

June 26, 1928.

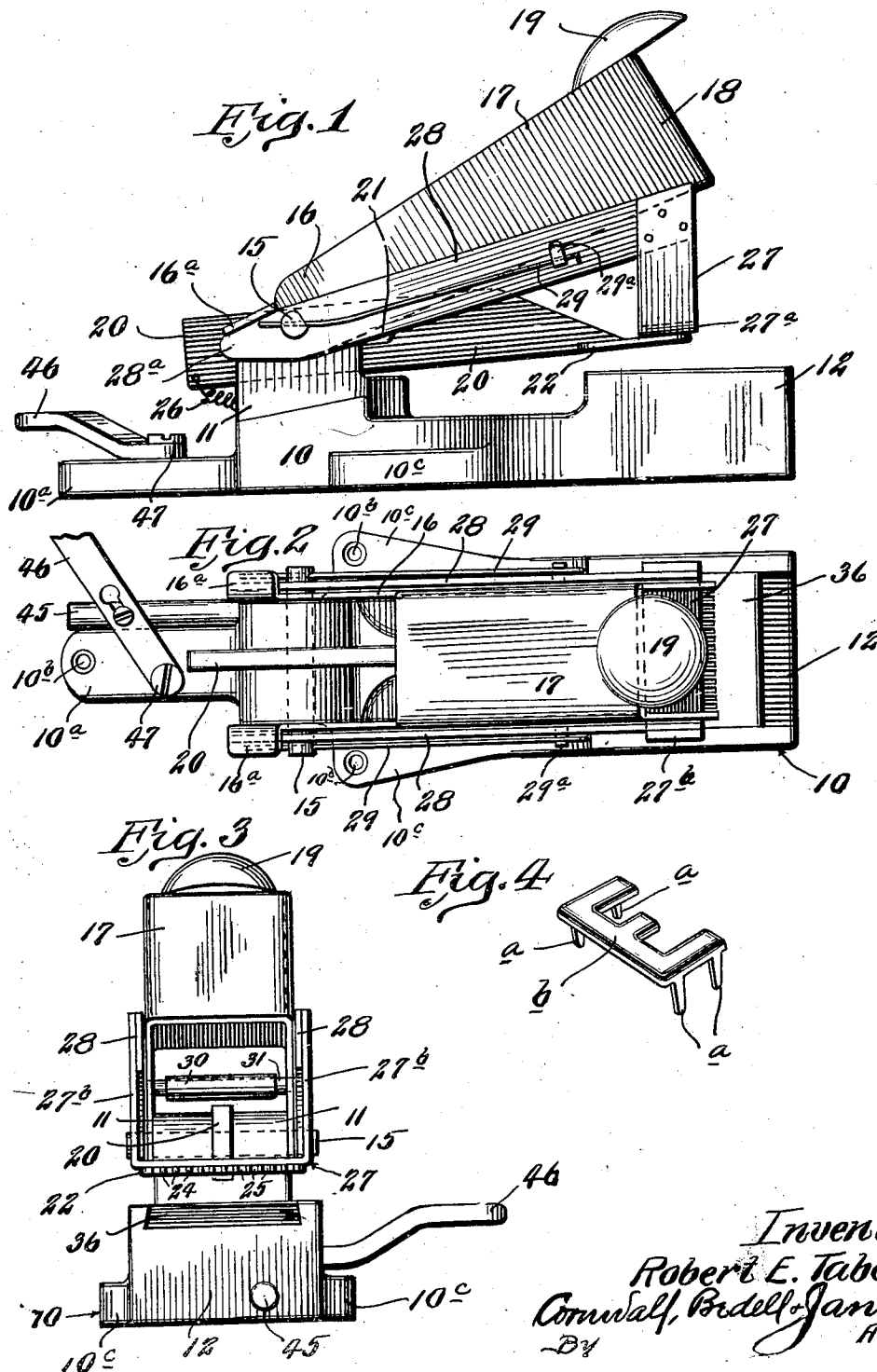
1,675,004

R. E. TABOR

MONOGRAM MACHINE

Filed April 13, 1925

4 Sheets-Sheet 1



Inventor
