

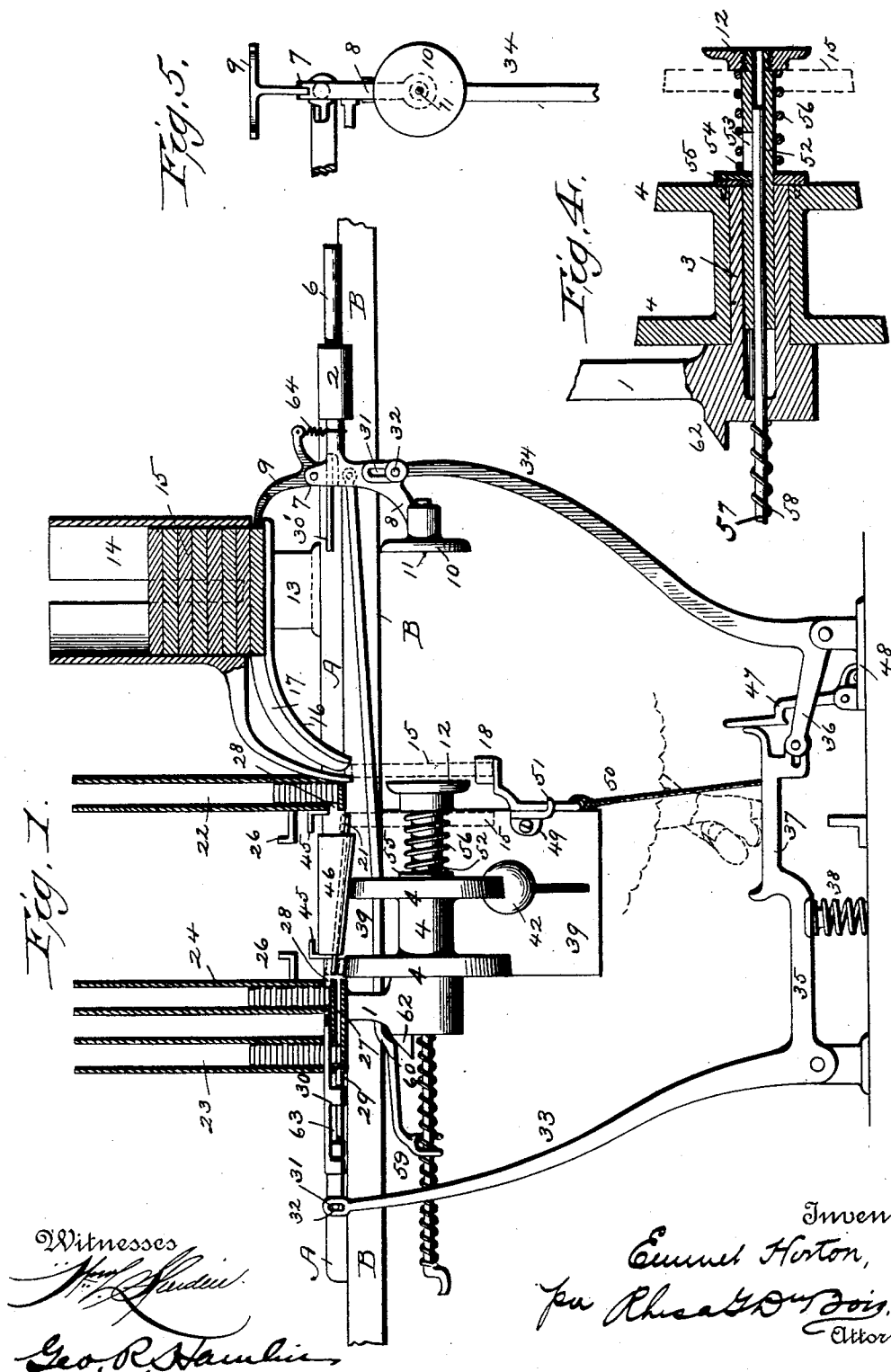
(No Model.)

3 Sheets—Sheet 1.

E. HORTON.
BASKET MAKING MACHINE.

No. 587,734.

Patented Aug. 10, 1897.



Witnesses
Geo. R. Hamlin

Inventor:
Emmet Horton,
per *Rhoads & Co.,*
Attorney.

(No Model.)

3 Sheets—Sheet 2.

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Fig. 2.

