 5 of the drawings the plaiting members 22 have central openings 23 which extend through the inner sides of the said plaiting members. The lower arms 24 of the levers 20 are normally disposed adjacent each other, the levers being held in this position by means of springs 25 which connect the arms 21 of the levers 20 with rods 26 which are supported on arms 27 secured to the portions 16 of the frame member 17.

A bifurcated arm 29 of an operating lever 30 is pivoted at 28, this bifurcated arm 29 being provided with slots 31 in which a pin 32 is disposed. The pin 32 is secured to an arm 33 of a slide 34, the arm 33 having an orifice 35 in which a plunger 36 is secured, the plunger 36 extending in a bearing 37 in a frame member 38 and in a bearing 39 mounted on one of the portions 16 of the frame member 17. The end 40 of this plunger is disposed adjacent the arms 24 of the levers 20, and the said plunger end 40 is beveled so that when the plunger is moved forwardly it will press the lever arms 24 apart, thereby moving the lever arms 21 and with them the plaiting members 22 to the position indicated in Fig. 6 of the drawings, the gas mantle being plaited and held by the plaiting members 11 and 22 for the introduction of needles 41 which are mounted at 42 on the slide 34.

The first action of the operating lever 30 serves to operate the levers 20, as stated, inasmuch as the plunger end 40 operates the levers, the needles 41 being subsequently introduced through the openings 23 in the plaiting members 22, at the inner side of the plaiting members 11, and as the mantle is disposed in plaited form between the said plaiting members, the needles are inserted through the mantle as illustrated in Fig. 6 of the drawings.

The slide 34 travels on a plurality of rods 43, preferably three in number, and on these rods 43 there is slidably disposed a guide 44 having openings 45 in which the needles 41 are disposed.

When the needles 41 have been introduced through the mantle, as has been stated, the needles are threaded, this being accomplished by the movement of hooks 46 through the needle eyes 47, after which a thread 48 is disposed down between one of the hooks and the needle adjacent thereto, and then up between the other hook and the other needle. When the hooks 46 are then removed from the needle eyes and the needles 44 withdrawn, the mantle is stitched in a manner which will be readily understood.

The hooks 46 are adjustably mounted on levers 49 the hooks 46 being held on the levers 49 by clamps 50 which are secured to the levers 49 by screws 51. By this means the hooks 46 may be adjusted as necessary, so that they will move freely through the eyes 47 when the machine is operated. The levers 49 are pivoted at 52 to a guideway 53, the lower arms 54 of the levers 49 having slots in which a pin 55 is disposed, the pin extending from a guide 56 which moves in the guideway 53. A cross-piece 57 is disposed at the outer side of the guide 56, and is secured to the sides of the guideway 53. The guide 56 is held yieldingly downwardly by a spring 58 which connects the guide 56 with the cross-piece 57. Mounted on the guide 56 below the cross-piece 57 there is a ring 59, and extending upwardly from the bottom of the ring 59 there is a boss 60, this boss 60 fitting in a guideway 61 at the bottom of the plunger 36 when the plunger moves forwardly. It will, therefore, be seen that with the plunger's forward movement it will not move the boss 60 or the ring 59 until the plunger 36 advances to a point where the boss 60 will be engaged by the shoulder 62 on the plunger. The boss 60 is beveled at its inner side, as illustrated in Fig. 3 of the drawings, so that the shoulder 62 will serve to press the boss 60 down and with it the ring 59, thereby moving the guide 56 down to operate the levers 49 and move the hooks 46 inwardly and through the eyes 47 of the needles 41. With this downward movement of the guide 57 the lower portion 63 of the guide 56 will move down into a recess 64 at the top of the plunger 36 and against a shoulder 65 at the rear of the said recess to check the forward movement of the plunger 36. As the lower end 63 of the guide 56 will rest against the plunger 36 in the recess 64, the downward movement of the guide 56 will also be checked. It will be observed that the recess 64 is disposed above the shoulder 62 on the plunger 36.

Having thus described our invention, we claim as new and desire to secure by Letters Patent:

1. In a machine for stitching gas mantles, plaiting members spaced apart, companion plaiting members spaced apart and adapted to be moved between neighboring plaiting members of those first mentioned, a needle movable longitudinally of the machine for dispcsal through a fabric plaited by the plaiting members, a plunger movable longitudinally of the machine, means connecting the needle and the plunger for simultaneous movement, a needle threading means for threading the needle after it has been inserted through the fabric, and means by which the plunger is adapted to operate the plaiting members and the needle threading means.