Robert E. Tabor
Cornwall, Bedell & Janus
Attys

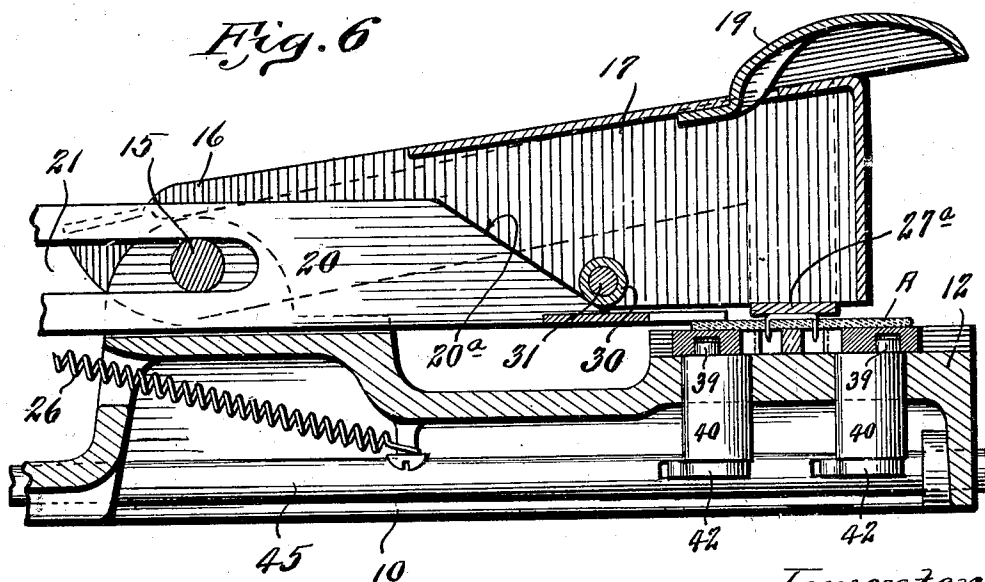
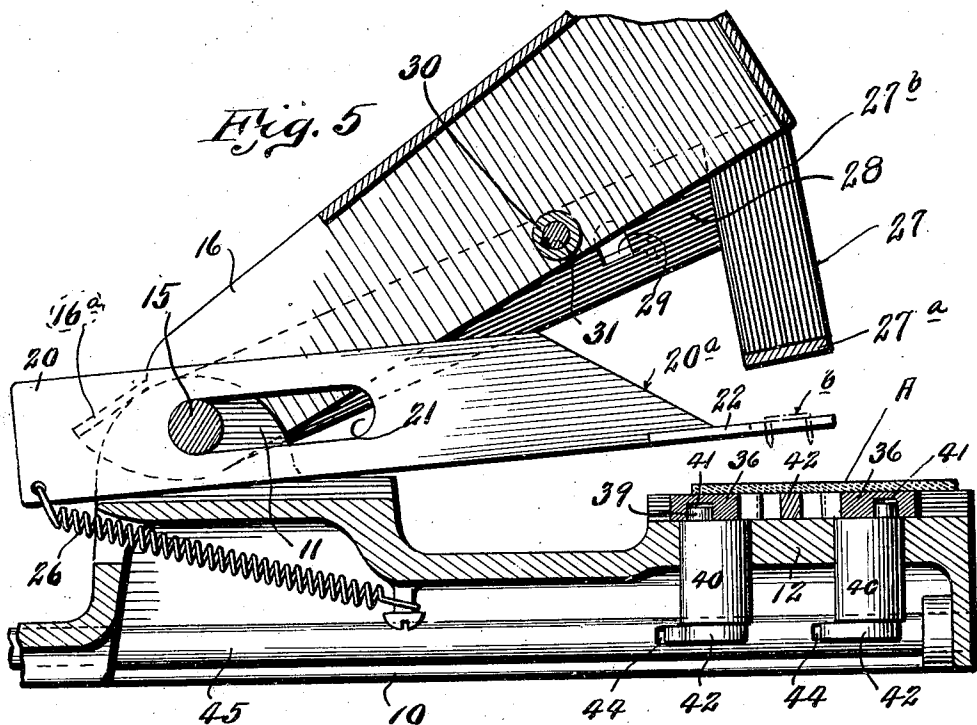
June 26, 1928.

