Jan. 14, 1947. E. QUINN 2,414,167

ASSEMBLING MACHINE

Filed April 14, 1945 3 Sheets-Sheet 1

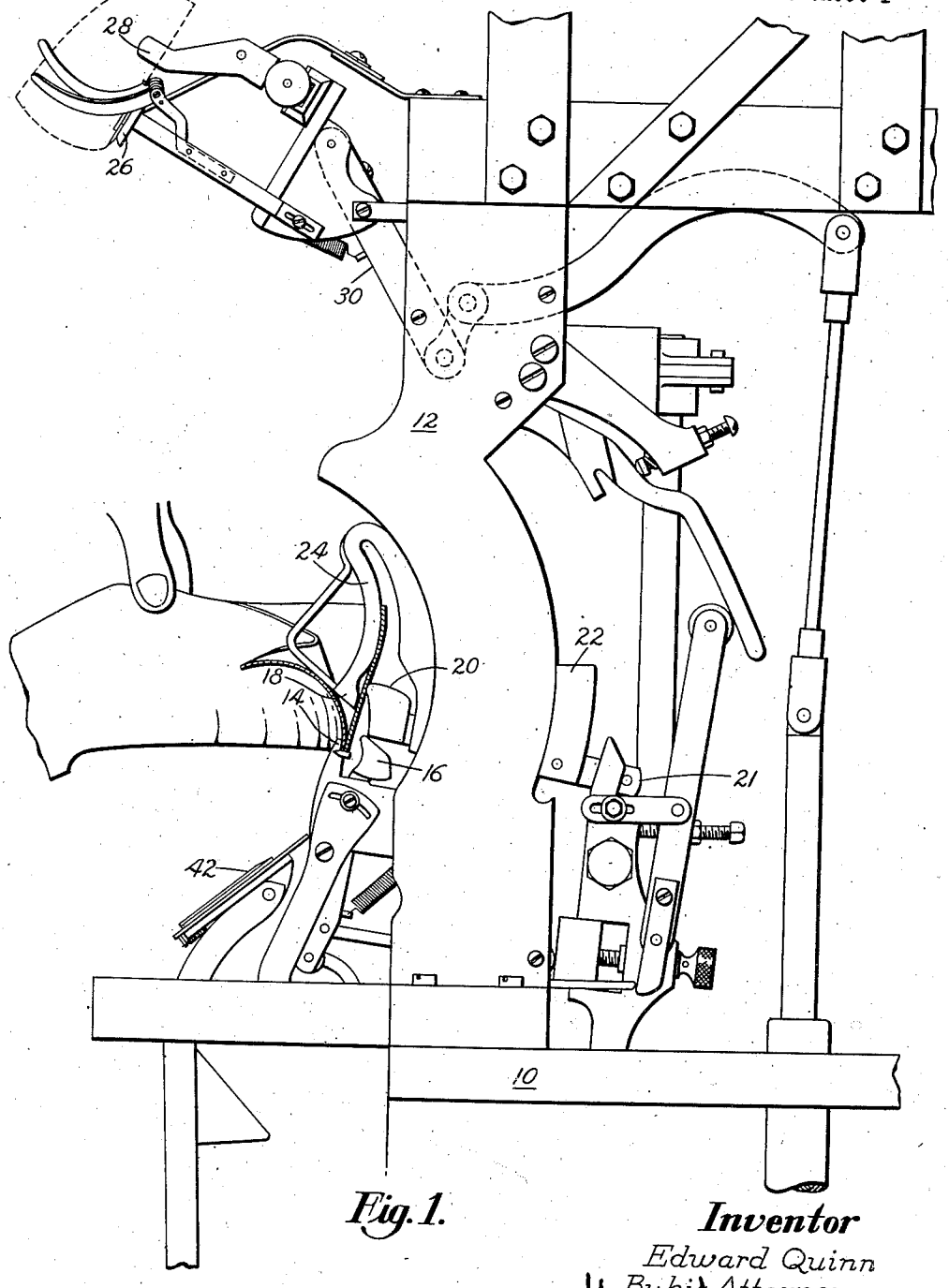


Fig. 1.