2. In a machine for stitching gas mantles, plaiting members spaced apart, companion plaiting members spaced apart and movably mounted for movement each between neighboring plaiting members of those first mentioned, a needle for moving through a fabric which has been plaited by the plaiting members, a needle threading means for threading the needle after it has been inserted through the fabric, a plunger, means connecting the needle and plunger for simultaneous movement, and means by which the plunger is adapted to operate the plaiting members and the needle threading means.

3. In a machine for stitching gas mantles, plaiting members, companion plaiting members pivoted on an axis extending longitudinally of the machine, a plunger movable longitudinally of the machine for engaging an arm of the second mentioned plaiting member for operating the latter, a needle, a needle threading means for the needle, and means adapted to be engaged by the plunger for operating the needle threading means.

4. In a machine for stitching gas mantles, plaiting members, companion plaiting members, pivoted on an axis extending longitudinally of the machine, a plunger movable longitudinally of the machine for engaging an arm of the second mentioned plaiting members for operating the latter, a needle movable longitudinally of the means, threading means for the needle, means adapted to be engaged by the plunger for operating the threading means, a slide having a pin, to which the needle and the plunger are secured, and a pivoted operating lever having a slot in which the pin is disposed.

5. In a machine for stitching gas mantles, plaiting members, companion plaiting members pivoted on an axis extending longitudinally of the machine, a plunger movable longitudinally of the machine for engaging an arm of the second mentioned plaiting members for operating the latter, a rod extending longitudinally of the machine, a

slide mounted for moving along the rod and to which the plunger is secured, a needle mounted on the slide, a guide on the rod and having an orifice through which the needle is disposed, and means for operating the slide.

6. In a machine for stitching gas mantles, plaiting members, companion plaiting members pivoted on an axis extending longitudinally of the machine, a plunger movable longitudinally of the machine for engaging an arm of the second mentioned plaiting members for operating the latter, a rod extending longitudinally of the machine, a slide mounted for moving along the rod and to which the plunger is secured, a needle mounted on the slide for moving through a fabric plaited by the plaiting members, an operating lever pivoted on a transverse axis and provided with a slot and a horizontal transversely extending pin on the slide disposed in the slot.

7. In a machine for stitching gas mantles, a member having plaiting openings spaced apart at each side, two levers having plaiting members on one set of arms for disposal one at each side of the first mentioned member, a plunger having an end for disposal between the other arms of the levers for moving the levers and portions of the plaiting members mounted thereon in plaiting openings in the first member, two needles disposed side by side for moving with the plunger one through each side of a fabric held between the plaiting members, and springs for holding the levers with the plaiting members thereon normally spaced apart.

8. In a machine for stitching gas mantles, a member having plaiting openings spaced apart at each side, two levers having plaiting members on one set of arms for disposal one at each side of the first mentioned member, a plunger having an end for disposal between the other arms of the levers for moving the levers and portions of the plaiting members mounted thereon in plaiting openings in the first member, two needles disposed side by side for moving with the plunger one through each side of a fabric held between the plaiting members, springs for holding the levers with the plaiting members thereon normally spaced apart, hooks for passing through the eyes of the needles, and actuating means for the hooks operable by the plunger.

9. In a machine for stitching gas mantles, a member having plaiting openings spaced apart at each side, two levers having plaiting members on one set of arms for disposal one at each side of the first mentioned member, a plunger having an end for disposal between the other arms of the levers for moving the levers and portions of the plaiting members mounted thereon in plaiting openings in the first member, two needles disposed side by side for moving with the plunger one through each side of a fabric held between the plaiting members, springs for holding the levers with the plaiting members thereon normally spaced apart, a guideway, a guide for moving in the guideway, two levers pivoted to the guideway, hooks carried by the last mentioned levers for moving through the eyes of the needles after the needles have been passed through the fabric, a pin on the guide for engaging the last mentioned levers to operate the latter, a ring secured to the guide through which the plunger may move, a boss on the ring, and a shoulder on the plunger for engaging the boss to move the guide to operate the hooks.

10. In a machine for stitching gas mantles, a member having plaiting openings spaced apart at each side, two pivoted plaiting members one at each side of the first member and each having portions for disposal in plaiting openings in the first mentioned member, two needles spaced apart for passing through a fabric plaited by the plaiting members, a plunger for engaging the pivoted plaiting members for operating the latter, operating means connected with the plunger and with the needles, a guideway, a guide for moving in the guideway, two levers pivoted to the guideway, hooks for passing through the eyes of the needles after the needles are inserted through the fabric, the hooks being carried by the last mentioned levers, a pin on the guide for engaging the last mentioned levers to operate the latter, a ring secured to the guide, through which the plunger may move, a boss on the ring, and a shoulder on the plunger for engaging the boss to move the guide to operate the hooks.