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R. E. TABOR
MONOGRAM MACHINE

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4 Sheets-Sheet 2



Inventor
Robert E. Tabor
By Cornwall, Bidell & James, Attys

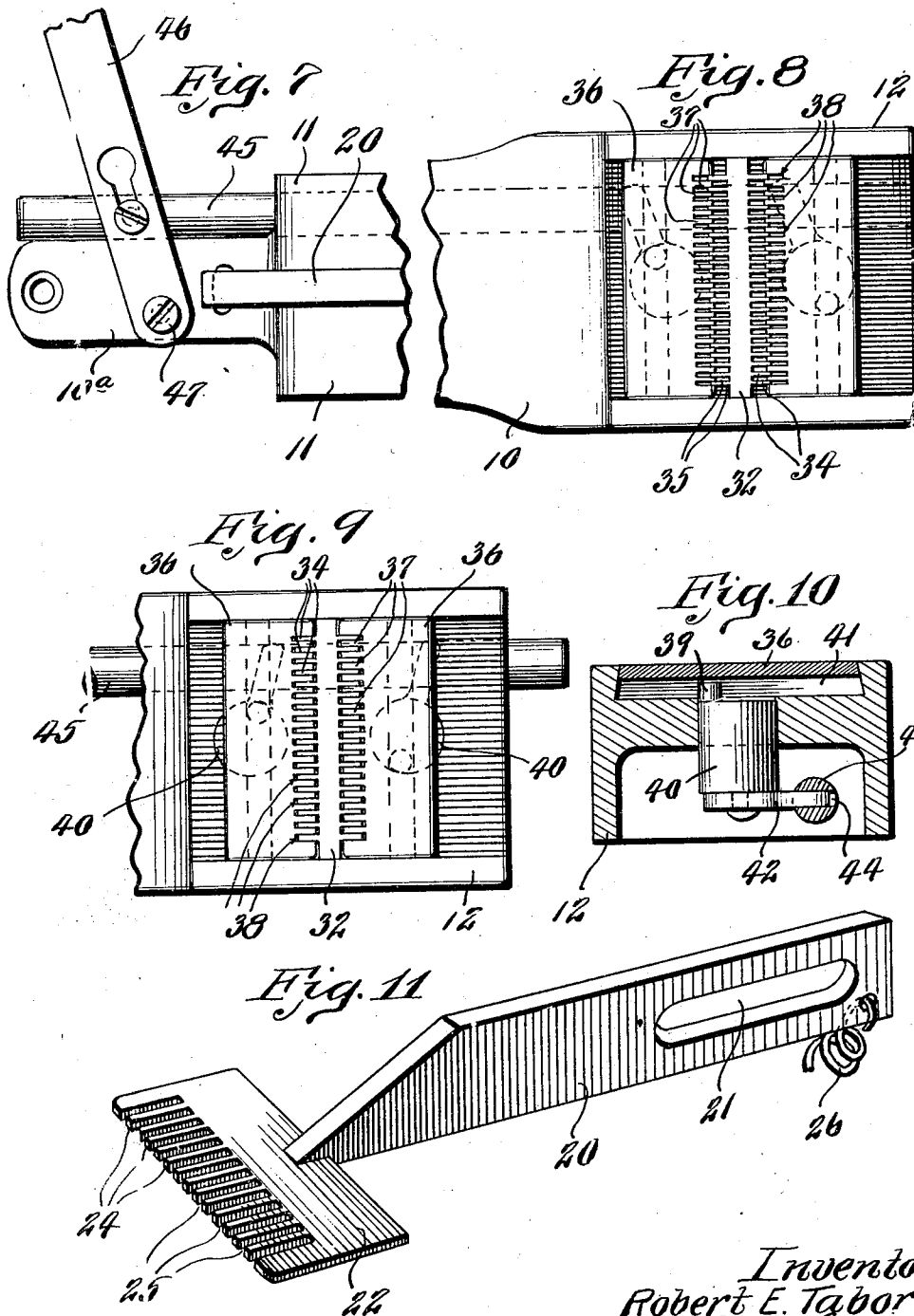
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R. E. TABOR
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4 Sheets-Sheet 3



Inventor
Robert E. Tabor
By *Cornwall, Bidell & Janus*
ATTYS.

June 26, 1928.

