Sept. 4, 1928. 1,682,770

A. H. SCHMIDTKE

BASKET MAKING MACHINE

Filed Feb. 6, 1926 5 Sheets-Sheet 1

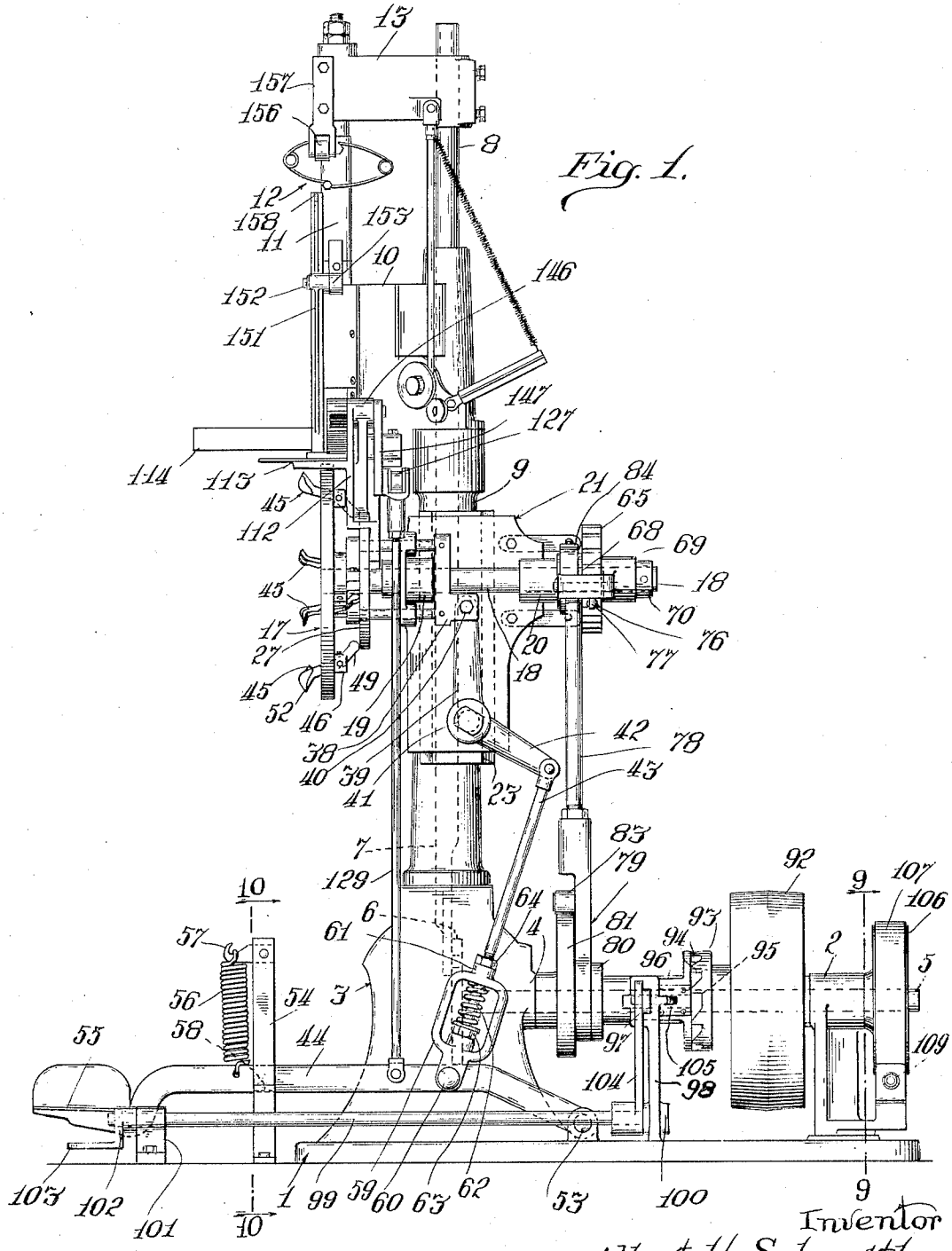

Fig. 1.

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Fig. 2.

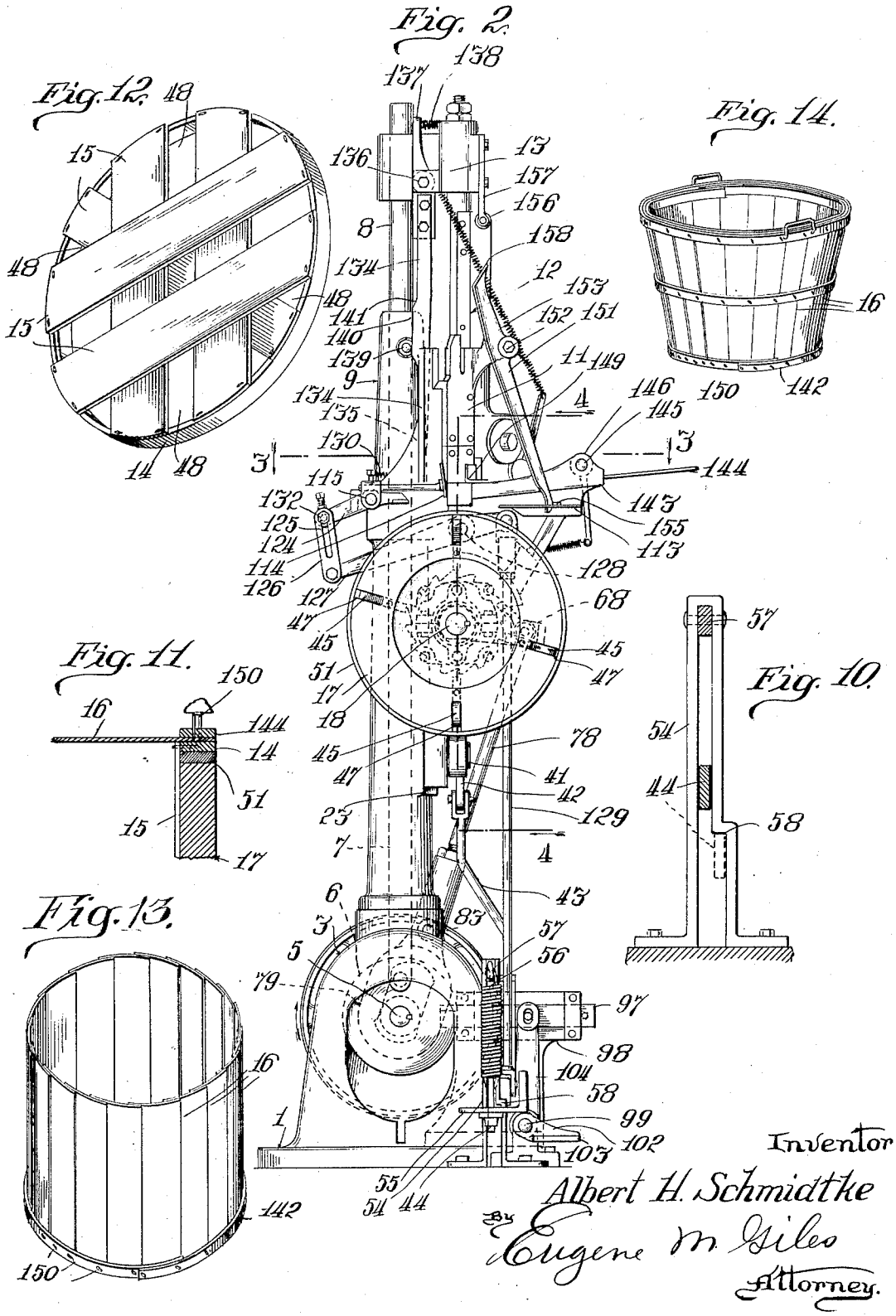

Fig. 14.