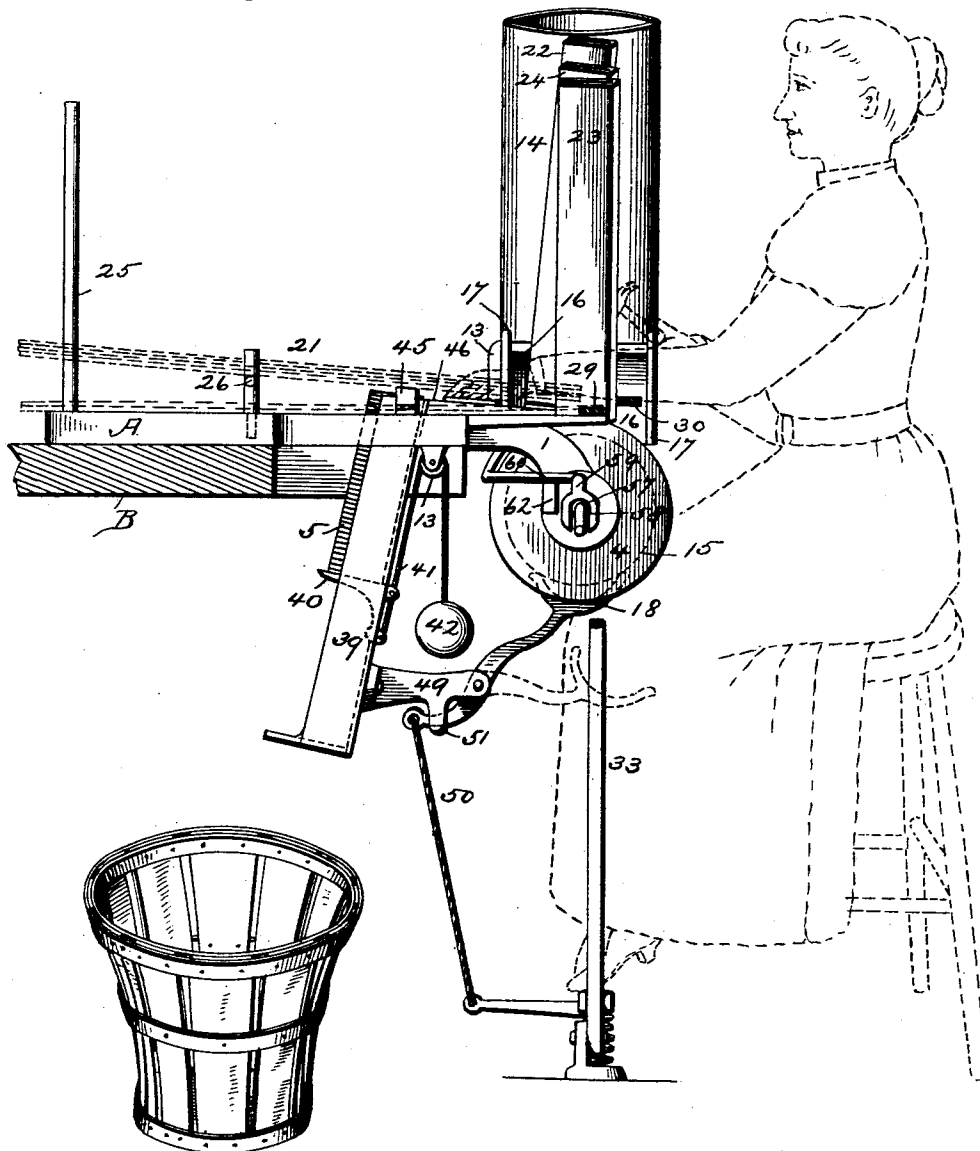


Fig. 6.