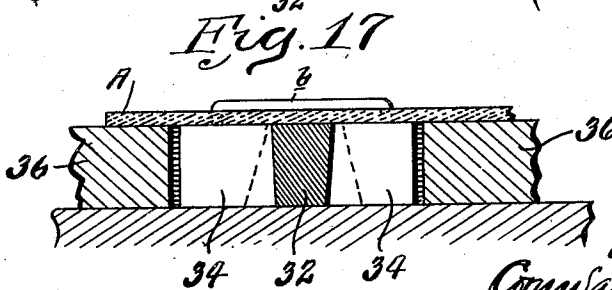
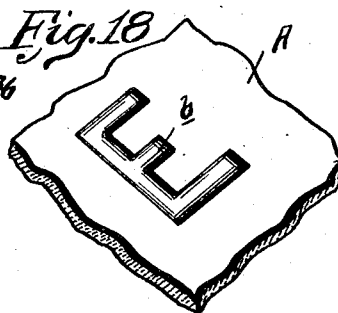
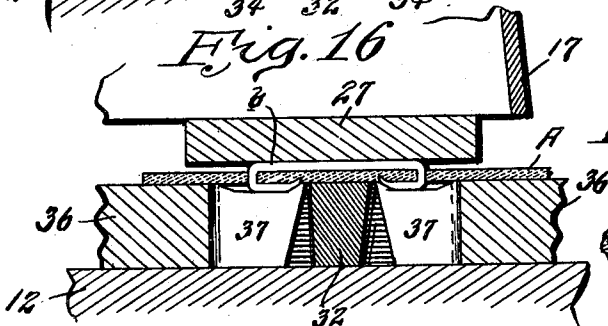
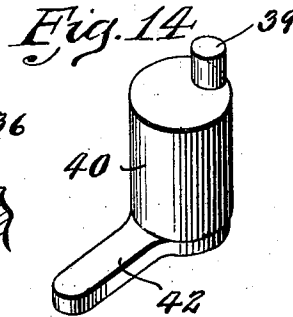
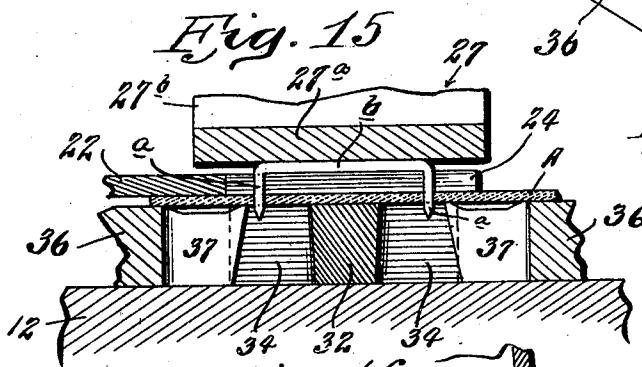
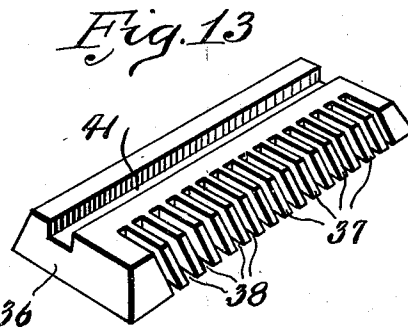
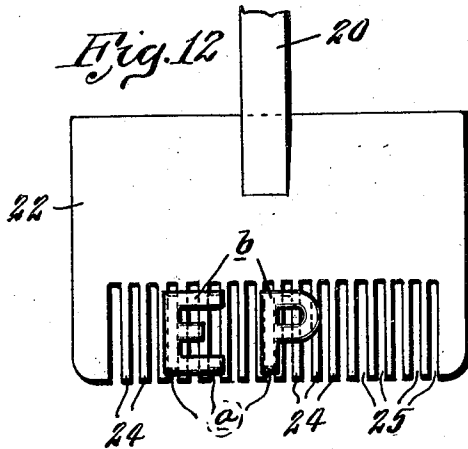
1,675,004

R. E. TABOR

MONOGRAM MACHINE

Filed April 13, 1925

4 Sheets-Sheet 4



Inventor
Robert E. Tabor
By Cornwall, Bidell & Janney
Attys

UNITED STATES PATENT OFFICE.

ROBERT E. TABOR, OF ST. LOUIS, MISSOURI, ASSIGNOR TO THE TAB CORPORATION, OF ST. LOUIS, MISSOURI, A CORPORATION OF MISSOURI.

MONOGRAM MACHINE.

Application filed April 13, 1925. Serial No. 22,834.

This invention relates to new and useful improvements in monogram machines and has for its principal object the provision of a simple and efficient machine for attaching suitable letters or marks to various articles, such as hat-bands, coat linings, bill folders, etc.

Further objects of the invention are to provide a machine adapted to receive a plurality of initials suitably disposed relative to each other and to the article to which they are to be attached, said machine being operable to position said letters on said article and permanently secure the same thereto.

Other objects of the invention are to provide a plurality of letters having depending prongs and to provide a machine adapted to receive said letters and attach the same to an article by positioning said letters on said article and forcing the prongs through the material thereof and preferably clinching the projecting portions of the prongs against the underside of the material.

With these and other objects in view my invention consists in certain novel features of construction and arrangement of parts, hereinafter more fully described and claimed, and illustrated in the accompanying drawings, in which—

Figure 1 is a side elevational view of the machine.

Figure 2 is a top plan view.

