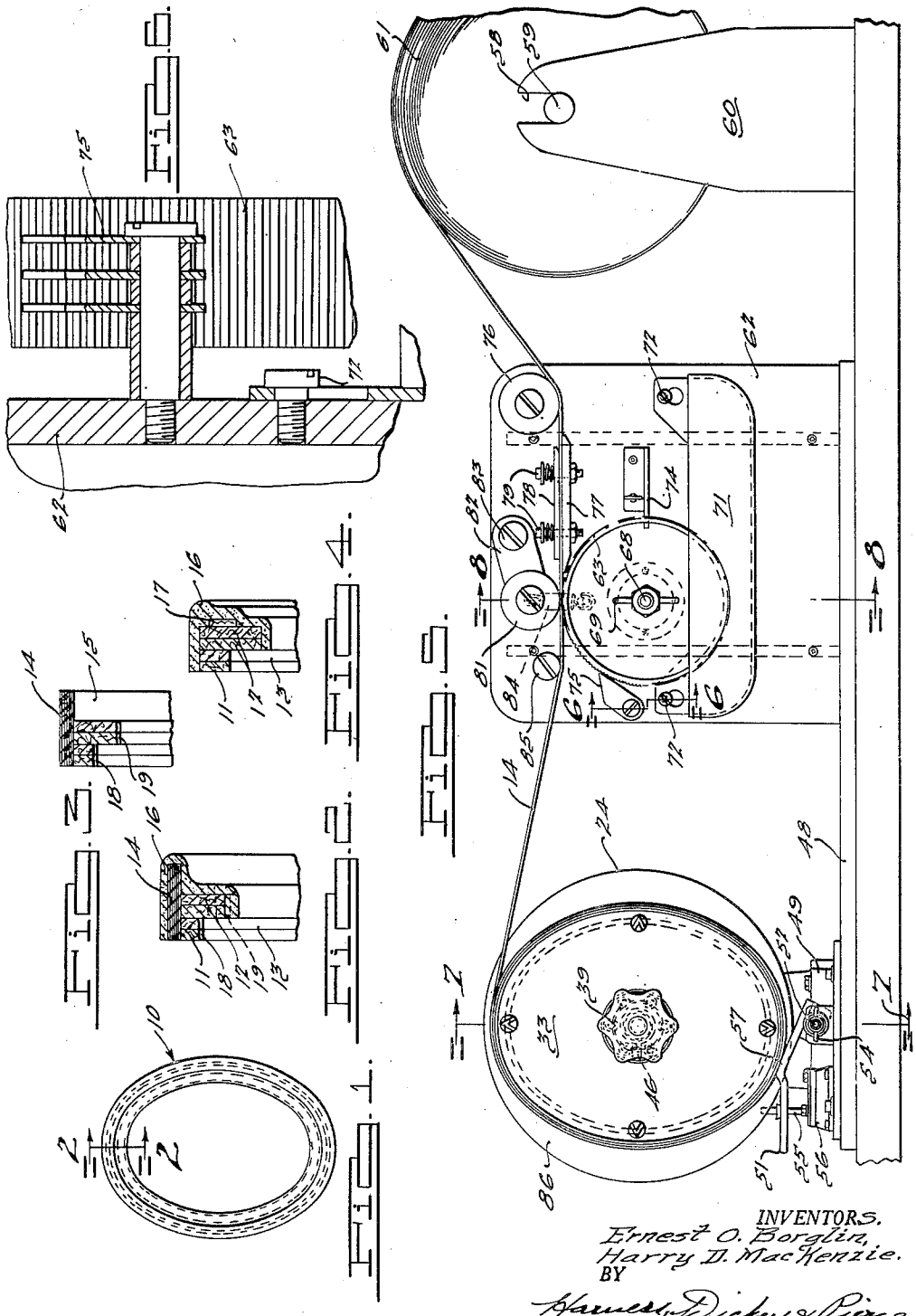
Oct. 14, 1952 E. O. BORGLIN ET AL 2,613,467