Witnesses
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Attorney

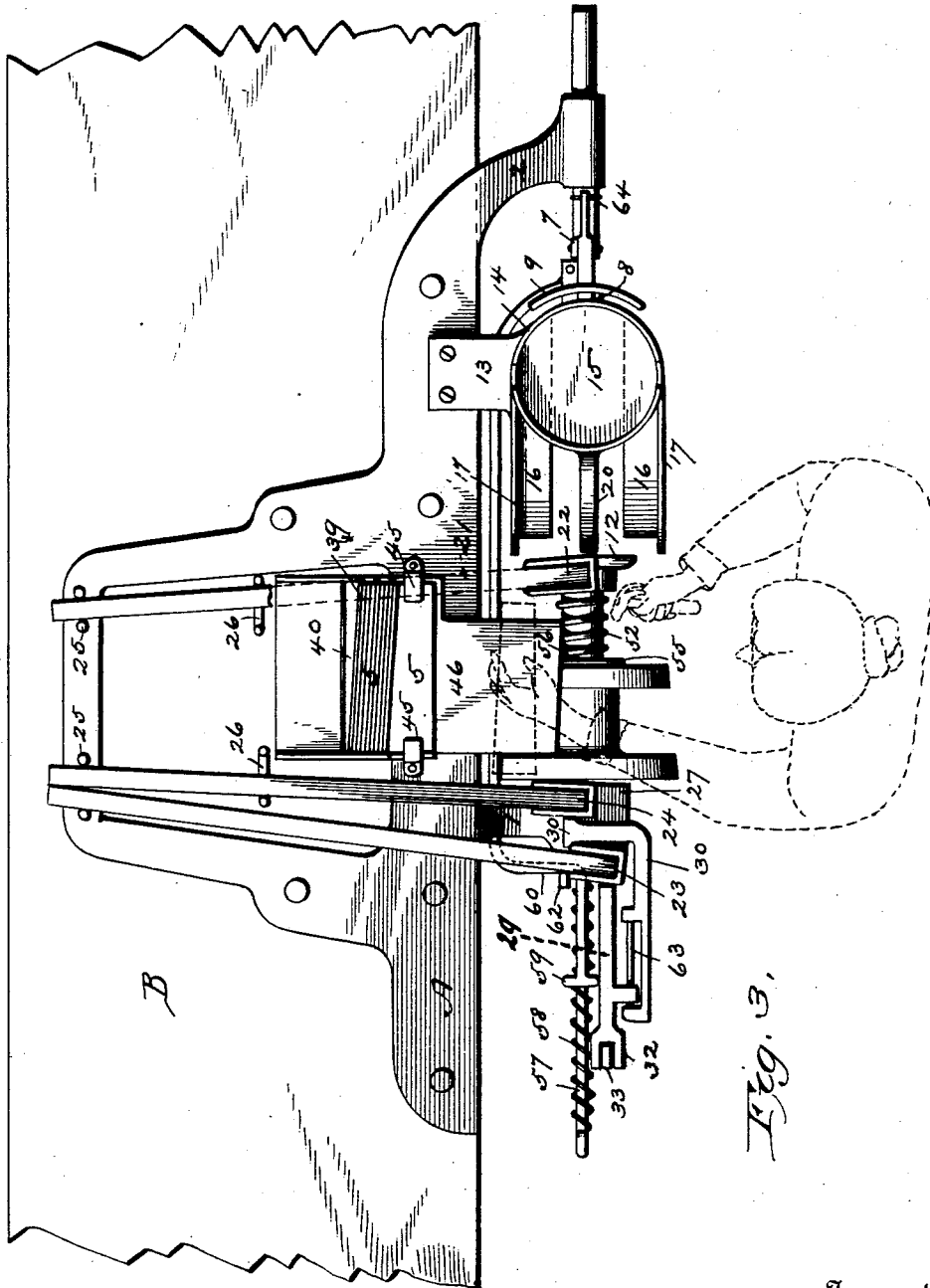
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UNITED STATES PATENT OFFICE.

EMMET HORTON, OF DUNDEE, NEW YORK, ASSIGNOR TO THE HORTON BASKET MACHINE COMPANY, OF WASHINGTON, DISTRICT OF COLUMBIA.

BASKET-MAKING MACHINE..

SPECIFICATION forming part of Letters Patent No. 587,734, dated August 10, 1897.

Application filed June 8, 1895. Serial No. 552,137. (No model.)

To all whom it may concern:

Be it known that I, EMMET HORTON, a citizen of the United States, residing at Dundee, in the county of Yates and State of New York, have invented certain new and useful Improvements in Basket-Making Machines; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the letters and figures of reference marked thereon, which form a part of this specification.

The object of my invention is to provide a basket-making machine which can be constructed more cheaply than my automatic machine shown and described in my Patent No. 530,048 and one that can be operated by manual power.

To this end my invention consists in the peculiar features and combinations of parts more fully described hereinafter and pointed out in the claims.