Figure 3 is a front elevational view of same.

Figure 4 is a perspective detail view of one of the letters adapted to be used in my machine.

Figure 5 is a longitudinal cross section through the machine and showing the same in open or receiving position.

Figure 6 is a similar view showing the machine in closed or operative position.

Figure 7 is a top plan view of the rear end of the machine.

Figure 8 is a top plan view of the table or clinching means and showing the latter in extended position.

Figure 9 is a top plan view of the table and showing the clinching means in closed position.

Figure 10 is a vertical cross section taken transversely through the table and showing means for actuating the clinching blocks.

Figure 11 is a perspective detail view of the comb or initial positioning member.

Figure 12 is a top plan view of the comb with two of the initials positioned thereon.

Figure 13 is a perspective detail view of one of the clinching blocks looking against the underside thereof.

Figure 14 is a perspective detail view of the means utilized for actuating the clinching blocks.

Figure 15 is an enlarged sectional view taken longitudinally through the table and showing an initial held against the material to which it is to be attached and in readiness for the clinching operation.

Figure 16 is a similar view showing the prongs of an initial clinched against the underside of the material.

Figure 17 is a similar view but showing in full lines the spacing fingers of the stationary block.

Figure 18 is a perspective detail view of a portion of the material and showing one of the initials secured thereto.

Referring by numerals to the accompanying drawings, 10 indicates a base provided at its rear ends with a pair of upwardly projecting lugs 11 and at its forward end with a channeled table 12. Lugs 11 are provided in horizontally disposed aligned apertures for receiving a pin 15 to which are fixed the rear ends 16 of a member 17. This member 17 is preferably box-shape in cross section and its forward end 18 terminates above table 12. A handle 19 is fixed in any suitable manner to the top wall of member 17 and provides convenient means for manually operating or depressing said member.

Lugs 11 are spaced from each other and slidably operating therebetween is a longitudinally disposed bar 20 having a horizontally disposed slot 21 which cooperates with pin 15 and permits longitudinal movement of said bar. The forward end of said bar has fixed thereto a horizontally disposed plate or comb 22 having forwardly presented teeth 24. The spaces 25 between teeth 24 are of sufficient width to receive prongs *a* when letters or initials *b* are placed on said comb. These spaces further serve as suitable means for spacing the letters the desired distances from each other. The rear end of bar 20 has fixed thereto one end of a coiled spring 26, the opposite end of which is anchored within base 10 which is formed box-shape in cross section. This spring

serves to hold bar 20 in forward position and maintains comb 22 in a raised position as shown in Figure 5. The U-shaped member 27 having its horizontal portion 27^a disposed above comb 22 and adapted to bear on the letters carried thereby has its parallel portions 27^b arranged to each side of the forward end 18 of member 17 and fixed to the forward ends of arms 28; the rear ends of which are loosely supported on pin 15. Member 17 and pressure member 27 are normally held spaced from each other by springs 29 arranged adjacent to each arm 28 and having their rear ends seated in the ends of pin 15 and their forward ends bearing on lugs 29^a struck out from arms 29. Pin 15, being fixed to member 17, the tendency of springs 29 will be to move members 17 and 27 away from each other as shown in Figure 1.

In order to prevent excessive disengaging movements of members 17 and 27 and to maintain springs 29 under proper tension, the rear ends 16 of member 17 are provided with lateral extensions 16^a against which bear rear extensions 28^a of arms 28, thereby limiting the relative outward movements of members 17 and 27.

When member 17 is depressed, a roller 30, loosely mounted on a pin 31 arranged transversely within member 17 and having its ends fixed to the side walls thereof, engages the inclined or cam face 20^a of member 20 causing the latter to move rearwardly, thereby retracting comb 22 from its letter-retaining position and out of engagement with member 27 as shown in Figure 6. This rearward movement of bar 20 stresses spring 26 and when the pressure is removed from member 17, said spring restores bar 20 to its normal position at the same time assisting in raising members 17 and 27.

Stationarily mounted in the channeled table 12 is a block 32 provided on the opposite sides with a series of laterally projecting fingers or blades 34, thereby forming spaces 35. Movably mounted in said table are opposed plates 36, the inner edges of which are provided with a series of vertically disposed blades or fingers 37 which are adapted to operate in the spaces or slots 35 formed by fingers 34 while the latter enter the slots 38 formed in plates 36 by said fingers 37. These plates 36 are movable to and from block 32 by means of pins 39 which are eccentrically disposed on and project upwardly from members 40 rotatably mounted in table 12. Pins 39 enter slots 41 formed longitudinally in plates 36 and transversely of the direction of travel of said plates.