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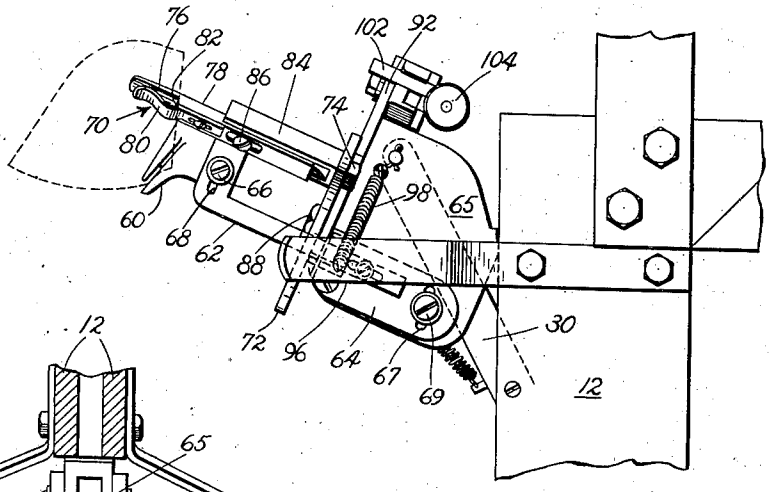


Fig. 2.

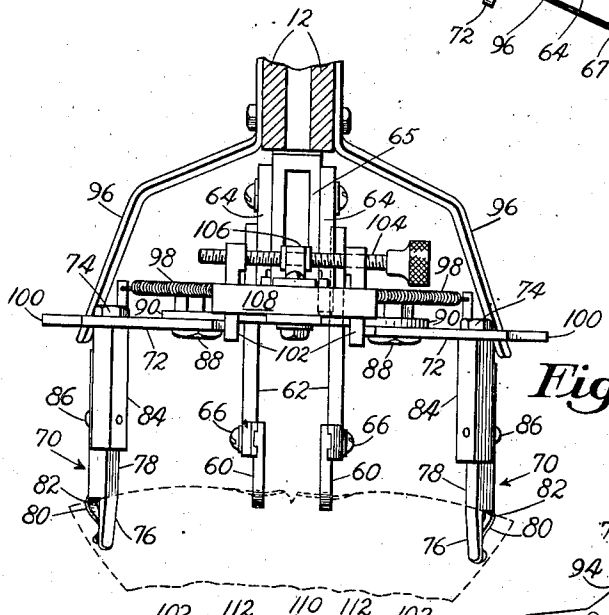


Fig. 3.

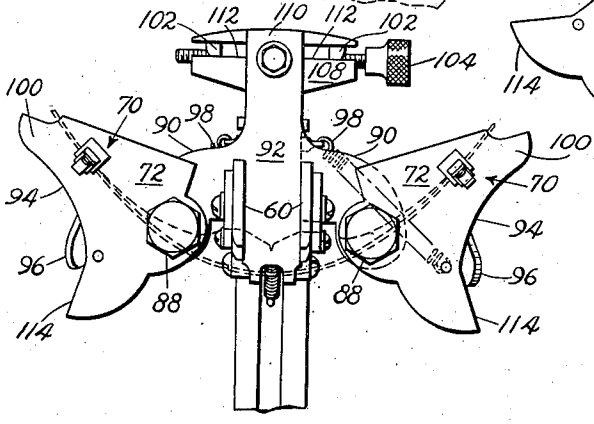


Fig. 4.

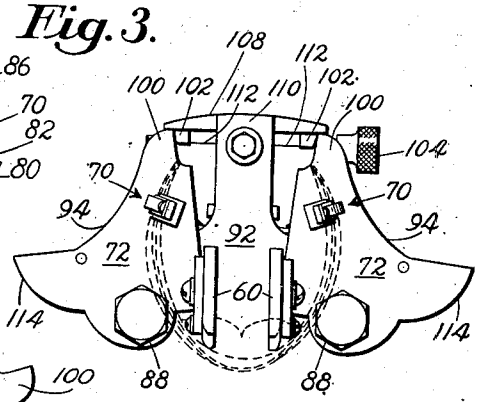


Fig. 5.

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ASSEMBLING MACHINE

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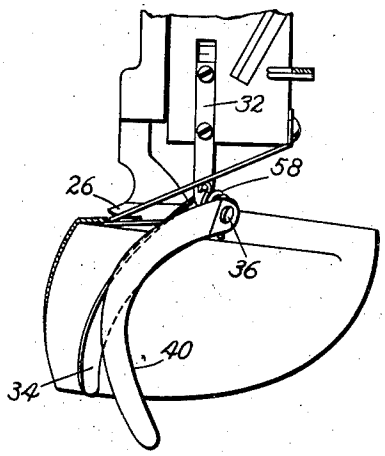


Fig. 6.