11. In a machine for stitching gas mantles, a member having plaiting openings spaced apart at each side, two pivoted plaiting members one at each side of the first member and each having portions for disposal in plaiting openings in the first member, two needles each disposed for passing through a side of a fabric, a plunger for engaging the pivoted plaiting members for operating the latter, operating means connected with the plunger and with the needles, hooks for disposal through the eyes of the needles after the needles have been inserted through the fabric, and means operable by the plunger for actuating the hooks.

12. In a machine for stitching gas mantles, a member having plaiting openings spaced apart at each side, two members one at each side of the first member and each having plaiting openings for receiving portions of the first member, two needles each

disposed for passing through a side of a fabric plaited between the members, a guideway, a guide for moving in the guideway, two levers pivoted to the guideway, hooks carried by the levers, a pin on the guide for engaging the levers to operate the latter, a ring secured to the guide through which a plunger may move, a boss on the ring, and a plunger having means for operating the members and the needles and provided with a shoulder for engaging the boss to move the guide to operate the hooks.

13. In a machine for stitching gas mantles, a member having plaiting openings spaced apart at each side, two members one at each side of the first member and each having plaiting openings for receiving portions of the first member, two needles each disposed for passing through a side of a fabric plaited between the members, a guideway, a guide for moving in the guideway, two levers pivoted to the guideway, hooks carried by the levers, a pin on the guide for engaging the levers to operate the latter, a ring secured to the guide through which a plunger may move, a boss on the ring, and a plunger having means for operating the members and the needles and provided with upper and lower shoulders one for engaging the boss to move the guide to operate the hooks, and the other for engagement with the bottom of the guide to limit the movement of the guide and the plunger.

14. In a machine for stitching gas mantles, a plaiting member, a companion plaiting member, a plunger movable longitudinally of the machine for engaging an arm of the second plaiting member for operating the latter, a needle, means for operating the plunger and the needle, a guideway, a guide for moving in the guideway and disposed in the path of the plunger to be operated thereby, a pivoted lever, a hook carried by the lever for moving through the eye of the needle, and a pin on the guide for engaging the lever to operate the latter.

15. In a machine for stitching gas mantles, a plaiting member, a companion plaiting member pivoted on an axis extending longitudinally of the machine, a plunger movable longitudinally of the machine for engaging an arm of the second plaiting member for operating the latter, a rod extending longitudinally of the machine, a slide mounted for moving along the rod and to which the plunger is secured, a needle mounted on the slide for passing through a fabric plaited by the plaiting members, means for operating the slide, a guideway, a guide for moving in the guideway and disposed in the path of the plunger to be operated thereby, a pivoted lever, a hook carried by the lever for moving through the eye of the needle, and a pin on the guide for engaging the lever to operate the latter.

16. In a machine for stitching gas mantles, a plaiting member, a companion plaiting member, a plunger having a shoulder movable longitudinally of the machine for engaging the arm of the second plaiting member for operating the latter, a needle, means for operating the needle and the plunger, a guideway, a guide for moving through the guideway and having a ring with a projection, through which the plunger may pass, the ring engaging a surface of the plunger for holding the guide in one position during a predetermined period in the operation of the machine and until the projection on the ring engages the shoulder on the plunger to operate the guide, said plunger having a recess to receive a portion of the ring when the guide is operated.

17. In a machine for stitching gas mantles, plaiting members spaced apart, companion plaiting members spaced apart and adapted to be moved between neighboring plaiting members of those first mentioned, a needle positioned for movement through a fabric plaited by the plaiting members, a needle threading means, a plunger, and means by which the plunger is adapted to operate the plaiting members and the needle threading means.

18. In a machine for stitching gas mantles, plaiting members spaced apart, companion plaiting members spaced apart and adapted to be moved between neighboring plaiting members or those first mentioned, an integral needle having an eye positioned for movement through a fabric plaited by the plaiting members, a needle threading device for threading the needle eye after it has been inserted through the fabric, a plunger movable longitudinally of the machine and means by which the plunger is adapted to operate the needle threading means.

19. In a machine for stitching gas mantles, means for plaiting a mantle, a needle, a plunger, means for operating the plunger and the needle, a guideway, a guide for moving in the guideway and disposed in the path of the plunger to be operated thereby, a pivoted lever, a hook carried by the lever for moving through the eye of the needle, and a pin on the guide for engaging the lever to operate the latter.

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Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."