W. E. ASPLIN AND H. WISANDER.

APPARATUS FOR MAKING BASKETS.

APPLICATION FILED DEC. 26, 1919.

1,383,280.

Patented July 5, 1921.

2 SHEETS—SHEET 1.

Fig. 1.

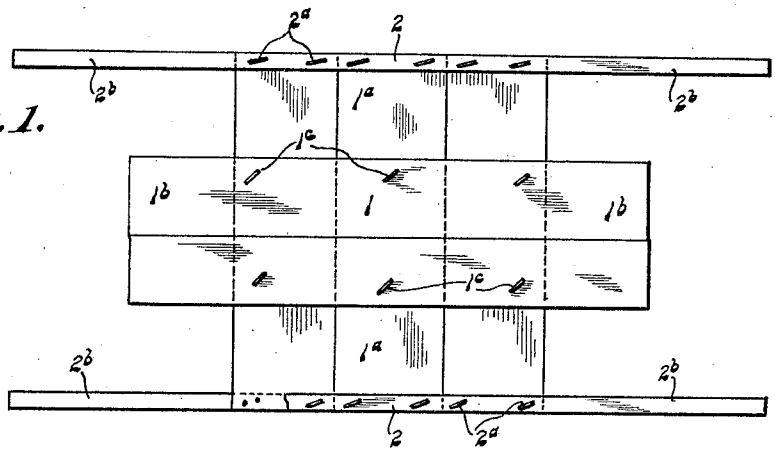


Fig. 2.

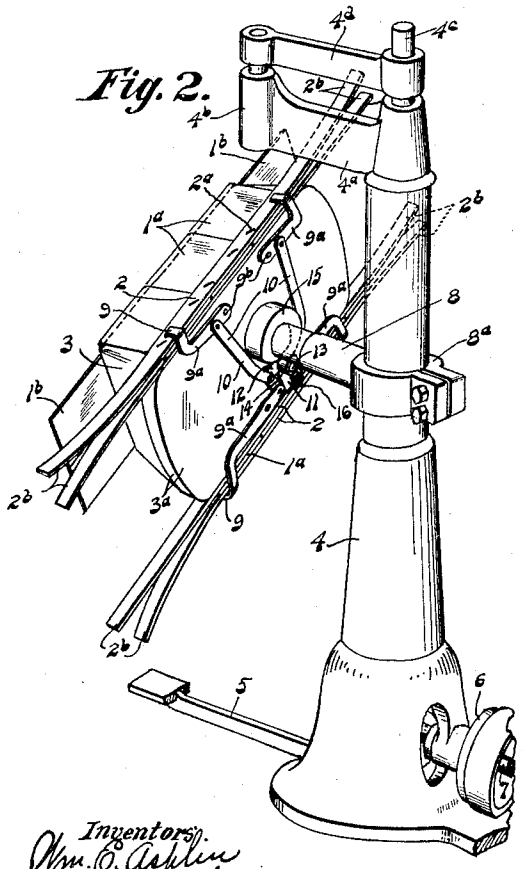
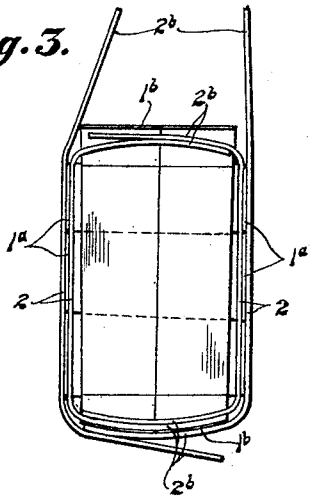


Fig. 3.



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2 SHEETS—SHEET 2.

Fig. 4.

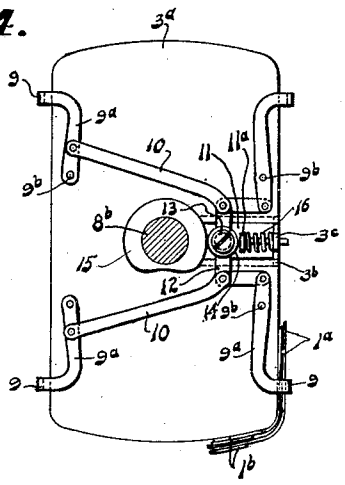


Fig. 5.