Fig. 11.

Fig. 10.

Fig. 13.

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BASKET MAKING MACHINE

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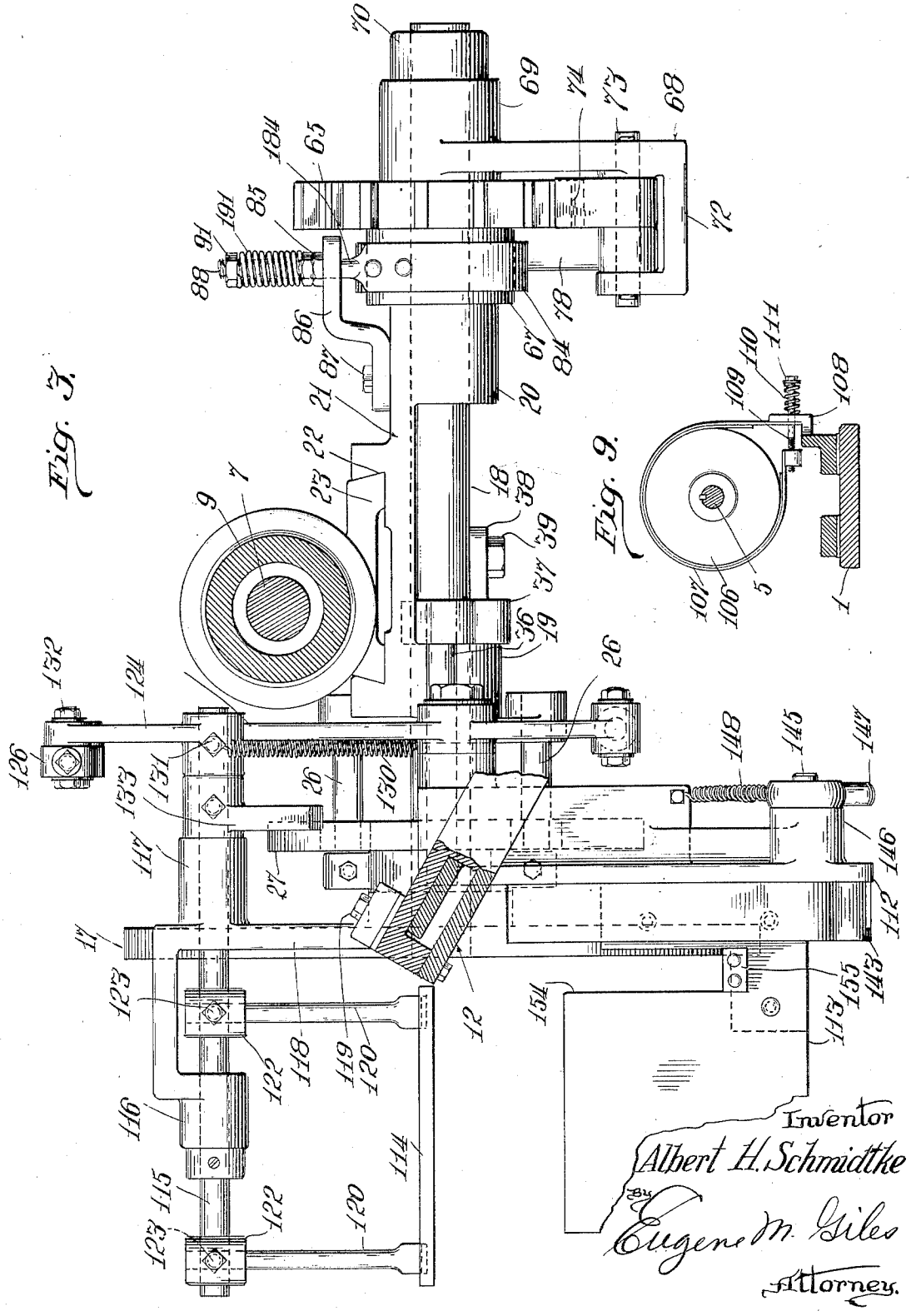

Fig. 3.

Fig. 9.

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BASKET MAKING MACHINE

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Fig. 4.