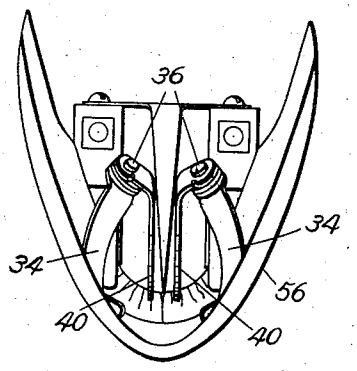


Fig. 7.

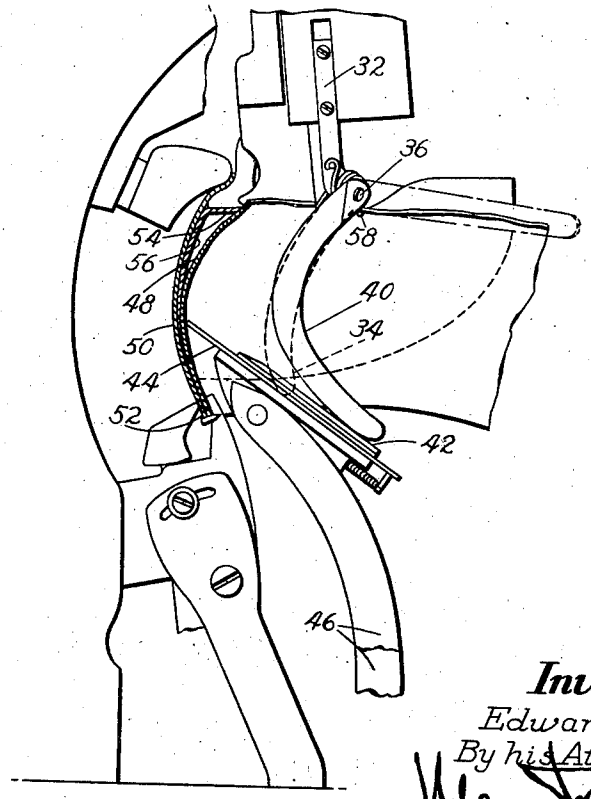


Fig. 8.

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Patented Jan. 14, 1947

2,414,167

UNITED STATES PATENT OFFICE

2,414,167

ASSEMBLING MACHINE

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Application April 14, 1945, Serial No. 538,326

33 Claims. (Cl. 12—1)

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This invention relates to machines for assembling lined uppers and counters and is herein illustrated as embodied in a machine of the type illustrated in United States Letters Patent No. 2,318,632, granted May 11, 1943, on my application.

Assembling machines of this type are provided with means for supporting the rear part of an upper which has not been mounted on its last, a counter carrier for automatically inserting a counter into the supported upper, and means engaging the foot contacting surface of the lining and wiping the lining heightwise from the top seam to the lasting margin to cause it to adhere to the cement treated surface of the counter. In automatically inserting the counter into the upper, folds or wrinkles commonly occur in the lining and it frequently happens that after the counter has been fully inserted into the upper the top line of the upper is not in alinement heightwise of the upper with the top line of the counter. In the operation of the machine illustrated in the patent above referred to these conditions are manually corrected by the operator before initiating the operation of the lining wiping means. The manual operation required to smooth out the lining and bring the top line of the upper into registration with the top line of the inserted counter is tedious and time-consuming and even the best operators will not consistently produce the most desirable results in the preparation of the lining for the wiping operation.

It is an object of the present invention to provide in a machine of the type above referred to means operating automatically to eliminate the folds or wrinkles formed in the lining by the automatic insertion of the counter and to bring the top line of the upper into registration with the top line of the counter. With the above objects in view the invention in one aspect thereof consists in the provision in a machine for assembling uppers and counters having automatic means for positioning a lined upper and a counter in assembled relation to each other, of lining wiping means constructed and arranged to engage the counter attaching surface of the lining. In the illustrated organization said lining wiping means exerts a force on the lining in the direction of the toe end of the upper to eliminate folds or wrinkles formed in the lining by the automatic insertion of the counter. Said means, as herein shown, comprises a blade which is inserted between the counter and the lining, said blade preferably being mounted on the counter carrier. In the illustrated wiper assembly the wiping operation is effected simultaneously at opposite sides of the heel portion of the upper by two such blades mounted at opposite sides of the counter carrier. In accordance with a further feature of the invention the wiper blades are

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actuated by the advancement of the wiping means operating on the foot contacting surface of the lining. In the illustrated organization said wiping means includes a wiper carrier which engages a pair of arms connected respectively to said wiper blades.

