

(No Model.)

2 Sheets—Sheet 1.

A. B. MINER.
BARREL MAKING MACHINE.

No. 541,246.

Patented June 18, 1895.

Fig. 1.

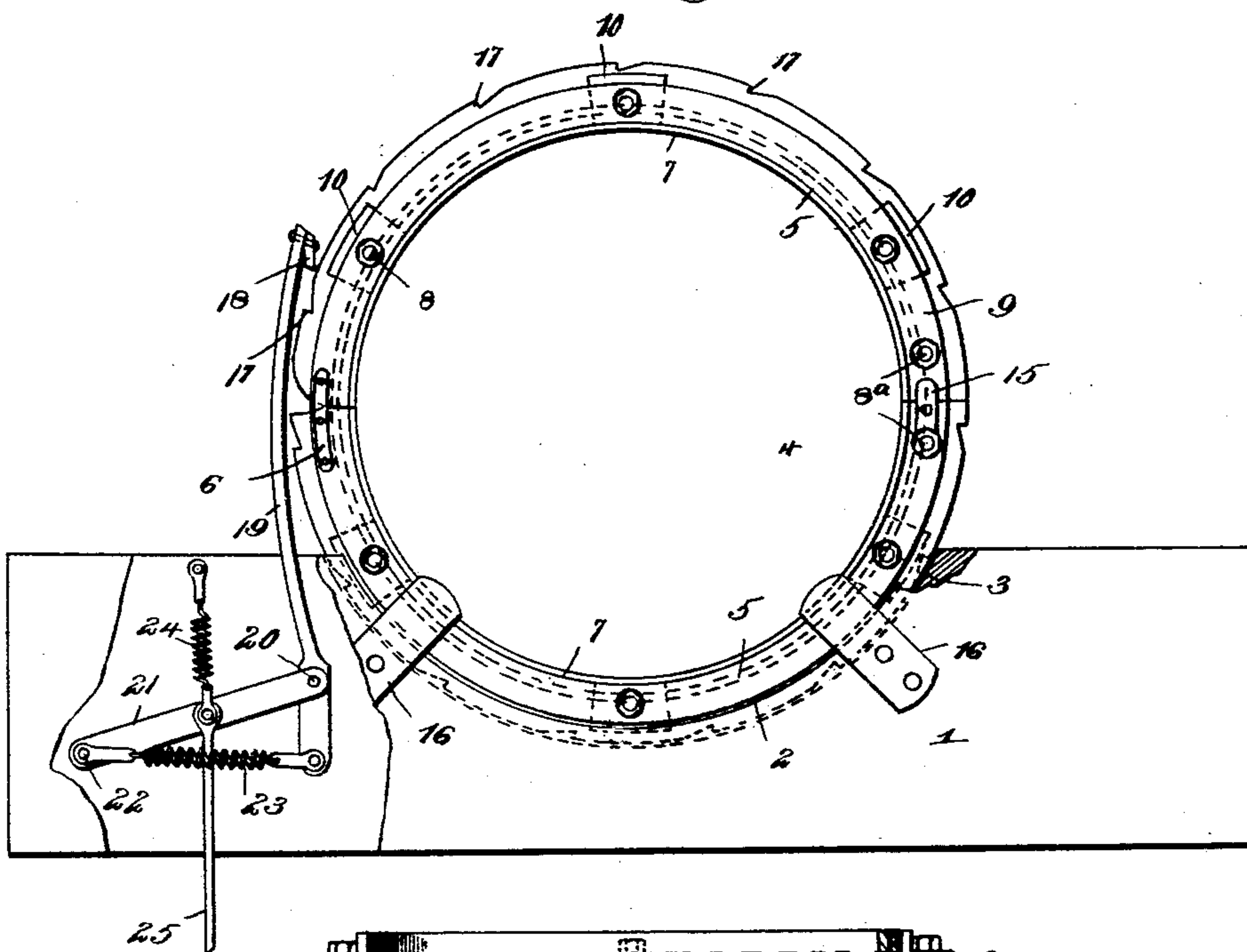
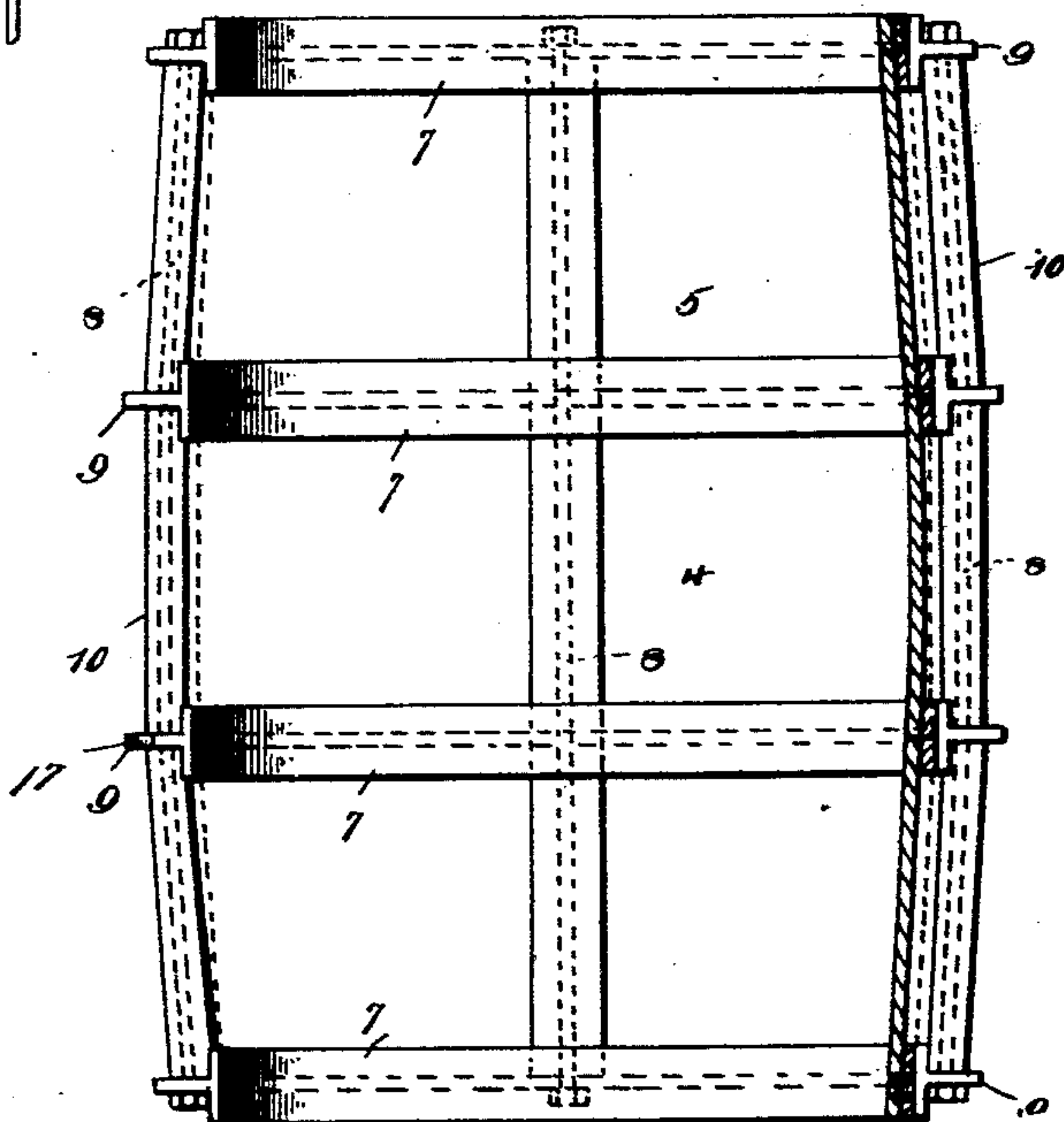