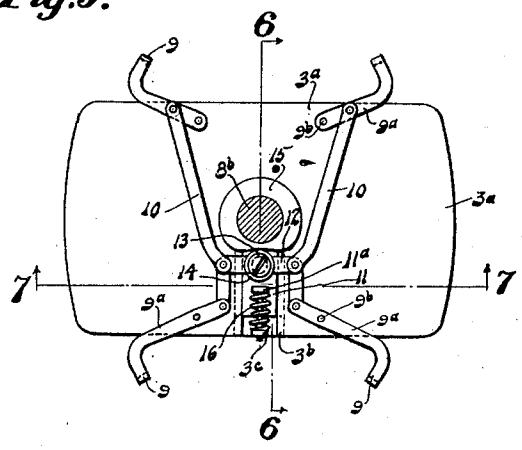


Fig. 6.

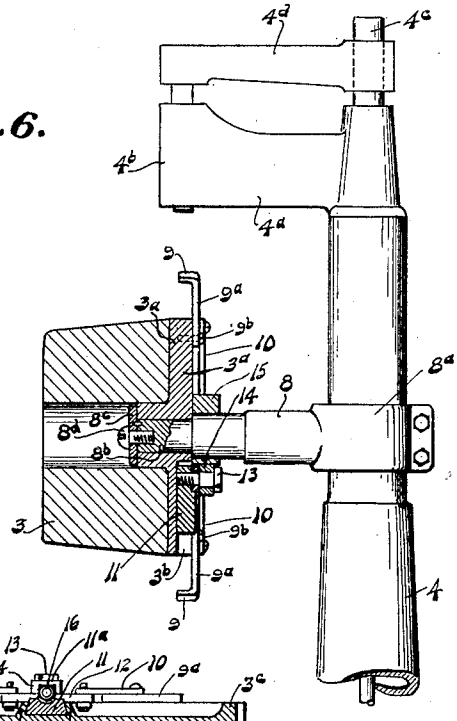


Fig. 8.

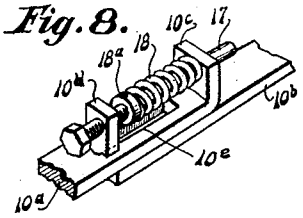
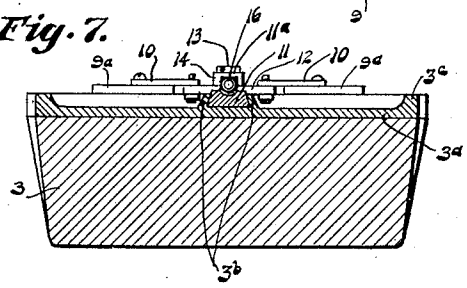


Fig. 7.



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UNITED STATES PATENT OFFICE.

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APPARATUS FOR MAKING BASKETS.

1,383,280. Specification of Letters Patent. Patented July 5, 1921.

Application filed December 26, 1919. Serial No. 347,507.

To all whom it may concern:

Be it known that we, WILLIAM E. ASPLIN and HUGO WISANDER, citizens of the United States and Sweden, respectively, residing at West Park, in the county of Cuyahoga and State of Ohio, have invented certain new and useful Improvements in Apparatus for Making Baskets, of which the following is a specification.

Our invention relates to an improved method of and apparatus for making baskets, and similar or analogous receptacles.

Our invention embodies an improved basket forming mat, together with improved means of preparing and folding the mat in the basket forming operation and an improved machine or apparatus for practising or carrying out the improved method.

The primary object of the invention is the provision of a generally improved method of and apparatus for making baskets which will not only simplify and improve upon the present methods of making baskets, but will improve upon the finished product.

With the above mentioned and other ends in view, the invention comprises the improved method and apparatus hereinafter described, illustrated in some of its embodiments in the accompanying drawings, and particularly pointed out in the appended claims.

Referring to the drawings, forming a part of this specification, Figure 1, is a plan view of a basket forming mat of the veneer board type constructed in accordance with the initial steps of the improved method and preparatory to further forming, tacking and completing in the improved machine for carrying out the improved method.

Fig. 2, a perspective view of a suitable machine, the conventional stapling or tacking device being somewhat diagrammatically illustrated, the improved mat being in its initial folded position upon the improved rotatably mounted basket form and illustrating in particular the initial engagement of the initially folded sides of the basket mat by the mat engaging members of the form preparatory to turning the basket form and mat for initially folding over the projecting binding strips and fastening one of the intermediate lateral basket walls or sections.