In order that the wiper blades during their toeward movement will operate to bring the top seam portion of the upper into registration heightwise of the upper with the top edge of the counter, the wiper blades, in accordance with a further feature of the invention, are constructed and arranged to extend substantially to the top of the upper, and the wiper is so constructed and arranged that during its wiping movement its free end portion defines a line which registers accurately with the top edge of the counter heightwise of the upper.

It is a further object of the invention to provide in a machine for assembling uppers and counters a counter carrier adapted to handle straight or partially molded counters. Counters of this sort are substantially flat or outspread as they come to the assembling operation and, therefore, cannot conveniently be handled in a counter carrier adapted to handle molded counters. To provide for the automatic assembling of a supported upper and such a straight or partially molded counter the illustrated machine, in accordance with a further feature of the invention, is provided with a counter support comprising counter mounting members constructed and arranged to receive a straight or partially molded counter in flat or outspread condition and to bend it into general conformity to the outline of the heel portion of the supported upper. The essential feature of the illustrated carrier comprises counter mounting members herein illustrated as counter wing engaging members constructed and arranged for relative movement to alter the shape of a counter mounted therein. The illustrated counter carrier is also provided with means for mounting the back part or central portion of a counter, said back part mounting means and the wing supports above referred to, in accordance with a further feature of the invention, being relatively adjustable heightwise of the counter to vary its pitch. For mounting the counter wing engaging members for counter bending movement the illustrated machine is provided with means herein illustrated as plates constructed and arranged to swing toward and from a central position. In order that the counter may be closed to the exact extent required to bring it into conformity with the peripheral contour of the upper, means is provided for determining the extent of the counter bending movement, said means in the illustrated machine comprising stops constructed and arranged for relative adjustment endwise of the counter. For effecting the counter closing

movement of the counter wing supporting members the illustrated machine is provided with means herein illustrated as rigidly mounted members constructed and arranged to operate on the plates which carry said wing engaging members to cause them to move toward each other during the counter inserting movement of the carrier.

These and other features of the invention will now be described with reference to the accompanying drawings and pointed out in the appended claims.

In the drawings,

Fig. 1 is a side elevation illustrating a portion of a machine for assembling uppers and counters and showing particularly mechanism embodying features of the present invention;

Fig. 2 is a side elevation somewhat enlarged illustrating a counter carrier constructed and arranged to receive straight or partially molded counters;

Fig. 3 is a detail view of the counter carrier;

Figs. 4 and 5 are detail views of the carrier looking heightwise of a counter mounted therein and showing the counter wing supporting members in two different positions;

Fig. 6 is a detail view of a counter carrier having mounted thereon a lining wiper blade embodying features of the present invention;

Fig. 7 is another view of the counter carrier illustrated in Fig. 6 looking generally heightwise of a counter mounted on the carrier; and

Fig. 8 is a view in side elevation showing the counter carrier of Fig. 6 in combination with the lining wipers which operate upon the foot receiving surface of the lining.

In its general organization the illustrated machine is substantially the same as the machine illustrated in United States Letters Patent No. 2,318,632, above referred to. The machine illustrated in said patent is provided with gripper jaws constructed and arranged to engage the top margin of a lined upper in the region of the back line or back seam of the upper, a pair of wiper jaws movable heightwise of the upper along the back seam to straighten said seam and to apply tension thereto, a counter carrier for inserting a counter into a lined upper supported by said jaws and a pair of lining wipers movable upwardly into the interior of the heel portion of the upper to wipe the lining against the inner surface of a counter mounted on the carrier and positioned within the heel portion of the upper.

Referring to Fig. 1 the illustrated machine is provided with a table 10 from which two parallel plates 12 extend upwardly to provide the frame for the machine head. Mounted between the arcuate central portions of said plates are the gripper jaws 14 and 16 which engage the top margin of the upper at the back seam, and wiper jaws 18 and 20 which operate on the back seam portion of the upper. The wiper jaw 20 is mounted on a bar 21 carried by a slide 22 which travels on the arcuate central portions of the plates 12, and the wiper jaw 18 is formed in an arm 24 projecting downwardly from an upward extension of said slide.

The counter carrier illustrated in Fig. 1 is substantially the same in its construction and operation as the counter carrier illustrated in United States Letters Patent No. 2,318,632 above referred to. Said counter carrier includes a holder 26 constructed and arranged to receive the flange at the heel portion of the counter and arms 28 which engage the wing portions of the counter and orient the counter in the carrier. The counter carrier is mounted at one end of a lever 30 pivotally mounted between the plates 12 and operable to move the counter carrier downwardly in the performance of the counter inserting operation.

