

No. 887,995.

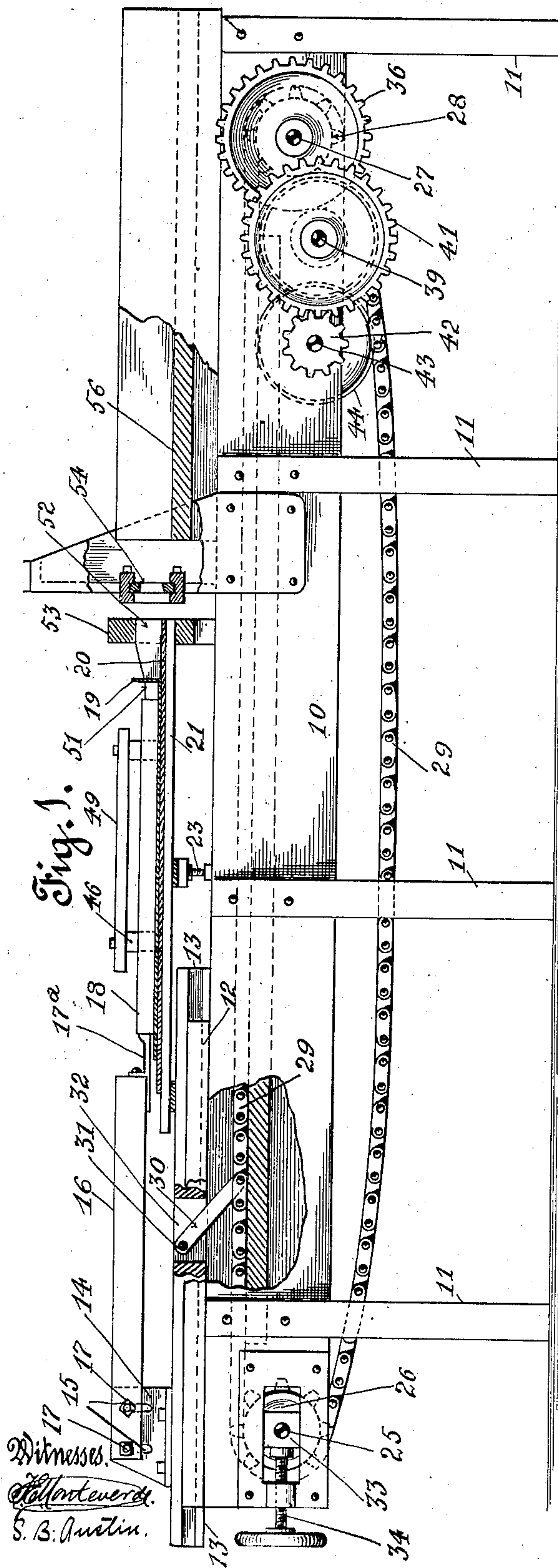
A. BEYRLE.

PATENTED MAY 19, 1908.

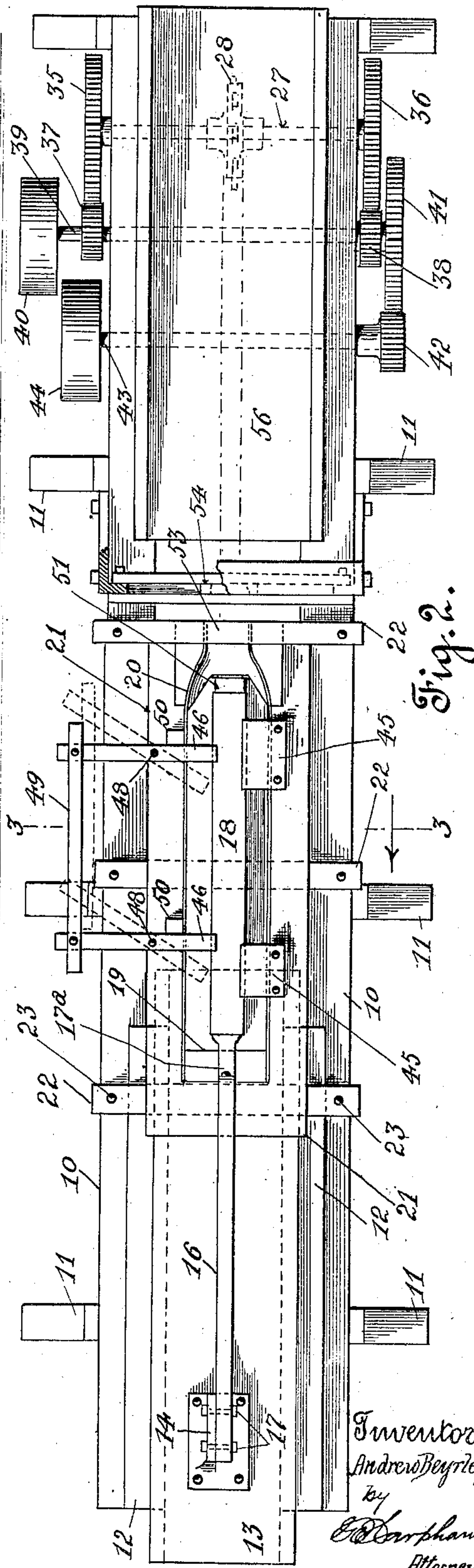
ART OF CASING WOODEN MOLDINGS, &c., WITH METAL.