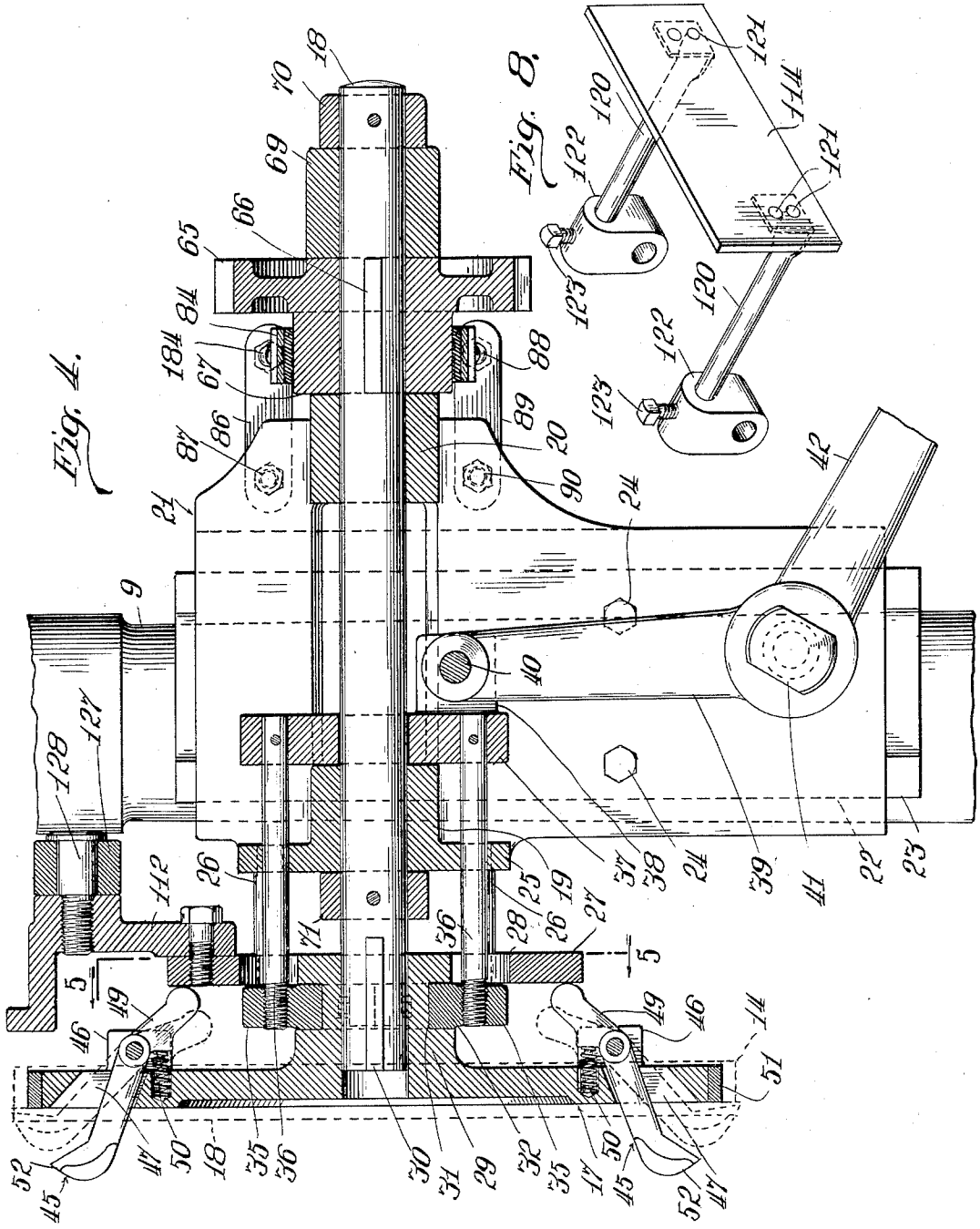

Fig. 8.

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BASKET MAKING MACHINE

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Fig. 5.

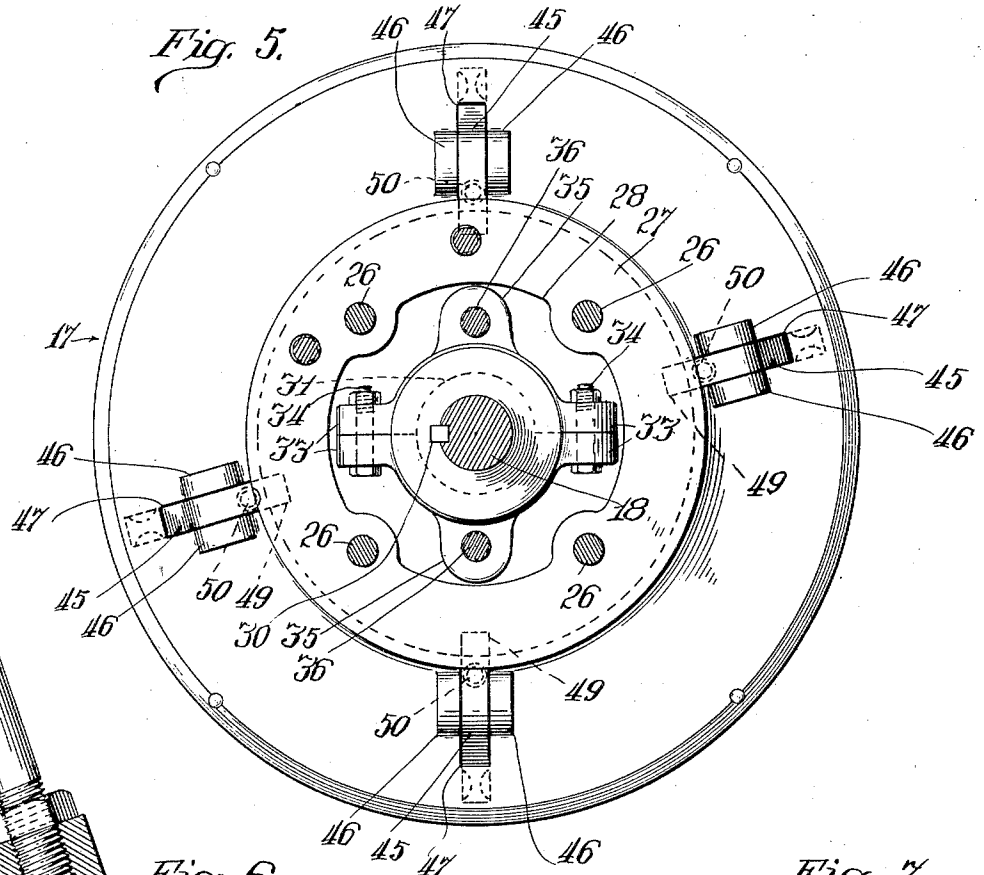


Fig. 6.

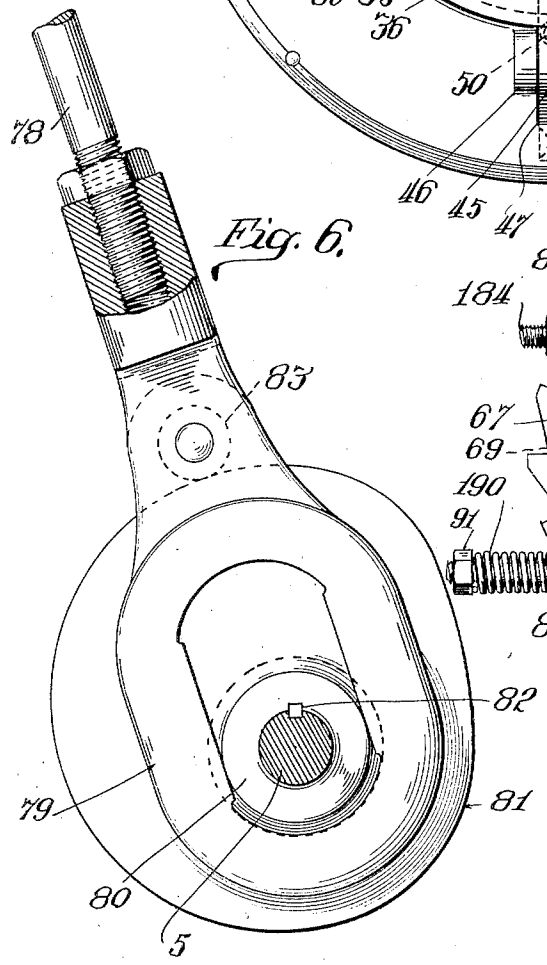
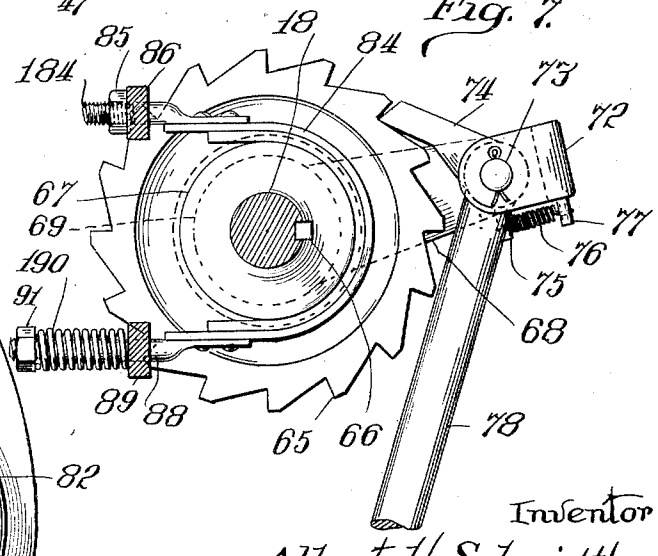


Fig. 7.