Members 40 are actuated by means of fingers 42 which are fixed to the underside of said members and terminate in slots 44 horizontally disposed in a bar 45 which is longi-

tudinally disposed in bearings formed in base 10 and is longitudinally movable by means of a handle 46 which is pivotally secured at 47 to an extension 10^a of base 10 and has a pin and slot engagement with member 35.

Pins 39 are disposed on the opposite sides of the center line of the machine whereby the movement of member 45 in one direction will cause plates 36 to move toward block 32 with the fingers 37 occupying slots 35 as shown in Figure 9. The operation of member 45 in the opposite direction will cause said plates to move outwardly away from block 32, thereby moving fingers 37 out of spaces 35. When plates 36 occupy their extreme extended positions, the ends of fingers 37 thereof slightly overlap the ends of fingers 34 of block 32 in order to insure efficient operation of the plates and prevent the ends of said fingers from forming abutting contact with each other.

In using the machine, the material to be initialed is placed on the table as indicated at A in Figure 5, and the suitable initials are placed on the comb with the prongs of said initials extending downwardly through the spaces 25 formed by the teeth 24 as shown in Figure 12. Member 17 is now brought downwardly, thereby bringing member 27 against comb 22 so that the underside of portion 27^a will bear on the initials B positioned on comb 22. The continued pressure on member 17 will rock bar 20, bringing comb 22 against the material positioned on table 12 so that the prongs of the initials placed on the comb will pass through the material positioned on said table as shown in Figure 6. During the downward movement of member 17, roller 30 engages the cam portion 20^a of bar 20, thereby causing the latter to move into retracted position as shown in Figure 6 so that the initials carried by the comb are positioned directly on the material to which they are to be attached. During the rearward movement of comb 22, portion 27^a bearing on said initials will prevent the displacement thereof and cause them to be firmly seated in the material.

After bar 22 has been moved to its rear position or at the completion of the downward movement of member 17, handle 46 is operated, bringing shaft 45 forwardly, thereby causing plates 36 to move toward block 32. During this inward movement of plates 35, the appropriate fingers 37 thereof engage prongs *a* of the initials and bend them upwardly and inwardly against the underside of the material as shown in Figure 16. Handle 46 is now returned to its normal position, thereby restoring plates 36, and the pressure on the member 17 is released causing bar 20 and members 17 and 27 to be restored to their normal positions,

whereupon the material with the initials attached thereto can be removed from the table.

The spaces 25 of comb 22 coincide with the spaces 35 of block 32 so that when comb 22 is depressed or moved against table 12, prongs *a* of the initials will enter the spaces or slots 35 of block 32 as shown in Figure 15. The horizontal portion 27^a bearing on the initials causes the prongs thereof to pierce the material positioned on the table and when comb 22 is withdrawn bring said initials against said material.

The machine can be attached to a table or other support by suitable fastening devices passing through apertures 10^b formed in extension 10^a and ears 10^c of base 10.

While a comb is used in the present instance for positioning the initials or marks, other means suitable for the purpose can be used.

A monogram machine of my improved construction is simple to operate, will hold the letters or marks securely in position during the attachment thereof to the material and is constructed so that the letters can be disposed in the retaining member in the exact relation in which they are to be attached to the material.

While I have shown and described the preferred form of my invention, it is obvious that minor changes can be made and substituted for those herein shown and described, without departing from the spirit of my invention.

I claim:

1. In a machine of the class described, a support adapted to receive the material to be marked, a comb disposed above said support and adapted to receive and support the marks which are to be applied to said material, and a horizontally disposed member movable downwardly into pressure engagement with said marks for forcing the latter against said material, said comb being movable rearwardly to release said marks when the prongs thereof enter said material.

2. In a machine of the class described, a support adapted to receive the material to be marked, a rockable comb disposed above said support and adapted to receive and support the marks which are to be applied to said material, a horizontally disposed member movable downwardly into pressure engagement with said marks for forcing the latter against said material, and means for retracting said comb horizontally and rearwardly for releasing said marks in correlation with the application of said pressure member.

3. In a machine of the class described, a support adapted to receive the material to be marked, a comb disposed above said support and adapted to receive and support the marks which are to be applied to said material, said comb being pivotally mounted and

adapted to be retracted with respect to said support, a horizontally disposed member arranged on said comb and movable downwardly into pressure engagement with said marks for forcing the latter against said material, and a manually operable member pivotally mounted for retracting said comb and actuating said pressure member in correlation with each other.