APPLICATION FILED JUNE 20, 1907

2 SHEETS—SHEET 1.



Witnesses.
H. J. J. J.
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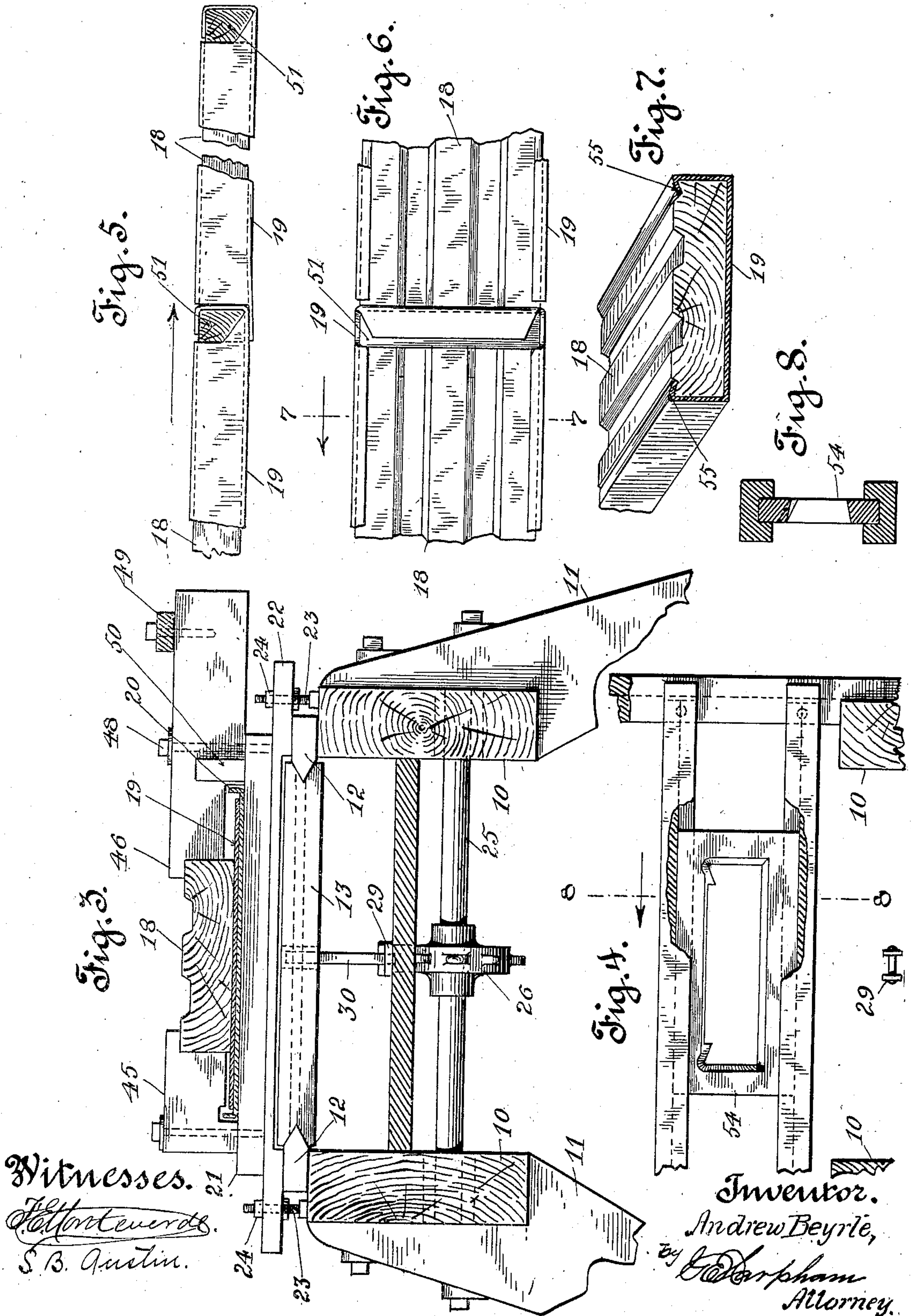
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UNITED STATES PATENT OFFICE.