PICTURE FRAME

Filed June 18, 1948 2 SHEETS—SHEET 1



Oct. 14, 1952 E. O. BORGLIN ET AL 2,613,467

PICTURE FRAME

Filed June 18, 1948 2 SHEETS—SHEET 2

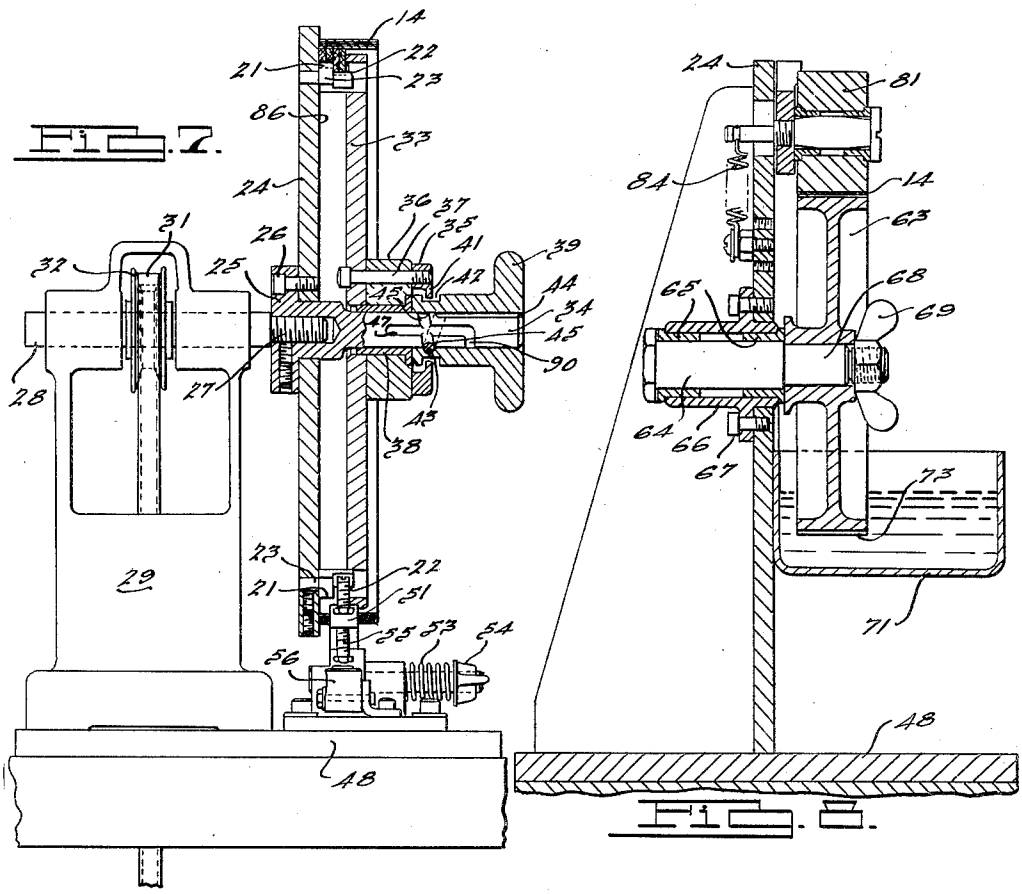


Fig. 1.

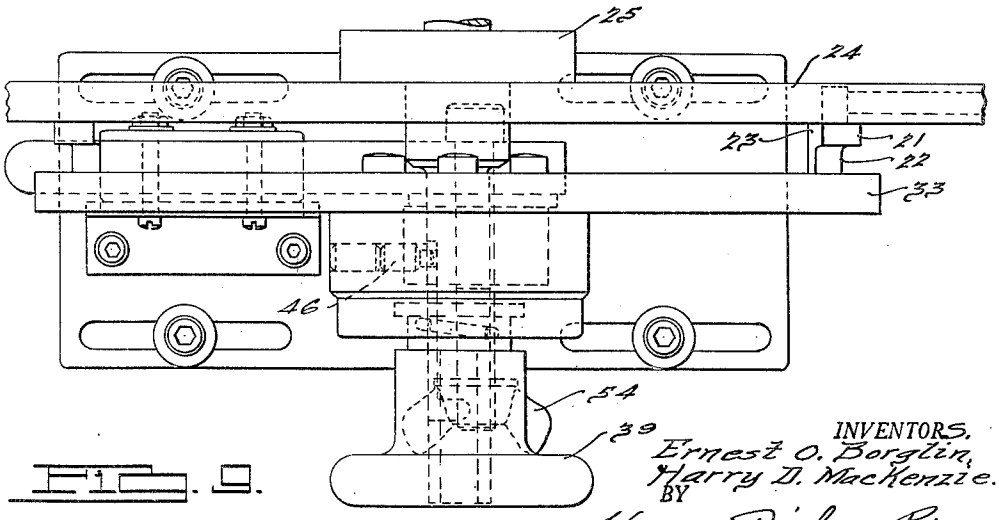


Fig. 2.