In the accompanying drawings, Figure 1 is a front elevation of the complete machine; Fig. 2, a view in elevation of the left side of the same, but showing one of the oscillating foot-levers disconnected from the band-delivering slides; Fig. 3, a plan view of the machine; Fig. 4, a sectional detail view of the form, its bearing, and the ejecting-rod; Fig. 5, a front end detail view of the bottom delivering and clamping traveler mechanism, and Fig. 6 a view of the product of the machine.

B represents a board or bench to which the frame A and the different mechanisms are bolted. The frame A is simply a flat perforated plate having the proper configuration to retain the operating mechanisms and the several holders for the stock, all of which will be more fully described hereinafter. Projecting forward from the front of the said plate A and overhanging the edge of the bench are the arms 1 and 2, the former serving to support a hollow stud 3, arranged at right angles thereto and in horizontal or parallel direction with the frame. On this stud is journaled the basket-form 4, which may have

any desired outline, but in the present case is given that of an ordinary peach-basket and is to be revolved intermittently by hand as the sides 5 are successively brought to follow one another thereon around the form and between or beneath the bands in making the basket. The axis of this form is substantially horizontal—that is to say, it may or may not be exactly horizontal. It could be somewhat inclined without departing from the principle of my invention, and the word “horizontal” is used merely to distinguish it from my former machine, wherein the form revolves on a vertical axis. The other arm 2 provides a bearing in which reciprocates a shaft 6 in the direction of the axis of the form. This shaft carries the laterally-projecting arms 7 and 8 at its inner end adjoining the form, a bottom-feeding pawl 9, and the bottom-gripping table 10, journaled to lie in the axis of the form and having one or more points 11 projecting from its face to puncture and retain the bottoms in a vertical position when they are gripped between the table and the spring-actuated foot of the form.

Supported upon a standard 13, secured to and projecting up and over the frame A, is a downwardly-extending cage or hopper 14, adapted to contain the stacked or piled basket-bottoms 15. This cage is adapted to be refilled from the top. The bottom of the cage is of proper adjustment in relation to the pawl 9 to cause the latter to engage the lowermost bottom as the pawl advances through the slotted way across the bottom of the cage in the direction of the axis of the form.

The cage-bottom is extended to compose the two divisions or ways 16, which are projected out laterally and curved downward in the direction of the form and of a proper pitch or inclination with their rising side walls to direct in the gravitating delivery of one bottom at a time to the crotched centering-adjuster 18, so they will lie on edge vertically and centrally alongside in front of the cushioned foot 12 of the form, and at which time the pawl will have traveled through the slot 20, and the gripping-table 10 will have advanced to close and grip the fallen or delivered bottom upon the foot of the form and

to pass it along between the said foot and gripper, as indicated by the dotted lines in Fig. 1, to the proper position before the form for the bottom of the basket. As the basket-bottom is thus driven home at the same time one or more bands 21, as may be desired, are delivered from the downwardly-extending band-holder 22 with their end or ends in proper plane of adjustment upon the form for nailing in the beginning of the basket, and likewise deliver from the downwardly-extending band-holders 23 and 24 the internal and external bands in position for the top of the basket. To accomplish said delivery of the bands, their respective holders are arranged vertically to retain one end of a large quantity of the bands in a pile. The other ends of the bands are also held in column form between parallel rods 25, provided therefor and projecting up from the rear of the frame, and the composing columns 22 and 24, which are the external bands for the basket, are made to rest tangentially inclining to the form upon the supports 26, as represented, rising from the frame, by *y* in Fig. 2. Each of these band-holders is provided next the bottom and on the side approaching the form with a mouth or chute 27 and 28, from which a band or bands may be cut out or ejected by their respective blades 29 and 30, arranged to simultaneously pass across the bottom of the reservoirs and actuated to reciprocate by the common slot and bolt 31 and 32, connected to oscillating arms 33 and 34 of a pair of bell-crank levers, to the shorter arms 35 and 36 of which is attached the tread 37 for the operator, and by which means said arms are given oscillation against the action of a spring 38, seated upon the floor under the treadle-arm and actuating the levers in their homeward strokes, and also to eject the basket from off the form through the medium of mechanism which will be more fully described later on. From the frame A at one side of the form, and between the band columns, is vertically suspended a side feeding chute or reservoir 39, in which is arranged a shelf 40, connected by a cord 41 and weight 42, the cord running up over a pulley 43, hung to the frame, thence to the suspended weight, which thus counterbalances and automatically lifts the shelf in the chute, and consequently the sides 5 thereon, up against the stops 45, which are regulated to project the thickness of one or two sides above the table 46 of the frame to which said stops are made fast, thus permitting the sliding out or removal from the pile of but one or two sides at a time, as may be desired by the operator, onto and across the table to the form between the outer and inner bands delivered for the top of the basket and under the band to be nailed to the bottom, and a central band if desired fed out from the latter holder. By referring to Fig. 1 it will be seen that the bottoms of the band-chutes are arranged in different planes and in the right positions with extended mouths

where necessary, as shown, to guide the bands to their proper places in assembling the stock to be united in starting the basket.