ANDREW BEYRLE, OF LOS ANGELES, CALIFORNIA.

ART OF CASING WOODEN MOLDINGS, &c., WITH METAL.

No. 887,995.

Specification of Letters Patent.

Patented May 19, 1908.

Application filed June 20, 1907. Serial No. 379,854.

To all whom it may concern:

Be it known that I, ANDREW BEYRLE, a citizen of the United States, residing in the city of Los Angeles, county of Los Angeles, and State of California, have made a new and useful Invention in the Art of Casing Wooden Moldings and other Forms of Wood with Metal, of which the following is a specification.

Heretofore wooden moldings and other forms of wood have been covered with metal by first partially forming the metal for the casing in a separate machine and reducing the front end of the wooden molding or other forms of wood and then forming the metal up around the reduced front end so that it would pass through the forming die and then gripping the end of the molding and metal and drawing the same through the die. In thus covering moldings with metal the reduced end which was first put through the die by hand would be of smaller size than the other portion of the finished molding and this reduced end had to be cut off by hand so that the molding would be of uniform appearance when used. It takes time to reduce the end of the molding and to form up the metal thereon so that it will pass through the forming die. It also takes time to partially form the metal and there is considerable waste both of the wooden molding and the metal to cut off this reduced end and properly prepare the molding for use, and it takes time so to do.

It is the object of my invention to cover moldings and other forms of wood with metal so that the strip of molding or other piece of wood and the metal which is to cover it can be forced through the forming die without having any portion of the same reduced in size to unfit it for use, and which will produce strips of molding or other forms of wood covered with metal, which strips will be in condition for use as soon as they pass through the forming die or dies without further preparation except to fit the metal on the ends; and to this end it consists in the method of so securing the front ends of the metal and wood that they will travel together and then pushing the wood and a metal strip with which the molding is to be covered through a die or dies by the application of pushing means applied to the rear end of the wood which causes the strip to firmly adhere to the wood and to surround so much of the exterior as it is desired to have provided with a metal facing, or cov-

ering, and in a machine for so doing. I accomplish this object by means of the machine described herein and illustrated in the accompanying drawings in which;

Figure 1 is the side elevation partly in section of the machine with a piece of molding in place thereon and a sheet of incasing metal beneath the same with a portion cut away for clearness of illustration. Fig. 2 is a plan of the parts shown in Fig. 1. Fig. 3 is a section on the line 3—3 of Fig. 2. Fig. 4 is a detail showing a die forming block. Figs. 5 and 6 are details illustrating and showing the adjacent ends of two strips of molding. Fig. 7 is a section on line 7—7 of Fig. 6. Fig. 8 is a section on the line 8—8 of Fig. 4.

In the drawings 10 are the side rails and 11 are the legs of the frame of the machine used in carrying out my improved method. Secured to and preferably upon the side rails at the rear end thereof are guide rails 12 which support and guide the traveling push bar table 13 to which is secured push block 14 having slots 15 therein. A push bar 16 is secured to block 14 by bolts 17 which pass through the slots and permit the push bar to be adjusted as to height. The push bar table and push bar are preferably of wood, while block 14 is preferably of metal. On the end of the push bar is secured a metallic shoe 17^a which is adapted to engage the rear end of the wooden molding 18 upon which is to be formed the metal facing from the strip of metal 19. The strip of metal which is to be formed upon the molding rests upon the edge turning plate 20 which is rigidly secured upon the forming table 21. This forming table is secured to cross bars 22 which are mounted upon screw threaded bolts or posts 23 which are provided with nuts 24 so that the forming table can be adjusted as desired. Mounted on a shaft 25 at the rear end of the machine is sprocket wheel 26, and mounted on shaft 27 at the front of the machine is a like sprocket wheel 28 shown in dotted lines in Figs. 1 and 2. Around these sprocket wheels pass a sprocket chain 29. A connecting bar 30 is secured by bolt 31 to the push bar table. The end of the connecting bar passes into a slot 32 in the push bar table and the other end is secured to chain 29 by being hooked over one of the links thereof. Shaft 25 is mounted in adjustable bearing blocks 33 which are adjusted by screws 34 to take up any slack that is objectionable in the driv-

ing chain. On shaft 27 are also mounted gears 35 and 36 which mesh with gears 37 and 38 which are mounted on shaft 39. On shaft 39 is mounted at one end power pulley 40 and at the other end gear 41 which meshes with gear 42 mounted on shaft 43. On the other end of shaft 43 is a power pulley 44. Power is applied to pulley 40 to drive the chain to return the push bar table to the rear end of the machine and power is applied to pulley 44 to drive the chain to cause the push bar table to travel toward the front of the machine, it being understood the power is alternately applied to these power pulleys to cause the travel of the push bar table in the direction desired by the operator.