Referring now to Fig. 6 two arms 32 are secured to opposite sides of the counter carrier, each of said arms mounting an arcuate wiper blade 34 which in its operative position is so mounted that its concave edge is oriented toward the ends of the counter wings. In the counter inserting operation of the counter carrier the wiper blades are inserted or positioned between the inner surface of the counter and the counter attaching surface of the lining. Each wiper blade 34 is freely mounted on a pin 36 projecting from the end portion of the arm 32 and positioned at such an angle relatively to a plane bisecting the counter that the wiper blade in its wiping movement follows generally the line of the counter wing when the counter is outspread slightly, as illustrated in Fig. 7, to facilitate the lining wiping operation. The wiper blade, as shown in Fig. 7, is bent heightwise of the counter to cause it to conform generally to the heightwise curvature of the counter so that it will not cause any considerable displacement of the lining from the counter in the wiping operation. For actuating the wiper blades there is secured to the hub of each of said blades an arm 40 shaped similarly to the wiper blade as seen in side elevation in Fig. 6. As seen in Fig. 7 the arms 40 lie in parallel adjacent planes extending longitudinally through the central portion of the counter. In its rest position each wiper blade 34 and its actuating arm 40 are in the position illustrated in Figs. 6 to 8 in which position the wiper blades are substantially adjacent to the back line of the counter and at the limit of their movement toward each other. The actuating arms 40 are at the limit of their movement toward the back line portion of the counter and so arranged that their free end portions project downwardly beyond the edge of the counter. The wiper blades are actuated simultaneously by means engaging the free end portions of the arms 40 and causing them to swing in a counterclockwise direction, as seen in Fig. 6. In the illustrated machine the wiper blades are actuated by the engagement of a plate 42 (Fig. 8) with the free ends of the arms 40, said plate forming the upper surface of a carrier on which are mounted a pair of lining wiper plates 44 which are substantially the same in their construction and operation as the lining wiper plates illustrated and described in United States Letters Patent No. 2,318,632 above referred to. The wiper carrier is mounted on parallel vertical arms 46 which move upwardly to cause the lining wipers 44 to wipe the lining 48 at the heel portion of the upper 50 heightwise of the upper from its top edge 52 to the flange 54 of the counter 56. In the course of the upward movement of the lining wipers the plate 42 engages the free ends of the arms 40 and causes them to swing in a counterclockwise direction, as seen in Fig. 8, thereby advancing the wiper blades 34 toewardly during the upward movement of the lining wiper plates 44. Thus, any folds or wrinkles formed in the lining by the introduction of the counter into the upper are wiped out by the wiper blades 34 in advance of the operation of the lining wiper plates 44, permitting the wiper plates to wipe the lining smoothly against the inner surface of the counter. It will be understood that the

lining is permanently attached to the inner surface of the counter by a coating of cement on the inner surface of the counter in the course of the operation of the lining wiper plates 44. Upon the completion of the upward movement of the lining wiper plates 44 the blades 34 lie in a generally horizontal position slightly above the wings of the counter. Upon the completion of the lining wiping operation the lining wiper plates 44 are moved downwardly or retracted but the wiper blades 34 are retained in their horizontal position by engagement with the wings of the counter, thus leaving the interior of the heel portion of the upper clear for the reception of a last. After the various operations of the machine are completed and the upper and last are removed from the machine a torsion spring 58 surrounding the hub of each wiper blade 34 returns each blade to its rest position shown in Figs. 6 and 7.