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Patented Sept. 4, 1928. 1,682,770

UNITED STATES PATENT OFFICE.

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BASKET-MAKING MACHINE.

Application filed February 6, 1926. Serial No. 86,386.

My invention relates to machines for making baskets of the type comprising an annular tapered wall composed of a plurality of panels which are secured at their lower end to the marginal hoop of a basket bottom, and my invention has reference more particularly to the means for holding the basket bottom while the panels or other parts of the basket are applied thereto and also to the mechanism whereby the panels or parts are placed in position and applied to the basket bottom.

In the manufacture of baskets of the type above referred to, it has been found desirable to first secure the lower ends of the panels, composing the annular wall of the basket, to the marginal hoop of the bottom so as to form a substantially cylindrical shell which is thereafter expanded and shaped in the final tapered form of the finished basket and provided with hoops or bands to maintain the tapered form, and my present invention is shown and described herein as applied to a machine for securing the panels to the basket bottom to form the aforesaid cylindrical shell.

The principal objects of my invention are to provide improved apparatus for making baskets; in which means are provided for holding the basket bottom in place in a convenient and satisfactory manner while the panels or other basket parts are applied thereto; in which the placing of the panels in the proper position for securing to the basket bottom is facilitated; in which the parts for positioning the panels are so arranged that they operate in proper timed relation with the fastener applying mechanism; to avoid interference with the basket structure as it is advanced or repositioned for succeeding operations; in which uniform location and arrangement of the panels around the basket bottom is insured; and in general to provide a simple and dependable apparatus for making basket shells wherein the work may be performed rapidly by inexperienced operators.

On the drawings:

Fig. 1 is a side elevation of a machine embodying my improvements;

Fig. 2 a front elevation thereof;

Fig. 3 an enlarged transverse view partly in section and taken substantially on the line 3—3 of Fig. 2;

Fig. 4 an enlarged vertical sectional view on the line 4—4 of Fig. 2;

Fig. 5 a sectional view on the line 5—5 of Fig. 4;

Fig. 6 an enlarged view of the cam mechanism for advancing the form on which the shell is assembled;

Fig. 7 a detail view of the ratchet and brake for controlling the step by step movement of the form;

Fig. 8 a perspective view of the side stop for the panels;

Fig. 9 a sectional view on the line 9—9 of Fig. 1;

Fig. 10 a view on the line 10—10 of Fig 1;

Fig. 11 a sectional view through the lower edge of the basket showing a staple as it is being applied to secure the bottom hoops together with the lower ends of the panels therebetween;

Fig. 12 a perspective view of a bottom such as I prefer to employ;

Fig. 13 a perspective view of a cylindrical shell such as my present machine is adapted to make; and

Fig. 14 a perspective view of a completed basket which the shell of Fig. 13 is designed to make.

Referring to the drawings, the reference numeral 1 indicates the base of the machine which has an elevated bearing 2 at one end and a housing 3 at the other end with a bearing 4 in line with the bearing 2. A main shaft 5 is journaled in said bearings and provided on the inner end, within the housing 3, with a crank disk 6 which is connected by the pitman 7 to the shaft 8 which is mounted to reciprocate in the tubular standard 9 which extends upwardly from the housing 3. A bracket 10 extends laterally from the upper end of the standard 9 and carries the stationary frame 11 of a staple applying member 12, the latter being secured at its upper end to a head 13 which is connected to the upper end of the shaft 8 so that the member 12 reciprocates with the shaft 8. Details of the construction and operation of the stapling mechanism are not given as stapling devices of this character are well known and any suitable form of stapling mechanism may be employed.

The particular apparatus illustrated herein is designed to assemble panels or staves, which compose the annular wall of a basket,

onto the basket bottom in the form of a cylindrical shell such as shown in Fig. 13, said shell being subsequently flared and provided with upper and intermediate hoops and handles to form a basket of the type shown in Fig. 14, and in the construction of the basket I prefer to use a bottom somewhat as shown in Fig. 12, comprising a hoop 14 having a plurality of crossed slats or panels 15 secured at their outer ends to the upper edge so as to form a mat with openings between the outer ends of adjoining panels. With my present invention a bottom of the character shown in Fig. 12 is mounted on a support or form which is positioned under the stapling device 11—12 and the panels or staves 16 which form the annular wall of the basket are successively positioned around the basket bottom on said support or form and stapled to the bottom hoop 14 by the stapling device 11—12.

The support above referred to, is in the form of a disk as indicated at 17, which fits within the hoop 14 of the basket bottom and this disk is mounted on the end of a shaft 18 which is journaled in bearings 19 and 20 of a bracket 21 which is mounted on the tubular standard 9, said bracket being preferably provided with a wide dovetailed groove 22 engaging a corresponding dovetailed rib 23 of the standard 9 so as to permit vertical adjustment of the bracket 21 and parts carried thereby, said bracket being clamped in the adjusted position by bolts 24. The bearing 19 is formed at its forward end with a flange or disk 25 and the latter has four rods or shafts 26 arranged concentrically around the shaft 18 and projecting forwardly from the disk 25 and suporting at their outer ends a ring 27 having a large central aperture 28 as shown in Fig. 5. The shaft 18 projects through the aperture 28 of the ring 27 and has the disk or support 17 slidably mounted thereon, said disk being provided with a hub 29 having a keyway engaging a key 30 on the shaft 18 whereby the disk is caused to rotate with the shaft, and this hub 29 has an annular groove 31 therein loosely engaged by a collar 32 whereby the disk 17 is adjusted axially on the shaft 18. For engaging the collar 32 in the groove 31, said collar is composed of two halves with corresponding ears 33 through which bolts 34 are passed for locking the collar in the groove 31, and each of the half sections of the collar has an ear or projection 35 arranged respectively at diametrically opposite sides of the shaft 18 and to which the forward ends of the shafts 36 are secured. These shafts 36 extend rearwardly through apertures provided therefor in the disk 25 and have their rear ends secured to an apertured plate 37 which loosely encircles the shaft 18, and this plate 37 is provided at the bottom with a pair of pivot lugs 38 between which the upper end of the arm 39 of a bell crank is pivoted as at 40. This bell crank is pivoted at 41 on a stud extending laterally from the lower end of the bracket 21 and has the outer end of the arm 42 connected by a link 43 to a treadle lever 44 so that the adjustment of the disk 17 on the end of the shaft 18 may be controlled by the foot of the operator.