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2,613,467

PICTURE FRAME

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4 Claims. (Cl. 40—154)

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This invention relates to picture frames, and particularly to picture frames built up from die-cut material and covered by a plaster composition.

It has usually been the practice heretofore to make picture frames from wood parts which are glued together or from rolls of glued paper which is wound in layers to build up thickness to a frame having a rabbet for the reception of the glass, the picture and the backing element.

The present invention utilizes die-cut elements of cardboard, wood or like materials which are glued together to provide a rabbet for the reception of the glass, the picture and the backing element while providing a predetermined contour on the front face. The die-cut elements are provided with a coating of glue, positioned in a frame and revolved to wind layers of paper on the outer edge. The face of the assembly is finished to a predetermined form by the application of a plaster material which is hand worked by suitable tools to obtain a desired cross section.

Accordingly, the main objects of the invention are: to form a picture frame from die-cut elements to provide a rabbet on the back for the reception of the glass, picture and the backing material, and having a predetermined contour built up on the front from plaster material; to glue precut elements together to form a rabbet for the reception of the picture, glass and backing element and apply to the outer edges thereof layers of paper to build up a rim which is covered by a plaster material which extends over the face of the die-cut elements to form a predetermined cross section therefor; to form round and oval shaped picture frames from die-cut rings of different width which, when glued together, provide a rabbet for the reception of the glass, picture and backing material and apply plaster material to the face and outer edge to form a predetermined cross section, and, in general, to provide a picture frame which is simple in construction and economical of manufacture.

Other objects and features of novelty of the invention will be specifically pointed out or will become apparent when referring, for a better understanding of the invention, to the following description taken in conjunction with the accompanying drawings, wherein:

Figure 1 is a plan view of a picture frame embodying features of the present invention;

Fig. 2 is an enlarged sectional view of the structure illustrated in Fig. 1, taken on the line 2—2 thereof;

Fig. 3 is a view of the structure illustrated in Fig. 2, before the plaster has been applied thereto;

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Fig. 4 is a view of structure, similar to that illustrated in Fig. 2, showing a further form of the invention;

Fig. 5 is a view in elevation of a machine employed to form the picture frame structure as illustrated in Fig. 3;

Fig. 6 is an enlarged sectional view of the structure illustrated in Fig. 5, taken on the line 6—6 thereof;

Fig. 7 is an enlarged sectional view of the structure illustrated in Fig. 5, taken on the line 7—7 thereof;

Fig. 8 is an enlarged sectional view of the structure illustrated in Fig. 5, taken on the line 8—8 thereof, and

Fig. 9 is an enlarged broken-down view of the structure illustrated in Fig. 5.

Referring to Figs. 1 to 3 inclusive, a picture frame 10 is illustrated, constructed from a pair of die stampings 11 and a pair of die stampings 12 which are glued together to provide a rabbet 13 for the reception of the glass, picture and backing material which is applied to the central opening in the frame. To the assembly a plurality of layers of paper 14 may be wound over the outer surface of the die-cut elements to extend above the front face thereof, as illustrated in Fig. 3. A plaster material 16 is then applied over the inner face of the die stamping elements 12, over the outer face and top edge of the wound paper 14, and over the outer face of the outer die-cut element 12. A suitable tool is employed to shape a predetermined contour to the plaster material, as illustrated in Fig. 2. Coloring material may be added over the finished plaster surface or may be embodied in the plaster material itself, so that if the material becomes chipped or scratched the white plaster will not show in contrast to the colored coating.

In Fig. 4, a similar type of frame is illustrated, that wherein the die-cut elements 11 and 12 are utilized to form the rabbet 13 and in addition a die-cut element 17 is utilized on the front surface of the outer element 12 to build up the surface for the reception of the plaster material 16 to provide the predetermined contour on the outer face thereof. This assembly is somewhat similar to that illustrated in Figs. 1 to 3, with the exception that the wound paper 14 is omitted and the die-cut element 17 employed to provide the predetermined facial contour. It is to be understood that the element 17 may be omitted and a plaster applied direct to the inner and outer edges of the elements 11 and 12 and to the face of the outer element 12.