Fig. 3.



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Witnesses

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Ashley B. Miner,

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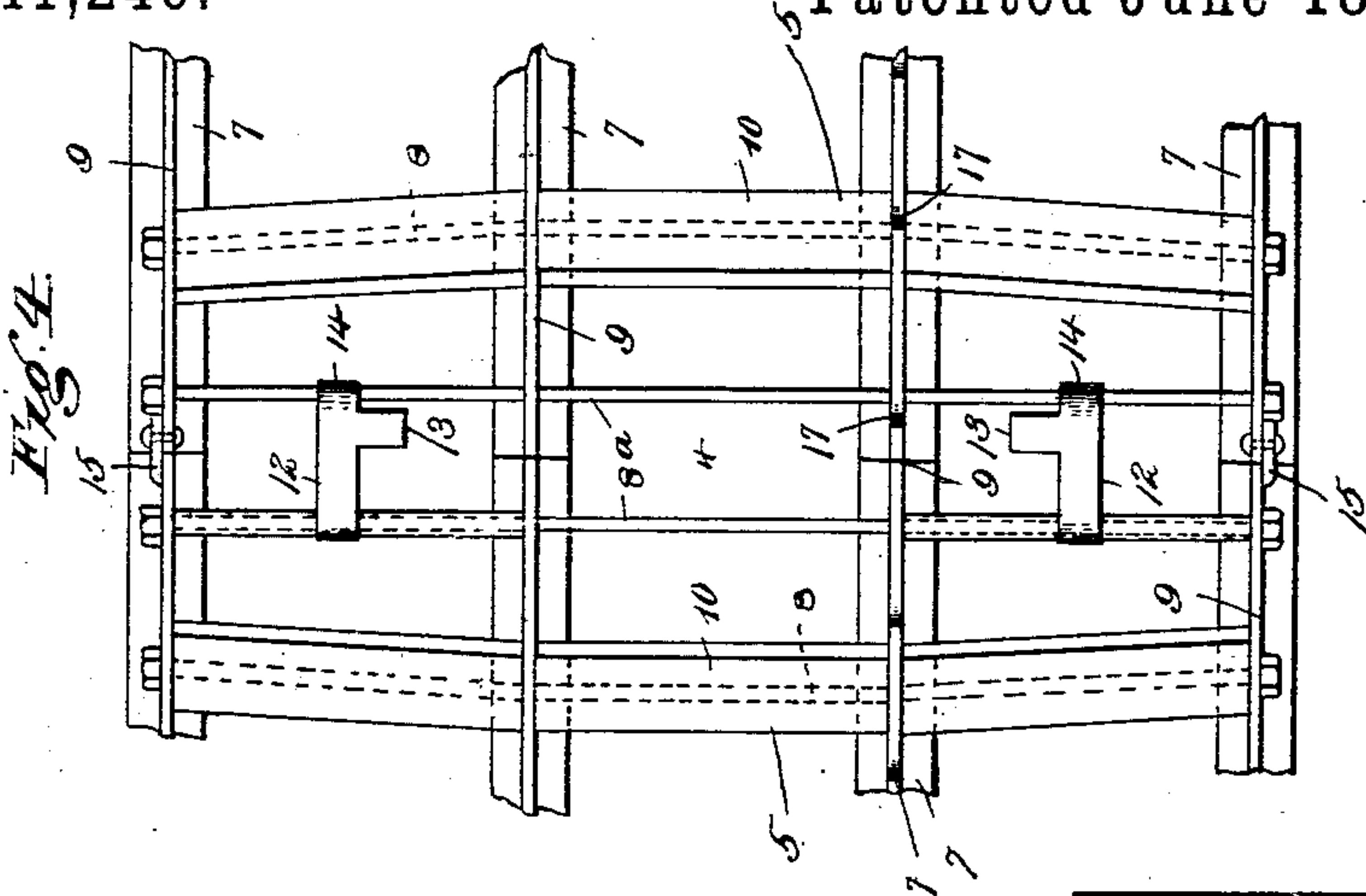


Fig. 5.