The axial adjustment of the disk 17 on the shaft 18 is for the purpose of operating fingers 45 which engage the hoop 14 of the basket bottom to secure the latter onto the disk 17. These fingers 45 are pivoted on a pair of lugs 46 on the rear of the disk 17 and project forwardly through slots 47 in said disk, said fingers being properly located to project through certain openings around the edge of the basket bottom and inside the hoop 14 as for example, the openings indicated at 48 in Fig. 12. These fingers 45 are provided at the rear of the disk 17 with extensions 49, the extremities of which are held against the ring 27 by springs 50 which are interposed between said extensions and the disk 17, and by reason of this arrangement, when the disk 17 is shifted rearwardly on the shaft 18, the fingers 45 are rocked on their pivots and the outer ends swing outwardly and rearwardly toward the peripheral edge of the disk 17. The basket bottom slips onto the disk or form 17 with the mat consisting of the staves 15 engaging the outer face of the disk, and with the hoop 14 extending over and around the peripheral edge of the disk 17, the latter being preferably formed with a peripheral band 51 of hardened steel to cooperate with the stapling device and clinch the staples when they are driven through the hoop 14. The disk 17 normally is positioned slightly in front of the stapling position so that when it is retracted to operate the fingers 45 and clamp the basket bottom thereon, the hoop 14 on the periphery of the disk 17 is brought under the stapling device 11—12 to the proper position for stapling the ends of the panels 16 to said hoop. In order that the panels 16 may be readily placed against the outer face of the hoop 14, the fingers 45 are arranged so that they merely engage the outer edge of the hoop but do not project beyond said edge to interfere with the placing of the panels, and to this end said fingers are formed at their outer ends with laterally extending heads or jaw portions 52 suitably shaped to engage the edge of the hoop 14 as indicated by dotted lines in Fig. 4.

The foot lever 44 which controls the adjustment of the disk 17 and the operation of the fingers 45 is pivoted at its rear end as indicated at 53 to the base 1 of the machine and extends forwardly through a vertical guide 54 so that the foot plate 55 for operating same is conveniently accessible to the

operator when he is standing in position to attend to the machine. A spring 56 is connected at one end to a hook 57 on the upper end of the guide 54 and at its other end to the lever 44 so as to normally hold said lever in uppermost position in which position the disk 17 is advanced and the fingers 45 are in the released position. The basket bottom remains clamped on the disk 17 during the series of operations of placing the successive panels in position and stapling same onto the hoop 14 and in order to hold the fingers 45 in the clamping position during such time, the guide 54 is formed with an offset 58 at one side under which the lever 44 may be engaged, when depressed, and thus held in the depressed position without continued attention of the operator.

In order to insure a tight clamping engagement of the fingers 45 against the hoop of the basket bottom during the operation of stapling the staves or panels thereon, the link 43 which connects the arm 42 of the bell crank lever with the foot lever 44 is provided with resilient means which exerts a constant pull on the arm 42 of the bell crank lever when the lever 44 is depressed and engaged under the shoulder 58 of the guide 54. This means comprises a yoke 59 which is pivoted at one end as at 60 to the foot lever 44 and at the other end has an apertured hub 61 sliding on the link 43. A spring 62 is interposed between the hub 61 and a nut 63 on the end of the link 43 and held under compression by the nut 64 which is likewise threaded on the link 43, and when the lever 44 is depressed and engaged under the offset 58 of the guide 54, the spring 60 exerts a tension on the arm 42 of the bell crank lever and thereby exerts a constant inward pull on the disk 17 so that the fingers 45 are clamped securely against the edge of the hoop of the basket bottom on the disk 17.

After the basket bottom is clamped on the disk 17, the latter is rotated in a step by step manner, so that the panels 16 may be successively positioned around the hoop 14 and stapled thereto. For effecting the step by step movement of the disk 17, the shaft 18 is provided at its rear end with a ratchet wheel 65 keyed thereon as at 66 and provided with an enlarged hub 67 next to the bearing 20 and serving as a brake drum. A rocker arm 68 has a hub 69 loosely engaging the shaft 18 at the outer end of the shaft and held in place thereon by a collar 70 which is pinned or otherwise secured to the shaft, and this collar together with a collar 71, which is secured on the shaft 18 at the outer side of the bearing 19, serves to hold the shaft 18 against endwise movement. The outer end of the rocker arm 68 is doubled over as shown in Fig. 3, to form a yoke 72 having a pivot pin 73 extending between the two arms thereof, and on this pivot pin is a pawl 74 which cooperates with the teeth of the ratchet wheel 65, said pawl being provided with an extension pin 75 connected by a spring 76 to a pin 77 on the cross bar of the yoke 72 for yieldingly holding the pawl 74 in engagement with the teeth of the ratchet wheel 65.

A link 78 is also connected at its upper end to the pin 73 and at its lower end is formed with an elongated loop 79 embracing the hub 80 of a cam 81 which is keyed at 82 on the main shaft 5, and the loop member 79 is provided at one side with an anti-friction roller 83 which is held by the weight of the link 78 in contact with the periphery of the cam 81.

It will be noted that the crank disk 6 which operates the stapling mechanism is secured to the shaft 5 so that the stapling mechanism is advanced to apply a staple and retracted during each revolution of the shaft 5, and the cam 81 is provided with an enlargement at one side properly located with respect to the connection of the pitman 7 with the crank disk 6 so as to elevate the connecting rod 78 and operate the ratchet wheel 65 and advance the disk 77 during the retraction of the stapling mechanism.

For the purpose of preventing overthrow of the disk 17 and insuring a uniform advance of the disk upon each operation of the ratchet mechanism, a friction band is applied to the hub 67 of the ratchet wheel 65. This band is indicated at 84 and is connected at its upper end by a threaded extension 184 and adjusting nut 85 to a bracket arm 86, which latter is bolted at 87 to the bracket 21, and the lower end of the band 83 has a threaded extension 88 engaged through an aperture in a bracket arm 89 which is bolted at 90 to the bracket 21, and said extension 88 has a spring 190 and adjusting nut 91 thereon for regulating the tension of the band 83 on the hub 67. It will be noted that the tension spring 90 is arranged to yield in the direction of the advance movement of the ratchet wheel 65 by the pawl 74 so that the advance movement of the ratchet wheel tends to relax the tension of the brake band but as soon as the advancing pressure of the pawl 74 on the ratchet wheel 65 is relaxed, the tension of the spring 90 serves to oppose further movement of the ratchet wheel and overthrow or irregularity in the step by step advance movement of the disk 17 is thereby avoided.