4. A monogram machine comprising a support, a comb pivotally mounted on said support and adapted to selectively receive between its teeth the prongs of suitable initials, a pressure plate disposed above said comb and movable coaxially therewith to exert pressure on said initials and force the prongs thereof through the material to which said initials are to be applied, and means for retracting said comb horizontally and rearwardly and releasing said initials in time relation with the operation of said pressure member.

5. A monogram machine comprising a support, a comb pivotally mounted on said support and adapted to selectively receive between its teeth the prongs of suitable initials, a pressure plate disposed above said comb and adapted to exert pressure on said initials to force the prongs thereof through the material to which said initials are to be applied, and a manually operable member pivotally mounted on said support, coaxially with said comb for retracting said comb rearwardly and cooperating with said pressure member for applying said initials to the material.

6. A monogram machine comprising a support, a comb on said support adapted to respectively receive between its teeth the prongs of suitable initials, a pressure plate disposed above said comb and adapted to exert pressure on said initials to force the prongs thereof through the material to which said initials are to be applied, and a manually operable member for retracting said comb immediately before said pressure member applies the final pressure to said initials.

7. A monogram machine comprising a support, a comb pivotally and slidably disposed on said support and adapted to selectively receive between its teeth the prongs of suitable initials, a pressure plate normally disposed above and in spaced relation with said comb and movable relatively thereto to exert pressure on said initials to force the prongs thereof through the material to which said initials are to be applied, means for retracting said comb thereby releasing said initials in time relation with the operation of said pressure member, and means mounted in said support for movement in a horizontal plane for clinching the prongs of said initials against the underside of said material.

8. A monogram machine comprising a support, a comb pivotally and slidably mounted on said support and adapted to selectively receive between its teeth the prongs of suitable initials, a pressure plate disposed above said comb and movable relatively thereto to exert pressure on said initials to force the prongs thereof through the material to which said initials are to be applied; means for actuating said pressure plate, means for retracting said comb in time relation with the operation of the pressure plate whereby the initials are released before the pressure plate completes its pressing movement, and manually operable means mounted in said support and movable in a horizontal plane for clinching said prongs against the underside of said material.

9. A monogram machine comprising a support, a comb pivotally mounted at one end on said support and having its opposite end adapted to selectively receive between its teeth the prongs of suitable initials, a pressure plate movably mounted on said support and operable relative to said comb and adapted to exert pressure on said initials to force the prongs thereof through the material to which said initials are to be applied; means for retracting said comb in a horizontal plane in correlation with the operation of said pressure plate, thereby releasing said initials in time relation with the operation of said pressure member, and yielding means for restoring said comb to its normal or operative position.

10. A monogram machine comprising a support, a comb movably mounted on said support adapted to selectively receive between its teeth the prongs of suitable initials, a pressure plate disposed above said comb and movable relative thereto to depress said comb and position said initials, said pressure plate being operable to exert pressure on said initials to force the prongs thereof through the material to which said initials are to be applied; means for retracting said comb rearwardly in time relation with the operation of said pressure member, and a spring for maintaining said comb in forward position.

11. A monogram machine comprising a support, an initial positioning member pivotally mounted and movable longitudinally of said support, and a pressure member pivotally mounted on said support coaxially with said positioning member and movable relative thereto to exert pressure on said initials and seat them in the material.

12. A monogram machine comprising a support, an initial positioning member pivotally mounted on said support, said positioning member having a pivotal slot and pin connection to render said member movable longitudinally of its pivot, a pressure member movable in a vertical plane for

engaging the initials, and a manually operable member operatively mounted on said support for engaging said pressure plate to cause it to bear on the initials and seat them in the material and adapted to engage said positioning member and cause retracting movement thereof for the completion of the seating of said initials.

13. A monogram machine comprising a support adapted to receive the material to be initialed, an initial positioning member pivotally and longitudinally movable on said support, a pressure member pivotally mounted on said support coaxially with said positioning member and adapted to bear on said initials and rock said positioning member downwardly and seat said initials in the material, and a manually operable member for retracting said positioning member and operatively engaging said pressure member.

14. A monogram machine comprising a support, an initial supporting and positioning member pivotally and retractably mounted on said support, a pressure member operatively pivotally mounted on said support and adapted to bear on said initials for retaining the latter in engagement with the material during the retraction of said positioning member, and means for clinching the prongs of said initials permanently to said material.