47 represents a hook pivoted to the base 48, in which one of the oscillating levers is also fulcrumed. This hook is arranged to stand on its pivot in a slightly-inclined position, resting against the end of the treadle-arm, and as said arm is pressed down low enough by the foot of the operator the hook engages and retains it and the operated mechanisms while the basket is being made, but on its completion the hook may be kicked from its engagement off the treadle and the parts returned to their normal positions.

49 represents an arm extended from the side chute, to which is fulcrumed the heretofore-mentioned bottom-adjuster, which is swung into position for receiving the bottom as the treadle is pressed down, by having the cord 50 connecting them. The adjuster is provided with a stop 51, extended to engage it from the arm 49. The center of the stud 3 is provided with a hole in which is fitted to slide a stem 52, to which the foot 12 is screwed or otherwise secured. Said stem is provided with a slot 53, into which projects from a collar 55, secured to the form 4, a traveling key 54. The several parts of the form are thus made to revolve together, while the foot can be reciprocated in and out against and with the action of a coil-spring 56, which is slipped upon the stem between its foot and collar. The center of the stem and the arm 1 of the frame are each bored out, and a hole is thus provided longitudinally through the center of the whole apparatus. Reciprocating in this hole is the basket-ejector 57, about which is coiled a wire spring 58, seated on the arm 1 of the frame and a shouldered offset at the free end of the rod and simply sufficient in its power to return said ejector to its normal position within the form after it has been hooked upon and drawn forward in ejecting the basket by the pawl or hook 59, which is pivoted to the shaft 6 with its free end bisected and resting astride the ejector. As the shaft 6 is brought forward to the form said hook slides off over and engages the free end of the ejector, and as the shaft 6 returns draws said ejector forward against the action of its spring until the basket is ejected off the form and the hook raised by having a bent portion 60 coming in contact with an inclined projection 62 from the arm 1 of the frame which raises the hook, and the ejector is at once returned home by its spring.

By referring to Fig. 3 it will be seen that the band-delivering blades 29 and 30 are arranged to be united by having lateral lugs supporting a rod 63 in parallel direction with them and by means of which the blades slide upon each other. To effect a difference in their strokes, the blade 29 is moved by the oscillating arm 33, which gives it its full stroke. The blade 30 is moved by the blade 29, but only a short way in unison at the ter-

minus either way of its stroke, as the lugs of the blades come in contact in alternate direction. In the return stroke of the shaft 6 the bottom-feeding pawl 9 goes downward against the action of its spring 64 until the bottoms have been passed. It then springs up to engage anew in the rear of another bottom for repeating the operation.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. In a basket-machine, the combination with a revoluble form, of a bottom-holder disposed to hold the bottoms in a pile extending at right angles to the axis of the form, and devices for transferring the bottoms singly from the hopper into coincidence with the form, bottom-clamping mechanism, a band-holder extending approximately at right angles to the axis of the form, and mechanism for separating and advancing the bands, to the form, substantially as described.

2. In a basket-machine, a revoluble form, in combination with downwardly-extending band-holders and a band-feeding device arranged and adapted to separate the bands singly from the lower end or mouth of the hopper and feed them sidewise to the form in substantially the direction of its axis.

3. In a basket-making machine, a revoluble form, in combination with downwardly-extending band-holders arranged at the opposite ends of the form, band-feeders cooperating with the hoppers and arranged and adapted to separate and feed the bands singly in a sidewise direction to the form and in position to be nailed to the basket sides, a bottom feeding and clamping device, and mechanism for operating said devices, substantially as described.

4. In a basket-making machine a revoluble form, in combination with band-feeding devices located at the opposite ends and above the axis of the form, a bottom feeding and clamping device, and treadle mechanism for actuating all of said devices.