Power is applied to operate the main shaft 5 through a pulley 92, which is loose on the shaft 5 and provided with a clutch disk 93 having clutch teeth 94 which are adapted to be engaged by an axially movable clutch pin 95 to interlock the pulley 92 with the shaft 5. The clutch pin 95 is slidable in a sleeve 96 which is keyed to the shaft 5 and the engagement of said clutch pin with the

clutch teeth 94 and the disengagement thereof is controlled in the usual manner by a trip bar 97 which slides to and from a position of engagement with the clutch pin, in a bracket 98 which is mounted on the base 1. A shaft 99 is journaled in a bearing 100 at the base of the bracket 98 and in a bearing 101 at the front of the machine and is provided at the forward end with a laterally extending arm 102 with a tread plate 103 whereby the shaft 99 is rocked in the bearings 100 and 101. An arm 104 is secured to the shaft 99 adjacent the bracket 98 and loosely connected at the upper end as indicated in Fig. 2 with the clutch shifter 97 so that the latter is retracted by pressure on the tread plate 103 against the tension of a spring 105, which latter serves upon release of pressure on the tread plate 103 to engage the trip bar 97 with and release the clutch pin 95 from engagement with the clutch teeth 94.

In practice when a stave or panel is applied in position to be stapled to the hoop of a basket bottom on the disk 17, the tread plate 103 is momentarily depressed so as to release the clutch pin 95 and permit engagement thereof with the adjacent clutch tooth 94, whereupon a complete revolution of the shaft 5 is made, and during such revolution the stapling mechanism advances and applies a staple and is then retracted, and during the retracting movement, the cam 81 operates to advance the disk 17 to the position at which the next panel is to be applied. Release of the tread plate 103 permits the restoration of the trip bar 97 to the position for releasing the clutch pin 95. Upon completion of the revolution of the shaft 5, the clutch mechanism is disengaged, thereby giving the operator sufficient time to place the next panel in position for stapling to the hoop of the basket bottom. As soon as the panel is properly placed, the tread plate 103 is again momentarily depressed and the operation just described is repeated.

For stopping the rotation of the shaft 5 promptly upon disengagement of the clutch mechanism, a brake drum 106 is secured on the shaft 5 at the outer side of the bracket 2 and engaged by a brake band 107. This brake band has one end secured to a bracket 108 on the base 1 and the other end of the brake band is provided with a threaded stem 109 which projects loosely through an aperture in the bracket 108 and has a tension spring 110 and adjusting nut 111 on the projecting end for regulating the tension of the brake band on the drum 106.

For locating the panels 16 in the proper position for stapling onto the hoop 14 of the basket bottom on the disk 17, a bracket 112 is mounted on the ring 27 and has a web portion extending upwardly at the rear of the disk 17 and adjacent the top of the latter and the disk 17 when retracted, so that said web serves as a stop against which the end of the panel is butted in positioning the panel for stapling. A shelf 113 projects forwardly from the bracket 112 at one side of the stapling device 11—12 to support a lateral portion of the panel in the stapling position and a shiftable stop 114 is positioned adjacent the location where the staple is applied so as to be engaged by a lateral edge of the panel for positioning the latter.

The stop 114 is engaged by the edge of the panel which leads or faces forwardly as the disk 17 is rotated and it is therefore necessary to remove the stop from the path of the panel after each panel is stapled onto the hoop and before the panel is advanced or moved ahead. The stop 114 therefore is carried by a rocker shaft 115 which is journaled in bearings 116 and 117 of the bracket 118, the latter being supported in any convenient manner as for example, by a bolted connection 119 with the staple frame 11. The stop 114 which consists of a plate extending lengthwise away from the disk 17, may be mounted on the shaft 115 in any desired manner, as for example, by the spaced rods 120 which are secured to the plate 114 as at 121 and extend rearwardly therefor through apertures in the collars 122, which latter are fixed on the shaft 115 and have clamping screws 123 for the rods 120 whereby the stop may be adjusted to properly locate the panel for stapling.

It is desired to elevate the stop 114 from the work after the basket shell is completed so that said shell may be conveniently removed and to depress same in place for locating the first panel in place for stapling after the basket bottom has been clamped on the disk 17, and as such elevation and depression is required respectively at the time of releasing the basket bottom after the shell is completed and at the time of clamping a new basket bottom in place it is preferable to control the elevation and depression of the stop by the pedal which controls the clamping fingers 45 so that no special attention or separate operations are required of the machine attendant. To accomplish this result the shaft 115 has an operating lever 124 fixed thereon and pivotally connected at its outer end in the slot 125 of a link 126, and the link 126 is pivoted at its lower end to a rocker arm 127 which is pivoted between its ends at 128 on the bracket 112 and has its other end connected by the link 129 to the foot lever 44. A spring 130 is connected at one end to the set screw 131 of the lever 124 and at the other end to a fixed part of the frame of the machine so as to exert a tension to depress the stop 114. With this construction, when the foot lever 44 is ele-

vated to release the clamping fingers 45 of the disk 17, the shaft 117 is, through the link 129, lever 127, link 126 and lever 124 rocked so as to elevate the stop 114 against the tension of the spring 130, to the position shown in Fig. 2, and when the lever 44 is depressed, the link 126 is elevated so that the spring 130 which holds the pivot pin 132 of the lever arm 124 at the upper end of the slot 125 of said link 126, rocks the shaft 115 and depresses the stop 114 to the panel engaging position, the extent of depression being limited by the engagement of the pivot pin 132 in the upper end of the slot 125.

As before stated, it is necessary to elevate the stop 114 after each stapling operation so that said stop does not interfere with or remain in the way of the panel, which has been adjusted thereagainst, this being necessary to permit the next step of movement of the basket bottom with the disk 17. To this end the shaft 115 has a trip arm 133 fixed thereon and the reciprocable bracket or head 13, which operates the stapling member 12, has a bar 134 depending therefrom and provided with a tooth 135 at the lower end which engages under the outer end of the trip arm 133 and serves, as the stapling member 12 begins to elevate after the stapling operation and just before the disk 17 starts to advance, to lift the end of the trip arm 133 and lift the stop at the proper time so that the panel which has just been stapled to the basket bottom is started under the stop.

The bar 134 is pivoted at 136 to the head or bracket 13 and has an extending upper end 137 connected to a spring 138 which serves to swing the lower end of the bar 134 so that the tooth 135 will engage the trip arm 133. A pin 139 on the standard 9 limits the throw of the bar 134, which latter has a rise or cam 140 with inclined upper extremity 141 suitably located so that when the bar 134 is lowered the incline 141 passes beyond the pin 139 and permits the tooth 135 to swing outwardly under the end of the trip arm 133. After the stapling device and head 13 are elevated part way and the stop 114 lifted so that the panel is started thereunder, (the slot 125 serving at such time to permit swinging of the arm 124) the incline 141 comes into engagement with the pin 139 which shifts the lower end of the bar 134 so as to release the tooth 135 from the trip arm 133 and permits the stop 114 to return to the panel regulating position under the tension of the spring 130.