In the operation of my machine the push bar and table will be caused to travel to the rear end of the machine as shown in Figs. 1 and 2 when the power is disconnected. A sheet of metal of the desired length and width is then placed upon the edge turning plate as shown in Fig. 2. A piece of wooden molding or other piece of wood is then placed upon the metal between the stationary guide blocks 45 which are secured at one side of the forming table, and the pivoted guide blocks 46 which are secured by bolts 48 upon the other side of the forming table. These blocks project over the edge turning plate and bear against the edge of the wooden molding and also project over the top of the wooden molding a short distance as shown in Fig. 3. Guide blocks 46 are connected at their rear ends by a link bar 49 so that they can be operated together, and when the molding is to be placed on the sheet of metal these blocks are thrown to the position shown in dotted lines in Fig. 2. After the molding is placed on the metal these blocks are returned to the position shown in Fig. 2 and their further movement prevented by stop blocks 50. A spacing block 51 which is a little shorter than the width of the molding and a little less in height than the molding is placed in front thereof and the sheet of metal is turned upwardly against the same as shown in Figs. 1 and 2. This block is large enough so that the metal which is formed around the same will be sufficient for forming at that end of the molding when the molding is put into use. The front end of the strip of metal is cut away as shown in Fig. 2. Power is applied to cause the movement of the push bar and table toward the front end of the machine, which carries the wooden molding and strip of casing metal therefor forward and the outer edges of the metal strip at the front end thereof will first engage the upturned edges of the edge turning plate and will be gradually turned thereby as it is pushed along. The edges of the edge turning plate at all portions, except the front are at right angles to the body and but little higher than the thickness of the metal used in casing. At

the front end these edges increase in height and are curved and approach more closely together as shown in Fig. 2.

As the molding and metal travel forward they pass through aperture 52 in forming die 53 which causes the metal to closely and snugly engage the wooden molding. The further travel of the molding and the metal casing therefor causes it to pass through the finishing die 54 which impresses the edges of the metal into the wooden molding as shown at 55 in Fig. 7, thereby locking the metal onto the wood. Just before the rear end of the molding passes through the forming die the motion of the push bar table is reversed and it runs to the rear of the machine and is stopped. Another sheet of metal and another piece of wooden molding is placed and secured in the machine as before described, when motion is imparted to the machine to cause the travel of the push bar toward the front end of the machine when the front end of the second piece engages the rear end of the first piece and pushes the same on through the dies and out upon the reception table 56 from which it is removed by an operator. The forming and finishing dies are removably secured in the machine so they can be replaced by dies of other sizes to fit the different sized moldings. The forming table and edge turning plate are also removably secured in the machine so they can be changed for different sized moldings, it being understood that the edge turning plates and forming and finishing dies are used in sets, there being as many different sets as there are different sized moldings to be finished.

By this method and machine it may be seen that a wooden molding can be incased with a metal sheet at one operation of the machine and without any partial preparation of the metal in any other machine, and that after the same is incased in metal that no cutting away of any part is required, except the ordinary finishing of the ends, whereby waste of time and material is avoided.

By the use of the spacing block, the required amount of metal is provided for finishing the end of the molding or other piece of wood; but if the end is not required to have a metal facing, the spacing block could be omitted and the front end of the metal would be appropriately secured to the front end of the wood. The spacing block forms a convenient means where the end of the wood is to be metal faced for gaging the amount of metal for the end, and at the same time it provides means for securing the front end of the metal so that it will travel with the wood through the dies. By this process, which consists of pushing the wood to be faced, and the metal that forms the facing, simultaneously through dies, by force applied to the rear end of the wood, no marks are produced on the finished piece of work and the forming

up of improperly formed ends, such as is required when the work is pulled through dies, is avoided.

Having described my invention what I claim is:

1. The herein described method of putting on a metal facing on wood consisting in first securing the front ends of the metal and wood so they will travel together, and then simultaneously pushing the wood and the metal for the facing of the same through a die by pushing means applied to the rear end of the wood.

2. The herein described method of putting on a metal facing on wood consisting in securing the front ends of the metal for the

facing and the wood to be faced so that they will travel together, and then applying pushing means to the rear end of the wood and simultaneously pushing the wood and the metal for the casing thereof through a succession of dies adapted to form the metal upon the wood and embed the edge of the metal in the wood, whereby it is locked thereon.

In witness that I claim the foregoing I have hereunto subscribed my name this 13th day of June, 1907.

ANDREW BEYRLE.

Witnesses:

S. B. AUSTIN,
G. E. HARPAM.