15. A marking machine comprising a stationary support for receiving the material to be marked, a transverse stud shaft on said support, a positioning member mounted on said shaft for rocking movement and having longitudinal movement, said positioning member being adapted to receive suitable marks having fastening prongs, a pressure plate mounted on said shaft and operable relative to said positioning member, an actuating member rockable on said shaft and having a yielding connection with said pressure member to hold the latter in advanced position for engaging said positioning member and bringing the marks carried thereby against the material to be marked, said actuating member being adapted during the completion of its actuating stroke to engage said pressure member and cause it to force the prongs of the marks into said material, and means carried by said actuating member for retracting said positioning member in time relation with the operation of said pressure member, whereby said marks are released before said pressure member completes its pressing movement.

16. In a monogram machine, a support, an initial receiving and positioning member pivotally mounted on said support and having longitudinal movement relative thereto, means for yieldingly holding said positioning member in forward position, a pressure plate adapted to bear against the initial carried by said positioning member, an

actuating member pivotally mounted on said shaft coaxially with said initial positioning member and having an operative yielding connection with said pressure plate for holding the latter in advanced position, whereby the initial movement of said actuating member brings said pressure plate against said positioning member and causes it to move against the material to be marked and the completion of movement of said actuating member brings the latter against said positioning member and forces the prongs of the initials into said material, and means on said actuating member for engaging said positioning member and retracting it in time relation with the operation of said pressure plate whereby the initials are released before said pressure plate completes its pressing movement.

17. In a monogram machine, an initial receiving and positioning member mounted for pivotal and longitudinal movement, a stationary block cooperating with said positioning member, and oppositely movable plates cooperating with said stationary block for clinching said initials in position.

18. In a monogram machine, an initial receiving and positioning member, a stationary block provided with oppositely disposed slots for receiving the prongs of the initials carried by said positioning member, and a pair of oppositely movable plates provided with opposed fingers entering said slots for engaging and clinching the prongs of said initials.

19. In a machine of the class described, a stationary block provided on its opposite sides with a series of open-ended slots adapted to receive the prongs of initials, and a pair of oppositely movable plates provided with a series of fingers coinciding with said slots and adapted to enter the same for clinching the prongs of said initials.

20. In a machine of the class described, a stationary block provided on its opposite sides with a series of open-ended slots adapted to receive the prongs of initials, a pair of oppositely movable plates provided with a series of fingers coinciding with said slots and adapted to enter the same for clinching the prongs of said material, and means for actuating said movable plates.

21. In a monogram machine a support, a block stationarily mounted thereon and provided on its sides with a series of open-ended slots, a pair of oppositely disposed plates provided with a series of fingers adapted to enter said slots, means for actuating said plates in opposite directions, and a handle for operating said means.

22. In a monogram machine, a support, a comb slidably and rockingly mounted in said support and adapted to selectively receive

suitable marks or initials and position them against the surface to which they are to be attached, and means for retracting said comb and attaching said initials in position.

23. In a monogram machine, a base member, a rock shaft journaled in one end of said base member, a table arranged at the opposite end of said base member, said table being adapted to receive the material to which the initials are to be applied, a comb rockingly and slidably mounted on said rock shaft and having its comb portions arranged above and in alignment with said table for selectively receiving the initials, a pressure member loosely mounted on said rock shaft and yieldingly bearing on the initials positioned on said comb, and an actuating member fixed to said rock shaft and adapted to engage said pressure member and apply the initials to said material.

24. In a monogram machine, a base member, a rock shaft journaled in one end of said base member, a table arranged at the opposite end of said base member, said table being adapted to receive the material to which the initials are to be applied, a comb rockingly and slidably mounted on said rock shaft and having its comb portion arranged above and in alignment with said table for selectively receiving the initials, a pressure member loosely mounted on said rock shaft and yieldingly bearing on the initials positioned on said comb, and an actuating member for retracting said comb and releasing the initials carried thereby, said actuating member being adapted to engage said pressure member and cause the latter to apply the initials permanently to the material.

25. In a monogram machine, a base member, a rock shaft journaled in one end of said base member, a table arranged in the opposite end of said base member, said table being adapted to receive the material to which the initials are to be applied, a comb rockingly and slidably mounted on said rock shaft and having its comb portion arranged above and in alignment with said table for selectively receiving the initials, a pressure member loosely mounted on said rock shaft and yieldingly bearing on the initials positioned on said comb, an actuating member for retracting said comb and releasing the initials carried thereby, said actuating member being adapted to engage said pressure member and cause the latter to apply the initials permanently to the material, and means for clinching portions of said initials against the underside of said material.

In testimony whereof I hereunto affix my signature this 9th day of April, 1925.

ROBERT E. TABOR.