In making basket shells of the character which this machine is designed to produce, it is preferred to apply the outside bottom hoop 142 (see Fig. 13) at the same time that the panels 16 are stapled onto the basket bottom and I have therefore provided a hoop guide 143 which is arranged to guide a strip 144 of material, for making the hoop 142, in between the stapling device and the hoop 14 on the form or disk 17. This guide has an opening therethrough through which the strip 144 passes and has a shaft or stud 145 extending laterally therefrom and journaled in a bearing 146 on the bracket 112. A lever 147 is secured to the inner end of the stud or shaft 145 and has its lower end connected to a spring 148 which exerts a tension to throw the inner end of the guide 143 upwardly, against a stop 149 on the lower end of the frame 11 of the stapling mechanism. This arrangement causes the guide 143 to normally exert a lifting tension on the portion of the strip 144 beyond the point at which the latter is attached to the basket bottom and thereby facilitate the insertion of the end of the panel between the basket bottom hoop 14 on the disk 17 and the hoop strip 144 and at the same time allows the hoop strip over the inserted panel to be readily depressed into close contact with the underlying panel by the stapling mechanism as the staple 150 is driven through the hoop strip 144, panel 16 and basket bottom hoop 14 as shown in Fig. 11.

For the purpose of insuring proper positioning of the panels before the staples are applied, I prefer to provide a pusher which acts automatically at the proper time to shift each panel 16, after it has been applied to the shelf 113, over against the stop 114. This pusher consists of a lever 151 which is pivoted at 152 to a bracket 153 on the stapling frame 11, and has the lower end extended down to swing transversely across the shelf 113 through a slot 154. This lever 151 has the pivot 152 at one side so that the lower end normally swings by gravity to the outer end of the slot 154 against a stop 155 which limits the outward movement. The upper end of this lever is located in the path of movement of a roller 156 carried by a bracket 157 on the reciprocating head or bracket 13 and said end of the lever is formed with an inclined or cam face 158 so that the engagement of the roller 156 therewith shifts the upper end of the lever 151 outwardly and the lower end inwardly along the slot 154 so that a panel which has been placed in position on the shelf or panel support 113 is thereby butted edgewise against the stop 114 and proper positioning of the panel thus assured. The roller 156 is arranged to engage the cam face 158 just before the staple is driven so that the adjustment of the panel is completed before the staple is applied and while the panel is free to move.

In the operation of this machine, assuming that the pulley 92 is operating and the tread plates 55 and 103 both released, a basket bottom such as shown in Fig. 12 is applied onto the disk or form 17 so that

the fingers 45 project through the openings 48 between the panels and so that the hoop 14 extends over the periphery of the disk 17. This act of applying the basket bottom tends to push the disk 17 rearwardly and at the same time the pedal 55 is depressed so as to fully retract the disk 17 to the stapling position under the stapling mechanism and at the same time the fingers 45 are operated by the retraction of the disk 17 to clamp against the outer edge of the bottom hoop 14 and clamp the basket bottom on the disk 17. The lever 44 when depressed, is engaged under the shoulder 58 of the lever guide 54 and this imposes a tension on the spring 62 to maintain a tension on the clamping fingers 45. The same operation of the foot lever 44 which operates the clamping fingers 45 also permits the panel stop 114 to be shifted to the depressed position and the panels 16 can now be applied. The first panel is then placed in position on the shelf or support 113 and the inner end butted against the web of the bracket 112 and a hoop band 144 inserted through the guide 143 so that the inner end is in the proper position to be stapled to the panel 16 and the bottom hoop 14. The pedal 103 is then momentarily depressed so that the shaft 5 is clutched to the pulley 92, whereupon the stapling member 12 is depressed. Upon initial movement of the member 12, the pusher 151 is operated to engage the panel 16 and shift same against the stop and the staple 150 is then driven through the hoop strip 144, the panel 16, the bottom hoop 14 and clinched against the staple clinching band 51 on the disk 17. As the shaft 5 continues its revolution and starts to lift the stapling member 12, the tooth 135 which has been engaged below the end of the trip arm 133 by the downward movement of the member 12, lifts said arm 133 and the stop 114, and immediately thereupon the ratchet 65—74 is operated to advance the disk 17 the proper extent to apply the next panel and the trip arm 133 is released to permit the return of the stop 144 to the depressed position.

As the shaft 5 completes its revolution, the clutch is automatically disengaged and the parts come to rest ready for the placing of the next panel in position. The tension of the spring 148 on the hoop guide 143 tends to lift the hoop strip 144 below the stapling mechanism so that the next panel 16 may be readily applied thereunder, and when such next panel has been placed in position the pedal 103 is again momentarily depressed and the cycle of operations above described is repeated. Succeeding panels are applied in the same manner until the shell of Fig. 13 is completed, whereupon the lever 44 is released from the shoulder 58 and the disk 17 then is thrown forwardly by the elevation of the foot leved 44 and the clamping fingers 45 withdrawn from the edge of the hoop 14 so that the shell may be removed from the disk 17. The release of the pedal 44 and elevation thereof also throws the stop 114 to the elevated position so that it is entirely removed from the basket shell and does not interfere with the removal of said shell from the disk 17 or the mounting of the next basket bottom thereon.

The shell of Fig. 13, which is made upon the machine herein shown and described, is subsequently expanded over a form to the required tapered form of the basket and maintained in such tapered form by securing thereto the other hoops with which baskets of this type are usually provided so that the completed basket is substantially as shown in Fig. 14.

While I have shown and described my device in a preferred form I am aware that various changes and modifications may be made without departing from the principles of my invention, the scope of which is to be determined by the appended claims.

I claim as my invention:

1. In a basket making machine, the combination of a support for holding a basket bottom with a marginal band as the basket is assembled, and means on the support movable to engage the marginal band of the basket bottom for securing the latter on the support.

2. In a basket making machine, the combination of a rotatable support for holding a basket bottom with a hoop around the edge of the basket bottom as the basket is assembled, and radially movable means on said support for engaging said hoop within the periphery of the latter to hold the basket bottom on the support.

3. In a basket making machine, the combination of a support for holding the basket bottom as the basket is assembled, and a plurality of members on the support operable to engage a marginal hoop on the edge of the basket bottom for securing the latter on the support.

4. In a basket making machine, the combination of a support for holding the basket bottom as the basket is assembled, and a plurality of members on the support movable to and from the periphery of the latter for engaging a marginal hoop on the edge of the basket bottom to secure said bottom on the support.

5. In a basket making mashine, the combination of a basket bottom support adapted to be positioned within a marginal hoop on the basket bottom, and means passing through apertures in the basket bottom and clamping against the outer edge of said marginal hoop for securing the basket bottom on the support.

6. In a basket making machine, the combination of a support for a basket bottom having a marginal hoop, said support being adapted to fit within the marginal hoop of the basket bottom, a plurality of members projecting from the outer face of the support so as to pass through apertures in the basket bottom, and means for adjusting said members radially and toward the support so as to engage the outer edge of the marginal hoop of the basket bottom and clamp the latter on the support.