In Figs. 2 to 5 there is illustrated a counter carrier constructed and arranged to handle straight or partially molded counters. This counter carrier is so constructed and arranged that it may be mounted on the lever 30 in place of the counter carrier illustrated in Fig. 1. Counters of the various types suitable for mounting in the counter carrier illustrated in Figs. 2 to 5 are usually initially shaped or clam-shell molded in the region of the back line but have no flange formed therein and in their normal position are outspread as shown in broken lines in Fig. 3. For mounting counters having these characteristics the illustrated counter carrier is provided with central counter holders herein illustrated as parallel plates 60 (Fig. 3) secured to parallel arms 62 which, as shown in Fig. 3, project downwardly from plates 64 so mounted on the frame 65 as to be angularly adjustable within the limits afforded by an arcuate slot 67 (Fig. 2) and a clamping screw 69. The counter holders 60 are secured to the arms 62 by headed screws 66 which extend through slots 68 (Fig. 2) in the arms 62, permitting adjustment of said counter holders, said adjustment being in the direction of the length of an upper mounted in the machine when the counter is inserted therein. For mounting the wings of the counter two gripper members or holders 70 are each arranged to project perpendicularly from the bottom of a plate 72 (Fig. 3), being attached to said plate by a headed screw 74 so as to permit a swiveling movement of the holder 70. Each holder 70 comprises a rigid jaw 76 formed by cutting a rectangular section out of the end portion of an arm 78 and a resilient jaw herein illustrated as a spring 80 secured to the arm 78 and curved inwardly to engage the recessed surface forming the work engaging portion of the rigid jaw 76. The shoulder 82 formed in the arm 78 provides a suitable gage for determining the heightwise position of the counter wing in the holder. The arm 78 is mounted in a channel member 84, being the member which is mounted for swiveling movement on the plate 72. The arm 78 is longitudinally adjustable in said channel member and is secured in adjusted position by a clamping screw 86. By adjusting the arm 78 in the channeled member the counter wing may be adjusted heightwise thereof relatively to the back line portion of the counter in order to vary the pitch of the counter to suit the construction of the upper into which the counter is to be inserted. Each plate 72 is pivotally mounted on a headed bolt 88 fixed in an ear 90 projecting from a plate 92 (Fig. 4) secured to

the body portion of the counter carrier. During the counter inserting movement of the counter carrier the plates 72 are automatically swung inwardly from their position in Fig. 4 to their position illustrated in Fig. 5 in order to close the counter so as to position it to be inserted into the heel portion of a supported upper. In the illustrated construction such movement of the plates 72 is effected by the engagement of their curved outer edges 94 with a pair of bent arms 96 rigidly secured to the upper portions of the plates 72 and extending divergently forward therefrom so that their outer end portions are arranged to intercept the plates 72 during the downward movement of the counter carrier, causing them to swing inwardly as above described. The inward movement of the plate 72 is assisted by tension springs 98 (Fig. 4) and said springs continue to operate on the plates 72 after they have moved clear of the bent arms 96, bringing their end portions 100 into engagement with stops 102 which serve to limit the inward movement of the plates 72 and, consequently, the closing action of the counter. The stops 102 are short parallel bars loosely mounted for adustment toward and from each other on a right and left-hand threaded screw 104 mounted in a lug 106 projecting from a crosshead 108 secured to an extension 110 of the plate 92. The stop members 102, as seen in Fig. 3, extend forwardly from the screw 104 through slots in the crosshead 108 which position said stop members relatively to the end portion 100 of the plates 72, said slots being identified by the numeral 112 in Fig. 5. It will be seen that by turning the screw 104 the stop members 102 may be adjusted toward or from each other, as required, to vary the extent of the movement of the plates 72 toward each other. Thus, the width of the counter in its closed position, as seen in Fig. 5, may be varied to agree with the width of the heel portion of the upper into which the counter is to be inserted. During the return or retracting movement of the counter carrier extensions 114 of the plates 72 engage the bent arms 96, causing said plates to swing outwardly into their open position. During such swinging movement the springs 98 transfer from one side to the other of the axis of each plate and therefore operate to retain said plates in their open position ready to receive another counter.

The counter carrier illustrated in Figs. 2 to 5 is not provided with lining wiper blades, such as the wiper blades 34 illustrated in Figs. 6 to 8. Such wiper blades may be mounted on the arms 62, if required, but in most cases they will not be found necessary since the absence of a flange on the counter usually obviates the formation of folds or wrinkles in the lining in the counter inserting operation.

Having thus described my invention, what I claim as new and desire to secure by Letters Patent of the United States is:

1. In a machine for assembling uppers and counters, means for positioning a lined upper and a counter in assembled relation to each other, and lining wiping means constructed and arranged to engage the counter attaching surface of the lining.

2. In a machine for assembling uppers and counters, the combination with means for positioning a lined upper and a counter in assembled relation to each other and a wiper for wiping the lining at the heel end of the upper heightwise from the top margin to the lasting margin, of means for exerting a force on the lining in the

direction of the toe end of the upper to eliminate folds or wrinkles in the lining.

3. In a machine for assembling uppers and counters, the combination with means for positioning a lined upper and a flanged counter in assembled relation to each other and means for wiping the lining at the heel portion of the upper heightwise from the top margin of the upper to the flange of the counter, of means operating on the lining after relatively positioning the upper and counter and prior to said lining wiping operation to wipe out folds or wrinkles created in the heel portion of the lining by the positioning of the upper and counter in assembled relation to each other.