For producing the assembly of the die-cut elements and the paper 14, or the die-cut elements alone, a machine is illustrated in Figs. 5 to 9 by which the assembly may be made in a rapid manner. The die-cut elements 11 and 12 are provided with four notches 18 on their inner face, substantially 90° apart, while similar notches 19 are provided on the inner edges of the elements 12 for engaging offset knife edges 21 and 22 on pins 23 mounted on a plate 24. The plate is supported on a hub 25 by screws 26 and is attached by a stud 27 to a shaft 28 in a standard 29 to be driven in rotation by a belt 31 operating a pulley 32 keyed or otherwise secured to the shaft 28. Each of the elements 11 and 12 has glue applied to a face thereof before being assembled upon the pins 23, and thereafter a clamping plate 33 is secured to the shaft extension 34 of the hub 25 in an easily attachable manner.

The attaching plate 33 has a flanged ring 35 secured on an annular element 36 by a plurality of screws 37 to project forwardly thereof. A bushing 38 is mounted within the aperture of the annular element 36 and plate 33 to snugly engage the shaft 34. An operating handle 39 is retained on the assembly by the flange 41 on the element 35 projecting into a slot 42 on the outer surface of the handle. A pin 43 is disposed in an aperture in the handle to have a portion thereof extend beyond the inner surfaces of the handle aperture. In assembly, this pin passes over a flat machined portion 44 into a spiral groove 45 which forces the plate 33 toward the plate 24 when the handle 39 is rotated to advance the pin 43 in the groove. A set screw 46 extends through the annular element 36 into the slot 47 in the shaft 34. After the plate 33 is assembled on the shaft, the setscrew 46 is adjusted to project within the slot 47 and to be freely movable therein. It will be noted that the slot extends for a portion of its length parallel to the axis of the shaft 34 and also circumferentially for at least 90°. This prevents the plate 33 from being removed from the shaft 34 but permits it to be rotated 90° so that the oval shaped die-cut elements 11 and 12 may be moved over the narrower edges of the plate 33, first from over one edge and then the other, after which they are applied over the pins 23. By this means, the four die-cut elements 11 and 12 are firmly held in face-to-face relation with each other against the plate 24 in position to be with the plate by the belt 31 operating in the pulley 32.

The standard 29 is mounted on a table 48 which also supports a gauging mechanism 49 disposed in alignment with the applied paper 14. An arm 51 is pivoted on a shaft 52 having a spring 53 and thumb nut 54 thereon by which the tension on the arm may be adjusted. An adjustable setscrew 55 is mounted on the arm 51 in position to operate a switch 56. A cam surface 57 is formed on the arm 51 which engages the paper 14 as it is wound in layers on the die-cut elements 11 and 12 until, when sufficient layers are built up on the frame edge, the screw 55 will actuate the switch 56 to interrupt the motor operation. On the opposite end of the table 48, a pair of spaced standards 60 is provided having notches 58 in the top for receiving a shaft 59 which supports a roll of paper 61.

Between the standards 29 and 60, a standard 62 is provided for supporting a device for applying glue to the lower face of the paper strip 14 as it is drawn therethrough. A glue-applying wheel 63 is secured on a shaft 64 mounted on bearings 65 in a sleeve 66 which is secured to the face of the standard by screws 67. The wheel is retained on the shoulder extension 68 of the shaft by a thumb nut 69. A pan 71 containing the glue is removably supported on pins 72 projecting from the face of the standard 62. The surface of the wheel 63 is corrugated at 73 and is engaged by a doctor blade 74 disposed adjacent thereto to regulate the amount of glue provided on the surface of the wheel as it advances counterclockwise to engage the paper strip 14 as the paper is pulled thereacross and rotated thereby. A plurality of fingers 75 on the opposite side of the wheel from the blade 74 strips the paper from the wheel in case it should adhere thereto. A roller 76 is aligned with the paper strip 14 which passes thereunder as it is drawn across a plate 77 and retained aligned with the roller by the spring-pressed plate 78. Bolts 79, having springs thereon, apply a tension to the plate 78 when secured adjacent to the outer edge thereof which slightly tilts the plate relative to the plate 77. As the paper 14 passes between the plates, it is urged inwardly and retained aligned with the roller 76 and wheel 63. A roller 81 is mounted on an arm 82 pivoted on a pin 83 secured on the standard 62. A spring 84 urges the roller 81 downwardly against the wheel 63 to maintain a predetermined pressure between the paper and the knurled face of the wheel 63 to cause the wheel to be rotated by the paper as it is drawn between the plates 77 and 78. A roller 85 is provided on the face of the standard 62 under which the paper strip passes as it is wound upon the die-cut elements 11 and 12.