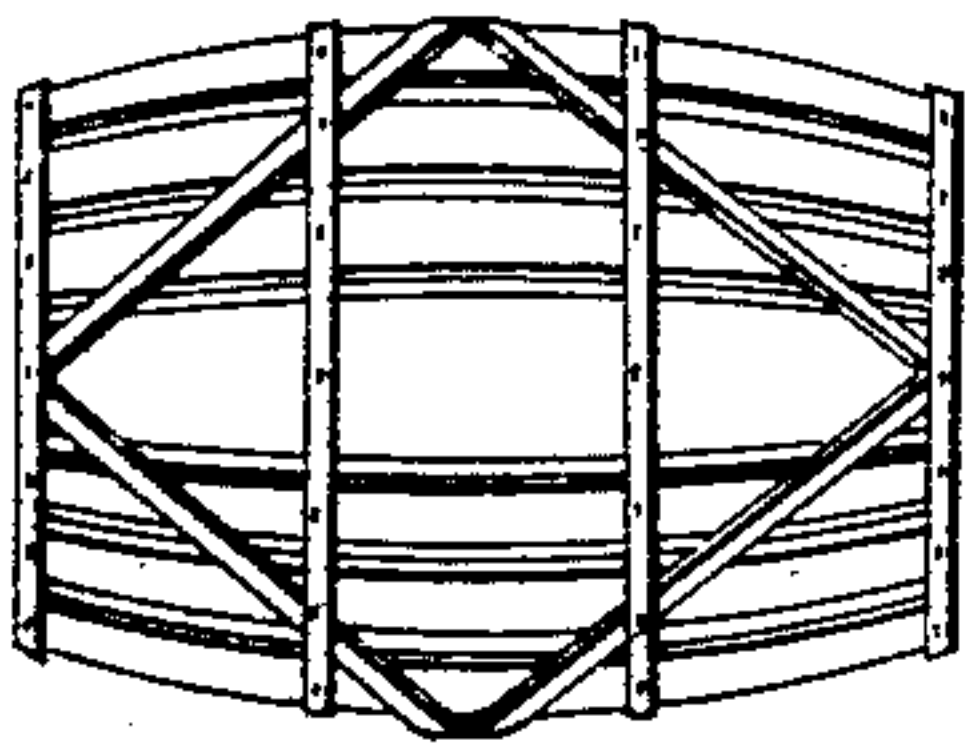
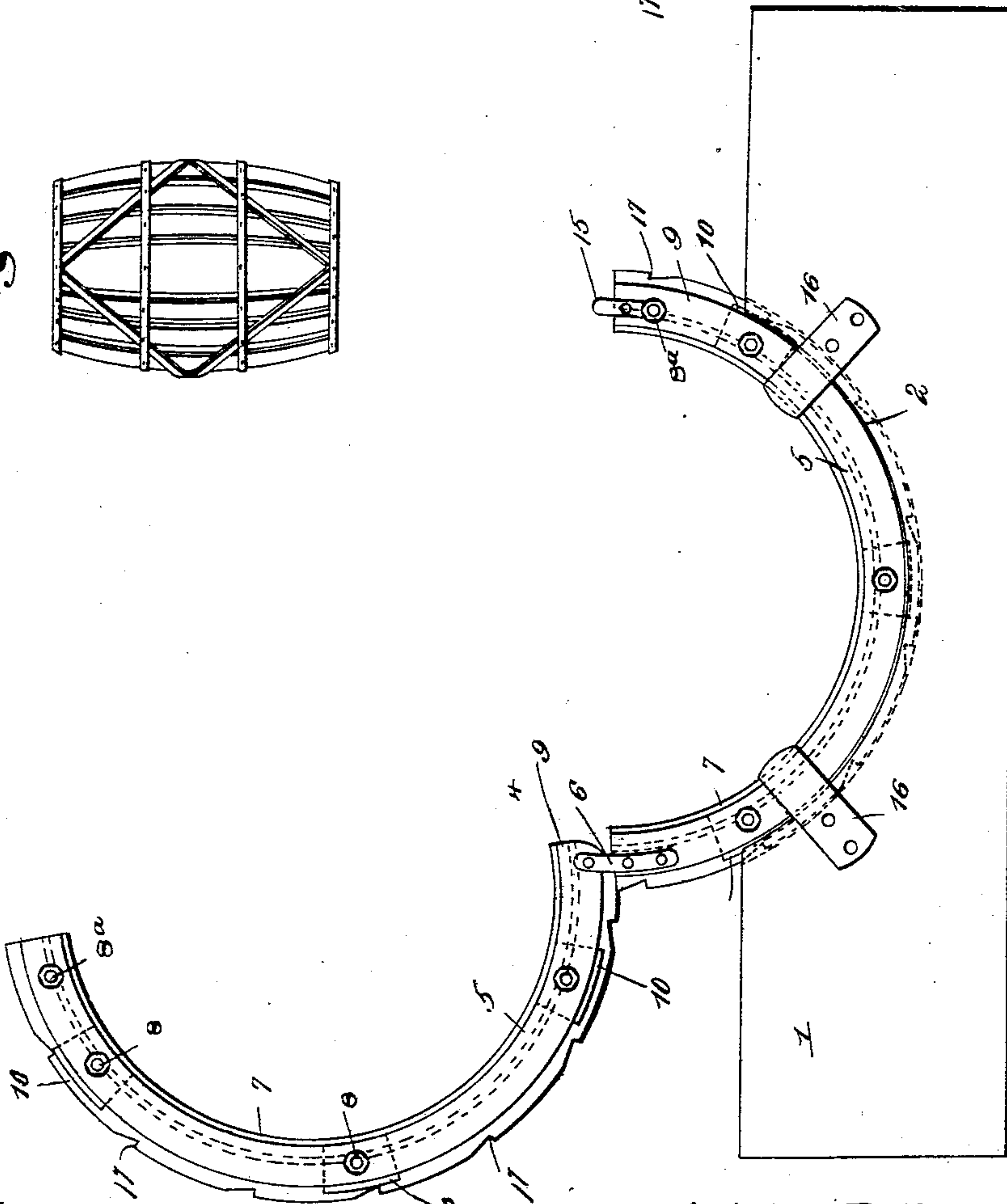


Fig. 2.