Fig. 3, a view of the inner side of a partially completed basket, illustrating in particular the manner of folding over and tacking the intermediate basket walls and ends of the rim forming binding and tacking strips.

Fig. 4, an enlarged rear view of the basket form or block and its oppositely arranged basket mat engaging members and actuating mechanism therefor, the parts being shown in their closed or clamping positions after the initial mounting of the basket mat on the rotatable form and the movement of the latter for the folding over and fastening of the first intermediate basket wall or section and the overlapping ends of the rim forming binding strips.

Fig. 5, a view of the rotatable basket form in its initial or horizontal basket mat receiving position, the mat clamping members or jaws being open preparatory to receiving and having folded thereover two of its sides the two walls of the basket mat carrying the binding strips and the clamping of the latter by such clamping jaws upon the further movement or cycle of rotation of the form block for the further folding and fastening of the remaining basket wall or section.

Fig. 6, a side elevation of the machine, the rotatable basket form being shown in central cross section taken on line 6—6 of Fig. 5, showing the rotatable form in horizontal or basket mat receiving position, the mat clamping members being open for such purpose.

Fig. 7, a longitudinal sectional view of the basket form taken on line 7—7 of Fig. 5.

Fig. 8, a perspective view of a means for resiliently connecting the connecting links between the mat clamping members and the form actuated mechanism therefor, whereby a limited independent resilient or spring actuated movement of the ends of the mat clamping members will be permitted when closed or being closed by the movement of the block.

Similar numerals of reference designate like parts throughout all the figures of the drawings.

While we have shown our improved method and apparatus in connection with a basket of the oblong veneer type, it should be understood and will be obvious that the improved method may be carried out in connection with the manufacture of baskets and

similar receptacles of varying forms and sizes, and it will also be understood that the improvements may be readily incorporated in or used in connection with various basket making machines and appliances.

For the purpose of illustration we have shown our improvements applied to a basket stapling machine of the ordinary or conventional form or type.

In carrying out our improved method, we provide a basket forming mat substantially as illustrated in Fig. 1, of the drawings. The mats may be made up of any suitable and convenient material and the material may be woven and secured in any suitable and convenient manner.

As a means of forming the bottom and side walls or sections of the basket or receptacle, the strips of material are formed or laid so that the intersecting portions will form the bottom section 1, and with projecting members or sections forming the lateral walls or sections of the basket when formed up as hereinafter referred to.

In the present instance, the projecting sections 1^a and 1^b, are adapted to form the basket side and end sections 1^a and 1^b, when folded and connected as hereinafter referred to.

In forming a basket of the veneer type, the strips of veneer after being assembled, as stated, may be secured by means of staples 1^c. As contradistinguished from the present methods of preparing the basket mat, the marginal edges of two of the lateral wall forming sections, (in the present instance, the basket side forming sections 1^a) are each provided with a pair of basket rim forming binding strips 2, which, in the present instance, are secured by means of staples 2^a, said strips having projecting portions 2^b, corresponding approximately in length to the width of the remaining or intermediate sections 1^b, (in the present instance, the end forming sections 1^b) said projecting portions 2^b, being adapted to engage and cover the marginal ends of the intermediate or end walls 1^b, as illustrated in Fig. 3, of the drawings.

After the mat has been prepared, as stated, the next step in the method is to fold the sections 1^a, carrying the strips 2, inwardly, and as a means of conveniently effecting this step in the method a rotatably mounted basket form or block 3, is provided, said block 3, having exposed end and lateral surfaces and being adapted to receive and clamp the binding strips 2, and side sections 1^a after the bottom and side sections of the mat are folded thereover, as hereinafter more fully described, after which the remaining or intermediate sections 1^b, (in the present instance the end sections) are folded over the ends of the block (after the initial inward folding of the inner projecting binding strips 2) and the outer projecting binding strips are folded inwardly thereover and said overlapping parts are suitably secured by means of a suitable fastening device, in the present instance, a stapling device arranged in suitable proximity to the ends of the rotatable block 3. In the present instance, the device is arranged to initially form, fold and bind the end walls 1^b, and projecting portions 2^b, of the strip in sequential order, after which the clamping devices of the block are released and the completed basket body may be removed.