5. In a basket-making machine, the combination with a revoluble form, of a bottom-holder extending at right angles to the axis of the form, and mechanism for transferring the bottoms from a horizontal position in the hopper to a vertical position before the form, and a clamping device, substantially as described.

6. In a basket-machine, a form having a substantially horizontal axis, in combination with vertically-disposed band holders or hoppers arranged and adapted to hold the bands in a vertical pile, and mechanism for separating and feeding the bands to the form and in position to be nailed to the side pieces of the basket.

7. In a basket-making machine, the combination with a form of a bottom-holder, and a band-holder, and a reciprocating arm provided with devices arranged and adapted to cut out and feed a bottom and band to the

form in one movement, substantially as described.

8. In a basket-making machine, the combination with a form, of band holders or hoppers, and differential band-feeding plungers arranged and adapted to move one in advance of the other to separate and feed the bands to the side of the form and in position to be nailed.

9. In a basket-making machine, the combination with a form, of bottom and band feeding levers or arms arranged to move toward the sides of the form, hoppers for holding the bands and bottoms, and treadle mechanism for operating the levers.

10. The combination in a basket-making machine, of a form having substantially a horizontal axis, band holders or hoppers disposed at the opposite ends thereof, a bottom-holder, a bottom feeding and clamping device, a band-feeding mechanism and treadle mechanism below the form to operate said parts, substantially as described.

11. In a basket-making machine, the combination with a form, of band holders or hoppers, and differential band-feeding plungers arranged and adapted to move one in advance of the other to separate and feed the bands to the side of the form, and in position to be nailed.

12. In a basket-making machine, a form having substantially a horizontal axis, in combination with a hopper for holding the side pieces, a follower in the hopper, a table at the discharge end thereof, and mechanism for feeding the bottom sides and bands to the form in the manner and for the purpose set forth.

13. In a basket-making machine, the combination with a form having substantially a horizontal axis, of a pair of band-holders arranged alongside of the form, and mechanism for cutting out of said holders a pair of bands and placing them in position before the form to be nailed to the edges of the side pieces to bind the top edges of the basket, substantially as described.

14. In a basket-machine, a form, in combination with a blank-feeding device having its mouth located in juxtaposition to the side of the form, and a table intervening between the mouth and the form, whereby the blanks can be removed from the mouth of the holder directly on the table and thence to the form, substantially as described.

15. In combination with a form, and means for assembling the blanks about the form, of a blank-holder extending upwardly in angular relation to the axis of the form with its discharge end at the top and in juxtaposition to the form, and a follower which urges the blanks upwardly as fast as they are removed from the top, substantially as described.

16. In a basket-machine, a revoluble form in combination with band-holders located above and feeding downwardly toward the axis of the form, and devices for cutting the

bands out of the holders and transferring them to the form, substantially as described.

17. In a basket-making machine, a revoluble form in combination with downwardly-
5 extending band-holders arranged at the opposite ends of the form, band-feeders cooperating with the hoppers and arranged and adapted to separate and feed the bands singly in a sidewise direction to the form and
10 in position to be nailed to the inside and outside of the basket sides, and mechanism for operating said devices, substantially as described.

18. In a basket-machine, a form, in combination with one or more band-receptacles,
15 and devices operated by man-power for transferring the bands therefrom to the form, substantially as described.

19. In a basket-machine, a form in combination with one or more band-receptacles,
20 and devices operated by man-power for transferring an internal and external band therefrom to the form, substantially as described.

20. In a basket-making machine, a form in
25 combination with one or more band-receptacles, and devices operated by man-power for transferring an internal and external band

together, laterally therefrom to the form, substantially as described.

21. In a basket-making machine, a form, in
30 combination with band-receptacles at the opposite ends of the form and man-operated band-feeding devices for transferring the bands therefrom to the form, substantially as described.

22. In a basket-making machine, a form
35 and a band-receptacle at one end of the form, in combination with a band-receptacle at the opposite end, and man-operated devices for transferring a pair of bands from one receptacle to one end of the form, and a single band
40 from the other receptacle at the opposite end of the form, substantially as described.

23. In a basket-making machine, a form, in
45 combination with a band-feeding and bottom-feeding mechanism, and manually-operated devices for operating said mechanisms, substantially as described.

In witness whereof I affix my signature in presence of two witnesses.

EMMET HORTON.

Witnesses:

ANDREW J. COLLONS,
WM. H. JONES.