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UNITED STATES PATENT OFFICE.

ASHLEY B. MINER, OF SUFFOLK, VIRGINIA.

BARREL-MAKING MACHINE.

SPECIFICATION forming part of Letters Patent No. 541,246, dated June 18, 1895.

Application filed October 9, 1894. Serial No. 525,404. (No model.)

To all whom it may concern:

Be it known that I, ASHLEY B. MINER, a citizen of the United States, residing at Suffolk, in the county of Nansemond and State of Virginia, have invented a new and useful Barrel-Making Machine, of which the following is a specification.

This invention relates to barrel making machines; and it has for its object to provide a new and useful machine of this character especially adapted for making truck barrels.

To this end the invention contemplates a machine providing simple and efficient means for the construction of a barrel wherein the staves thereof are secured to the hoops by fastening devices, preferably nails, which are passed through the staves and clinched through the hoops.

With these and other objects in view, which will readily appear as the nature of the invention is better understood, the same consists in the novel construction, combination, and arrangement of parts hereinafter more fully described, illustrated, and claimed.

In the drawings, Figure 1 is an end view, partly in section, of a barrel-making machine constructed in accordance with this invention. Fig. 2 is a similar view of the machine with the barrel-form thrown open. Fig. 3 is a top view or plan of one of the duplicate form-sections. Fig. 4 is an exterior detail plan view of the barrel-form, showing the fastening devices for locking the sections together. Fig. 5 is an elevation of a completed barrel made by the machine.

Referring to the accompanying drawings, 1 designates a stationary supporting frame provided in the top thereof with the semi-circular open bearings 2, having grooves therein, and which are lined with the metallic wear plates 3, to take up the wear of the rotatable circular barrel form 4, that is mounted to rotate in the circular bearings 2, of the frame 1.

The rotatable circular barrel form 4, is open at both ends and comprises the duplicate semi-circular form sections 5, that are hinged together at one meeting edge by suitable hinge straps 6, to provide means whereby the form may be readily opened to take out a completed barrel and quite as readily closed tight onto the hoops of the barrel to be constructed. The duplicate semi-circular form

sections 4, each consists of a series of semi-circular iron bands or rims 7, that are T-shaped in cross section to loosely register in the grooved bearings 2, and which are regularly spaced from each other at distances agreeing with the space between the hoops of the barrel.

The semi-circular T-shaped bands or rims 7, are securely braced and connected together by means of the exterior longitudinal tie rods or bolts 8, which are passed through the peripheral flanges 9, of the T-shaped bands or rims 7, and are also passed through the wooden combined brace and spacing staves 10, that are interposed between the flanges 9, of the adjacent bands or rims 7, and the staves 10, combined with the tie-rods or bolts 8, passing therethrough, firmly brace and strengthen the form, while at the same time securely connecting and positively holding the bands or rims 7, relatively positioned.

Near the unhinged edges of the duplicate form sections 5, certain of the tie-rods or bolts, additionally designated as 8^a, do not pass through staves 10, and the tie-rod or bolt 8^a, of one section has hinged or pivoted thereto one end of the pivoted lock latches 12, provided with the finger flanges 13, and adapted to have the swinging hook edges 14, thereof detachably engage the rod or bolt 8^a, of the other section, thereby providing simple means for detachably locking the unhinged edges of the two sections of the form together. The end bands or rims 7, of one section have attached to one extremity thereof the side keeper plates 15, that are adapted to overlap the corresponding extremities of the end bands or rims of the other form section, so that when the two sections are locked together, the same will be secured against any longitudinal movement.