4. In a machine for assembling uppers and counters, the combination with means for positioning a lined upper and a counter in assembled relation to each other and a wiper for wiping the heel portion of the lining heightwise from the top margin to the lasting margin, of a wiper constructed and arranged to be positioned between the counter and the lining, and means for moving said last-mentioned wiper toewardly to wipe out any folds or wrinkles created in the heel portion of the lining by the positioning of the upper and counter in assembled relation to each other.

5. In a machine for assembling uppers and counters, means for positioning a lined upper and a counter in assembled relation to each other, and lining wiping means positioned between the counter and the lining and operable generally lengthwise of the upper.

6. In a machine for assembling uppers and counters, means for positioning a lined upper and a counter in assembled relation to each other, a wiper blade constructed and arranged to be inserted between the lining and the counter, and means for moving said blade generally toewardly of the upper to exert a wiping action on the lining.

7. In a machine for assembling uppers and counters, means including a counter carrier for positioning a lined upper and a counter in assembled relation to each other, and a wiper blade mounted on the counter carrier and constructed and arranged to exert a wiping action on the lining.

8. In a machine for assembling uppers and counters, means for positioning a lined upper and a counter in assembled relation to each other, a pair of wiper blades constructed and arranged to act against the counter engaging surface of the lining, and a wiper constructed and arranged to engage the foot contacting surface of the lining, said wiper being constructed and arranged to actuate said wiper blades.

9. In a machine for assembling uppers and counters, means for positioning a lined upper and a counter in assembled relation to each other, a pair of wiper plates constructed and arranged to operate upon the foot contacting surface of the lining at the heel end of the upper, a pair of wiper blades constructed and arranged to operate upon the counter engaging surface of the lining, and a common actuator for operating said plates and said blades in predetermined time relation to each other.

10. In a machine for assembling lined uppers and counters, the combination with means for mounting a lined upper, of a counter carrier, means for actuating said carrier to insert a counter into the upper, a wiper blade mounted on said carrier and constructed and arranged to be inserted between the counter and the lining, lining wipers constructed and arranged to act upon the foot contacting surface of the lining, a carrier for said wipers, and means actuated by said carrier for moving said blade generally toewardly of the upper to wipe out any folds or wrinkles in the lining caused by the insertion of the counter.

11. In a machine for assembling lined uppers and counters, the combination with means for mounting a lined upper, of a counter carrier, means for actuating said carrier to insert a counter into the upper, a wiper blade mounted on said counter carrier and constructed and arranged to operate between the lining and the counter, an arm connected to said blade and constructed and arranged to extend into the interior of the heel portion of the upper, lining wipers constructed and arranged to operate upon the foot receiving surface of the lining, a carrier for said wipers movable generally heightwise of the upper, said arm being constructed and arranged to be actuated by the wiper carrier to move said blade generally toewardly of the upper to wipe out any folds or wrinkles caused by the insertion of the counter into the upper.

12. In a machine for assembling uppers and counters, means for positioning a lined upper and a counter in assembled relation to each other, a wiper blade constructed and arranged to be inserted between the lining and the counter, an operating member connected to said wiper blade and extending into the interior of the upper, and means movable heightwise of the upper through the interior of the upper and constructed and arranged to operate said member.

13. In a machine for assembling uppers and counters, means for positioning a lined upper and a counter in assembled relation to each other, a pair of wiper blades constructed and arranged to be inserted between the lining and the counter, operating members connected to the wiper blades respectively and arranged to extend into the interior of the upper, and a member movable heightwise of the upper through the interior of its heel portion and constructed and arranged to operate said members.

14. In a machine for assembling uppers and counters, means including a counter carrier for positioning a lined upper and a counter in assembled relation to each other, a pair of wiper blades pivotally mounted on the counter carrier for movement generally lengthwise of the upper, said blades being constructed and arranged to be inserted between the lining and the counter, a pair of arms connected to said wiper blades respectively and arranged to extend into the interior of the heel portion of the upper, lining wipers constructed and arranged to engage the foot contacting surface of the lining, and a carrier for said lining wipers constructed and arranged to engage and actuate said arms during its advancing movement.

15. In a machine for assembling uppers and counters, means for positioning in assembled relation to each other a counter and an upper having a lining secured thereto by a top seam, and means for positioning the top margins of the upper and lining relatively to the top margin of the counter comprising a wiper blade constructed and arranged to be inserted between the lining and the counter and to extend substantially to the top seam.