As a convenient means of carrying out our improved method in connection with the improved apparatus, we have shown the latter in connection with a stapling machine of conventional form and such stapling machine as to its details forming no part of our invention need not be described in detail.

It will be seen, that the fastening or stapling device, in the present instance, comprises a suitable supporting pedestal 4, having an arm 4^a, terminating in a stapling head 4^b, and a reciprocatory shaft 4^c, provided with a second arm 4^d, and having suitable attachments (not shown) adapted to control the stapling mechanism when brought into action by the foot lever 5, and the clutch 6, and driving shaft 7.

As a convenient means of mounting the basket form 3, beneath the stapling head 4^b, the block 3, is provided with a metallic head or base 3^a, the marginal edges of the latter being adapted to support the basket rim or binding strips 2, and form an anvil for the insertion of the fastening devices or staples when driven through the portions 2^b, of the binding strips 2.

As a means of mounting the basket form conjointly formed by the block 3, and base 3^a, in proper coöperative relation to the overhanging stapling head 4^b, a bearing arm 8, provided with a split head 8^a, is mounted on a supporting pedestal 4, said arm 8, terminating at its end in a reduced bearing spindle 8^b, adapted to support the bearing portion of the member 3^a, and to removably secure the latter by means of a retaining plate 8^c, and screw 8^d, as shown most clearly in Fig. 6, of the drawings.

As a means of removably clamping or securing the sides of the basket carrying the binding strips 2, so that the latter will be securely retained in place while the opposite walls or end sections of the basket are being secured to the projecting portions 2^b, of the strips, the opposite sides of the block are provided with basket mat engaging members 9, said engaging members 9, being in the specific form of outwardly extending tongues or jaws 9, adapted to be moved toward and away from the edges of the form or base portion 3^a, and forming the free

ends of the lever members 9^a, the latter being pivotally secured at the rear of the metallic base portion 3^a, of the block by means of pivots 9^b, in the present instance, in the form of bearing pins, said jaws or lever members being adapted to be simultaneously actuated and controlled by means of link members 10, connected to a spring resisted carrier member or block 11. The links 10, may be secured to the movable block 11, by means of a cross member 12, removably secured by means of a bearing bolt 13, the latter also forming a bearing for a friction roller 14, adapted to travel upon and be actuated by a cam 15, secured upon the end of the bearing arm 8.

The position of the flat portion of the cam 15, is such relative to the roller 14, of the carrier block 11, and the jaws 9, on the lever members 9^a, that when the basket form 3, is in a predetermined position (as for example, in a horizontal position, as shown in Figs. 5 and 6, of the drawings) the basket engaging members or jaws 9, will be in an open position and the opposite sides of the basket mat are folded thereover and when the block is turned to one side to bring the intermediate section of the basket into position to be operated upon by the stapling device, the carrier block 11, will close said jaws over the strips 2, as indicated in Fig. 2, of the drawings and hold the same in such position during the remaining cycle of rotation of the block and until it reaches its original position, whereupon the jaws will be automatically opened for the removal of the completed basket from the forming block.

The carrier block 11, is adapted to operate in a guide way formed between undercut flanges 3^b, of the base 3^a, of the head or block 3, and the roller 14, of the carrier 11, may be held in engagement with the cam 15, by means of a spring 16, arranged between a flanged member 3^c, of the base 3^a, and a lug 11^a, on the carrier block 11.

Should it be desired to permit some individual outward movement of the jaw and lever members 9 and 9^a, to meet irregularities in the thickness of the binding strips 2, at the points of contact, the link members 10, may be formed in two parts as at 10^a and 10^b, in Fig. 8, of the drawings, said overlapping members terminating in lugs 10^c and 10^d, the lug 10^d, extending through a guide slot 10^e, and being provided with a guide bolt 17, surrounded by a compression spring 18, extending between the lugs 10^c and 10^d, and as a means of adjusting the tension of the spring 18, the guide bolt 17, may be provided with a flange or collar 18^a, and carried by the bolt 17, as the latter is adjusted through its head and operating in a well known and understood manner.

From the foregoing description, taken in connection with the accompanying drawings, the operation and advantages of our invention will be readily understood.