After the die-cut elements 11 and 12 are assembled on the pins 23, the plate 33 is revolved to be in alignment with the elements and is advanced into engagement therewith, after which the rotation of the knob 39 applies a clamping pressure to secure the elements 11 and 12 together. Thereafter, the end of the strip 14 is applied to the outer edges of the elements 11 and 12 and against the face 86 of the plate 24. The lever 51 is raised to have the cam surface 57 engage the outer surface of the elements and to close the circuit through the switch 56. This starts the motor which drives the plate 24 in rotation to draw the strip 14 over the gluing wheel 63 from the roll 61. When sufficient layers of the paper have been applied to deflect the arm 51 sufficiently, the setscrew 55 thereon will operate the switch 56 to interrupt the motor operation, after which the paper 14 is torn, the handle 39 released, the plate 33 moved outwardly and revolved 90° to permit the assembled elements to be withdrawn forwardly from the pins 23 and then angularly from the plate 33. The plaster material 16 is then applied to the frame, as pointed out hereinabove and as illustrated in Fig. 3, to produce the cross-sectional contour, as illustrated in Fig. 2. When a frame similar to that illustrated in Fig. 4 is to be built up, the left-hand portioin of the device mounted on the standard 29 is the only part that is utilized. The die-cut elements 11 and 12 are mounted against the surface 86 of the plate 24 in a manner pointed out hereinabove, and when desired, an additional die-cut element 17 may be added thereto to produce a foundation for the desired contour to be built thereon from the plaster material.

What is claimed is:

1. A picture frame having a body portion made of a plurality of elements in the shape of rings of predetermined inside and outside dimension

and like inside and outside configuration, and an additional plurality of rings of the same outside dimension but larger than the inside dimension so as to form a rabbet for the reception of a picture when the elements are glued together in face-to-face relation, said elements after assembly having a plurality of layers of a paper strip wound on the outer edge to project outwardly from the front face of the frame on the side opposite to that containing the rabbet to provide additional depth thereto of an amount at least equal to the combined thickness of the rings having the smaller inside dimension.

2. A picture frame having a body portion made of a plurality of elements in the shape of rings of predetermined inside and outside dimension and like inside and outside configuration, an additional plurality of rings of the same outside dimension but larger than the inside dimension so as to form a rabbet for the reception of a picture when the elements are glued together in face-to-face relation, a plurality of layers of a paper strip on the outer edge of the assembled rings projecting outwardly from the front face of the frame on the side opposite to that containing the rabbet to provide additional depth thereto at least equal to the combined thickness of the rings having the smaller inside dimension, and plaster material on the edges and the face of the assembly opposite to that containing the rabbet to provide a predetermined cross-sectional contour thereto.

3. A picture frame made of a plurality of elements of like inside and outside oval configuration which is mountable one upon the other to provide a predetermined thickness, the outside dimension of said elements being equal, the inside dimension of some of said elements being larger than others whereby a rabbet is formed for the reception of a picture within the frame at the rear thereof, and layers of paper on the outer edge of the assembly which project forwardly from the face of the assembly opposite to that having the rabbet therein an amount at least equal to the combined thickness of the rings having the smaller inside dimension.

4. A picture frame made of a plurality of elements of like inside and outside oval configuration which are mountable one upon the other to provide a predetermined thickness, the outside dimension of said elements being equal, the inside dimension of some of said elements being larger than others whereby a rabbet is formed for the reception of a picture within the frame at the rear thereof, layers of paper on the outer edge of the assembly which project forwardly from the face of the assembly opposite to that having the rabbet therein an amount at least equal to the thickness of the plurality of rings of smaller inside dimension, and plaster on the last face and shaped to a predetermined cross-sectional contour.

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