16. In a machine for assembling uppers and counters, means for positioning in assembled relation to each other a counter and an upper having

a lining secured thereto by a top seam, and means for positioning the top margins of the upper and lining relatively to the top margin of the counter comprising a wiper blade constructed and arranged to be inserted between the lining and the counter and to extend substantially to the top seam, said wiper plate being movable toewardly of the upper to exert a wiping action on the lining and to bring the top edge of the rear part of the upper into registration with the top edge of the counter.

17. In a machine for assembling uppers and counters, means for positioning in assembled relation to each other a counter and a lined upper, and a wiper blade constructed and arranged to be inserted between the lining and the counter, said blade being characterized by a construction and arrangement whereby said blade during its wiping movement defines a line which registers accurately with the top edge of the counter heightwise of the upper.

18. In a machine for assembling uppers and counters, means for positioning an upper and a counter in assembled relation to each other including a counter carrier constructed and arranged to receive a counter in outspread condition and to bend it into general conformity to the outline of the heel portion of an upper.

19. In a machine for assembling uppers and counters, means for positioning an upper and a counter in assembled relation to each other including a counter carrier constructed and arranged to receive a counter in outspread condition and means operating on the carrier during its counter inserting movement to bring the counter into general conformity to the periphery of the heel portion of the upper.

20. In a machine for assembling uppers and counters, a counter carrier comprising means for mounting the back part of a counter and means for mounting the wings of the counter, said wing mounting means being relatively movable to bend the counter into general conformity to the peripheral curvature of the rear part of an upper.

21. In a machine for assembling uppers and straight or partially molded counters, the combination with means for mounting an upper, of a counter support comprising counter mounting members constructed and arranged to receive a straight or partially molded counter in flat or outspread condition and relatively movable to bring the counter into general conformity to the periphery of the heel portion of the upper.

22. In a machine for assembling uppers and counters, a counter carrier comprising means for mounting the back part of a counter, and wing mounting members movable relatively to said back part mounting means to establish a predetermined curvature of the counter.

23. In a machine for assembling uppers and counters, a counter carrier comprising back part mounting means, and wing mounting members relatively movable to bend a counter, said wing mounting members being adjustable heightwise of the counter to alter the pitch of the counter in the carrier.

24. In a machine for assembling uppers and counters, a counter carrier comprising means for mounting the back part of a counter, and wing mounting members, said means and said members being relatively adjustable heightwise of the counter to vary its pitch.

25. In a machine for assembling uppers and counters, a counter carrier comprising wing mounting members and a back part mounting member constructed and arranged to engage the overwiping margin of the counter and to receive the counter with its wing portions offset heightwise thereof and relatively to the wing mounting members.

26. In a machine for assembling uppers and counters, a counter carrier comprising a back part mounting member constructed and arranged to receive the overwiping margin of the counter and normally to position the wings of the counter in offset relation to their mounted position on the carrier, and wing mounting members into which the wings of the counter are inserted by bending the counter about said back part mounting member.

27. In a machine for assembling uppers and straight or partially molded counters, a counter carrier comprising wing engaging members constructed and arranged to receive a straight or partially molded counter in flat or outspread condition, and means mounting said wing engaging members for counter bending movement.

28. In a machine for assembling uppers and counters, a counter carrier comprising wing engaging members, means mounting said wing engaging members for counter bending movement, and means for predetermining the extent of such counter bending movement.

29. In a machine for assembling uppers and counters, a counter carrier comprising wing engaging members, means mounting said wing engaging members for counter bending movement, and stops adjustable widthwise of the counter for determining the extent of such counter bending movement.

30. In a machine for assembling uppers and counters, a counter carrier comprising wing engaging members, means mounting said wing engaging members for counter bending movement, yielding means normally retaining said wing engaging members in a predetermined counter receiving position, and means operating automatically during movement of the counter carrier to effect the counter bending movement of said wing engaging members.

31. In a machine for assembling uppers and counters, a counter carrier comprising wing engaging members, means mounting said wing engaging members for counter bending movement, and rigidly mounted members operating during movement of the counter carrier in one direction to move the wing engaging members to bend the counter and operating during movement of the carrier in another direction to return the wing engaging members to their initial position.

32. In a machine for assembling uppers and counters, a counter carrier comprising wing engaging members, plates mounting said wing engaging members, and means pivotally mounting said plates for swinging movement about axes extending generally heightwise of a counter in the carrier, said plates having cam faces which engage fixed members during movement of the counter carrier to actuate said plates.

33. In a machine for assembling uppers and counters, a counter carrier including wing engaging members and pivotally mounted plates mounting said wing engaging members, and means for effecting pivotal movement of said plates to bend a counter supported by said wing engaging members.

EDWARD QUINN.