Having thus described the improved method of making baskets, together with one of the forms or embodiments of a suitable apparatus or device for carrying the same into effect, what we claim and desire to secure by Letters Patent, is,—

1. A basket making machine, comprising a support, a stapling device, a movable basket form in operative relation to said stapling device, and having end and lateral surfaces exposed to receive and form the sections of a basket mat when folded thereon, means for clamping said basket mat to the end and lateral surfaces of said form when rotated to predetermined positions relative to said stapling device, and means for releasing said clamping means and basket, at a predetermined position of rotation of said form.

2. A basket making machine, comprising a support, a fastening device carried by said support, a basket form rotatable on the latter and having exposed end and lateral surfaces, jaw members on said lateral sections of said form adapted to engage and hold the basket mat as folded thereover, and means for opening and closing said jaws at predetermined positions of the cycle of rotation of said form and for holding said jaws in closed position during the remaining portions of the cycle of rotation of said form.

3. A basket making machine, comprising a support provided with a fastening device and a bearing member, a basket form on the latter having exposed end and lateral surfaces, said form being adapted to be rotated to bring certain of said lateral surfaces into working position relative to said fastening device, a plurality of movable jaw members on said form adapted to engage the marginal edge of a basket mat when folded over said lateral surfaces, and means for simultaneously opening and closing said jaws at a predetermined position of the rotation of said form and for holding said jaws in closed position during the further cycle of rotation of said form with respect to said fastening device.

4. A basket making machine, comprising a support provided with a stapling device, a rotatable basket form having exposed end and lateral surfaces carried by said support in operative relation to said stapling device, means on said form for clamping the opposite sides of a basket mat to said form when placed thereover and the latter is rotated to predetermined working positions relative to said stapling device, and means for releasing said clamping means and the completed basket from said form at a predetermined position of rotation of the latter.

5. A basket making machine, comprising a supporting pedestal carrying a fastening

device, a bearing arm provided with a cam, an exposed basket form rotatable on said bearing arm below said fastening device, and mounted to receive and form a seat for the marginal edges of said basket mat when folded thereover and into working relation to said fastening device, a carrier block movable on said form in coöperative relation to said cam, and basket mat engaging jaws on opposite sides of said form operatively connected to and controlled by said carrier block as said form is rotated whereby said jaws will be opened and closed to clamp and release opposite sides of said basket mat at a predetermined point of rotation of said form.

6. A basket making machine, comprising a supporting pedestal, a fastening device, a bearing arm, a basket form rotatable on said bearing arm in coöperative relation to said fastening device, and having one end exposed to receive the bottom forming section of a basket forming mat and permit the latter to be formed over the sides of said basket form, a carrier member movable on said form as the latter is rotated, and basket mat engaging members on said form controlled by said carrier member as said form is rotated whereby said mat engaging members will be opened to receive said basket mat at a predetermined point of rotation of said form, then closed to clamp and hold said mat during the remaining cycle of rotation, and then finally opened to release the same at the completion of the cycle of rotation.

7. In a basket making machine, a rotatable basket form having an exposed axial end face and adjacent side and end walls adapted to receive and form the bottom and sides and ends of a basket blank when formed thereover, jaws overhanging said side walls from the opposite axial face of said basket form, and means for automatically opening and closing said jaws at predetermined points of rotation of said rotatable basket form.

8. In a basket making machine, a support, a rotatable basket form thereon having an exposed axial end and side faces adapted to receive and form the bottom and sides of a basket mat when applied and folded thereover, means for clamping and holding said basket mat to two of said basket form sides when said form is rotated to a predetermined position, and means for releasing said clamping means in a second position of rotation of said basket form.

9. In a basket making machine, a rotatable basket form having an exposed axial end and also having side faces adapted to receive and form the bottom and side forming sections of a basket mat, respectively, means on said basket form adapted to receive the marginal edges of said basket mat and operable from the axial face of said form opposite said exposed axial end face, and means for automatically opening and closing said basket mat receiving means at predetermined positions of rotation of said basket form.

10. A basket making machine, comprising a support, a stapling device, a rotatable basket form on said support in operative relation to said stapling device and having an exposed axial end face, means on said form for clamping the opposite sides of a basket mat thereto when said form is rotated to a predetermined position relative to said stapling device, and means for releasing said clamping means and the completed basket from said form at another predetermined position of rotation of said form.

In testimony whereof we have affixed our signatures.

WILLIAM E. ASPLIN.
HUGO WISANDER.