7. In a basket making machine, the combination of a rotatable support adapted to engage within the marginal hoop on the edge of a basket bottom, means rotatable with said support and shiftable outwardly toward the periphery thereof for engaging the hoop of the basket bottom to hold the latter on the support, and non-rotatable mechanism for adjusting the aforesaid means.

8. In a basket making machine, the combination of a rotatable support adapted to engage within the marginal hoop of a basket bottom, means rotatable with said support and adjustable to and from the periphery thereof for engaging the hoop of the basket bottom to hold the latter on the support, and a member shiftable axially of the rotatable support for adjusting the aforesaid means.

9. In a basket making machine, the combination of a rotatable support adapted to engage within the marginal hoop of a basket bottom, means rotatable with said support for engaging the hoop of the basket bottom to secure the latter on the support, and a shifting lever remote from said support and having connections for adjusting the aforesaid means, said connections including parts having a loose engagement permitting rotation of one part independently of the other part.

10. In a basket making machine, the combination of a frame, a support mounted to rotate on said frame and adapted to engage within the marginal hoop of a basket bottom, a plurality of clamping members on the support for engaging the hoop of a basket bottom to hold the latter on the support, a non-rotatable member movable along the axis of the support for controlling the operation of said clamping members, and a lever mounted on the frame for adjusting said axially movable member.

11. In a machine of the class described, the combination of a frame, a fastener applying device mounted thereon, a circular support mounted to rotate on the frame and having the peripheral edge positioned to serve as an anvil for the fastener applying device and adapted to support a basket bottom thereon with a marginal hoop overlapping the peripheral edge of the circular support, and means operable to engage the outer edge of the hoop to hold the basket bottom on the support.

12. In a machine of the class described, the combination of a rotatable disk adapted to support a basket bottom with marginal hoop so that the latter overlaps the edge of the disk, means operable to engage said hoop for locking the basket bottom on the disk, a work support adjacent the disk for holding a panel so that the end thereof extends over the edge of the disk, and a fastener applying device cooperating with the edge of the disk to fasten the panel to the hoop of the basket bottom on the disk.

13. In a machine of the class described, the combination of a rotatable support adapted to hold a basket bottom with marginal hoop so that the hoop of the basket bottom extends over the peripheral edge of the support, adjustable means for engaging the hoop to hold the basket bottom on the support, a stop adjacent the support for engaging the end of a panel for positioning the latter so that the end thereof overlaps the hoop of the basket bottom on the support, and a fastener applying device cooperating with the edge of the support to fasten the panel to the hoop.

14. In a machine of the class described, the combination of a rotatable support, a fastener applying device operable to and from the periphery of the support, clamping means operable to engage the marginal hoop of a basket bottom to hold the hoop on the periphery of the support, a work holder adjacent the disk for holding a panel with the end of the latter projecting between the fastener applying device and the hoop of the basket bottom on the rotatable support, and a stop adjacent the work holder for engaging the lateral edge of the panel for locating the latter relatively to the fastener applying mechanism and the hoop on the rotatable support.

15. In a machine of the class described, the combination of a rotatable support, a fastener applying device operable to and from the periphery of the support, means for holding a basket bottom with marginal hoop on the support so that the said hoop extends over the periphery of the support, a work holder, a stop for positioning a panel with relation to the fastener applying mechanism and the hoop on the rotatable support, and means operable to shift the panel on the work holder against the stop prior to the operation of the fastener applying mechanism.

16. In a machine of the class described, the combination of a fastener applying device, a rotatable support positioned so that the periphery serves as an anvil for the fastener applying device, means for holding a basket bottom with marginal hoop on

the support so that the said hoop extends over the periphery of the support to receive fasteners from the fastener applying device, a stop for engaging the edge of a panel to position the latter with relation to the fastener applying device and the hoop on the rotatable support, and mechanism for automatically shifting said stop from the panel after operation of the fastener applying device.

17. In a machine of the class described, the combination of a rotatable holder for a basket bottom, a fastener applying device for securing panels to the edge of the basket bottom on the holder, means for holding the panel, a stop for positioning the panel, and a pusher operable in predetermined timed relation with the fastener applying mechanism to shift the panel edgewise against the stop preparatory to the operation of fastening the panel to the edge of the basket bottom.

18. In a machine of the class described, the combination of a rotatable support, a fastener applying device movable to and from the periphery of the support, a work holder, a stop adjacent the work holder, and a pusher movable along the work holder towards and from the stop.

19. In a machine of the class described, the combination of a rotatable support, a fastener applying device movable to and from the periphery of the support, a work holder for supporting a panel between the periphery of the rotatable support and the fastener applying device, a pair of stops for engaging respectively the end and lateral edges of the panel to position the latter relatively to the support and fastener applying device, and a member movable transversely of the work holder toward the lateral edge engaging stop to shift the panel against the latter stop.

20. In a machine of the class described, the combination of a rotatable support, a fastener applying device movable to and from the periphery of the support, a work holder adjacent the fastener applying position, a stop adjacent the work holder for positioning a panel between the rotatable support and the fastener applying device, means for rotating the support in a step by step manner, and mechanism for withdrawing the stop prior to each step by step movement of the support.

21. In a machine of the class described, the combination of a frame having a fastener applying device mounted to reciprocate theron, a rotary holder for a basket bottom having the peripheral edge positioned to serve as an anvil for the fastener applying device, a work holder for supporting a panel with the end thereof between the fastener applying device and the peripheral edge of the rotatable support, a stop adjacent the work holder, and a member actuated by the operation of the fastener applying device to shift the panel on the work holder against the stop.

22. In a machine of the class described, the combination of a support adapted to hold a basket bottom with marginal hoop so that the latter projects over the periphery of the support, a fastener applying device for applying fasteners to the hoop on the support, a stop for positioning panels between the fastener applying device and the support, and means for rotating the support in a step by step manner, said stop being automatically shiftable away from the path of movement of the panels prior to each step by step movement of the support.

23. In a machine of the class described, the combination of a fastener applying mechanism, a rotatable disk having a peripheral edge serving as an anvil for the fastener applying device, means for holding a basket bottom with marginal hoop on the support so that said hoop engages over the peripheral edge of the support, a work holder, a stop for positioning a panel between the periphery of the support and the fastener applying device, and an oscillatable hoop guide for directing a hoop strip between the periphery of the support and the fastener applying device, said guide being adapted to resiliently hold the portion of the hoop therebeyond away from the periphery of the aforesaid support.

24. In a basket making machine, the combination of a frame having a fastener applying device mounted to reciprocate thereon, a disk positioned adjacent the fastener applying device and having a peripheral edge serving as an anvil for the fastener applying device, means for rotating said disk in a step by step manner, a plurality of grippers extending forwardly from the disk and operable by axial movement of the latter, an oscillatable guide for feeding a strip of material between the fastener applying device and the edge of the disk, a work holder at the outer side of the disk, a stop adjacent the work holder, and a pusher for shifting material on the work holder against said stop, said pusher and stop being operable in conjunction with the fastener applying device so that the pusher acts before the fastener is applied and the stop is shifted after the fastener is applied.

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