The end rims or bands of the barrel form are loosely engaged by the upper ends of the flanged guide plates 16, attached to the end pieces of the frame 1, to provide for properly holding the rotatable barrel form in its bearings, and one of the intermediate peripheral flanges 9, of the form is provided with a regular series of ratchet notches or teeth 17, which are adapted to be engaged one at a time by the ratchet dog 18, carried at the upper end of the curved pawl 19, and the space between

the notches or teeth 17, substantially agrees with the width of the barrel staves used in constructing the barrel. The curved dog arm 19, is pivoted near its lower end as at 20, to one end of the pivoted lever 21, pivoted at its other end to the frame 1 as at 22, and a spring 23, connected to the lower extremity of said dog arm 19, and to a fixed point of attachment, serves to hold the dog 18, in engagement with the ratchet flange of the barrel form. A retractile lifting spring 24, arranged above and connected to the lever 21, holds the said lever, and therefore the dog arm, normally elevated, and a suitably operated pull rod 25, arranged below and connected to the lever serves to depress the same to engage the dog 18, in the notches or teeth 17, for rotating the barrel form. A treadle or other suitable operating means (not shown), may be employed in connection with the rod 25, for operating the ratchet mechanism to turn the form 4.

In operation, an operator is stationed at each open end of the rotatable barrel form, and to construct a barrel, similar to the barrel illustrated in Fig. 5 of the drawings, the form is thrown open, by unhooking the latches 12 from one of the rods 8^a, and the outer hoops of the barrel are placed within and rested against the semi-circular bands or rims 7, of the lower section of the form as the same stands open. The upper section of the open form is closed and locked by means of the latches 12 onto the barrel hoops, which are thereby held firmly clamped inside of the completely circular bands or rims of the closed form. The barrel staves and braces are then placed in position inside of the hoops and are secured to said hoops by means of nails or other fasteners which are driven through the staves and into the hoops, it being understood that the points of said nails or fasteners are turned over or clinched as they are driven against the inner sides of the metallic bands or rims 7. As the work progresses one of the operators works the ratchet mechanism described with his foot, so that the barrel form is turned in its bearings, providing means whereby every nail or fastener may be driven downward, and in this operation of the machine no time is lost whatever.

When one barrel is completed the form is opened and the barrel removed, and the hoops for the next barrel are clamped in position within the form in the manner already described, when the operation of nailing the staves in position is proceeded with as before.

Changes in the form, proportion and the minor details of construction may be resorted to without departing from the principle or sacrificing any of the advantages of this invention.

Having thus described the invention, what is claimed, and desired to be secured by Letters Patent, is—

1. In a barrel making machine, a stationary

support, a rotatable barrel form mounted on said support and comprising duplicate semi-circular sections hinged together at one edge, and means for intermittently and positively rotating the form a distance equal to the width of a barrel stave, whereby every nail or fastener may be driven in a downward direction, substantially as set forth.

2. In a barrel making machine, the combination with a stationary support; of a rotatable barrel form mounted on said support and comprising duplicate semi-circular sections hinged together at one edge, each of said sections consisting of a series of spaced semi-circular T-shaped bands or rims, and bracing connections between said bands or rims, substantially as set forth.

3. In a barrel making machine, the combination of a stationary bearing support, and a rotatable circular barrel form comprising duplicate semi-circular form sections hinged together at one edge and each consisting of a series of spaced semi-circular T-shaped bands or rims, combined brace and spacing staves interposed between the outer peripheral flanges of said bands or rims, and exterior longitudinal tie-rods or bolts passed through said staves and said outer peripheral flanges of the bands or rims, substantially as set forth.

4. In a barrel making machine, the combination of a bearing support provided with open semi-circular bearings having grooves, a rotatable sectional barrel form comprising duplicate semi-circular form sections hinged together at one edge and provided with a series of spaced T-shaped bands or rims turning in the bearings of the frame, said form being further provided with a ratchet flange, lock latches adapted to detachably connect the unhinged edges of the sections together, flanged guide plates attached to the bearing support and engaging the opposite ends of the form, and ratchet mechanism engaging with said ratchet flange to rotate the form, substantially as set forth.

5. In a barrel making machine, a stationary supporting frame, a rotatable barrel form mounted on said frame and provided with a series of circular T-shaped metallic bands or rims, the outer peripheral flange of one of which bands or rims is provided with ratchet notches or teeth, a normally spring elevated lever pivotally mounted on said frame, a suitably operated pull rod connected to said lever at an intermediate point, and a spring actuated dog arm pivotally connected to the free end of said lever and having a dog adapted to engage said ratchet notches or teeth, substantially as set forth.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in the presence of two witnesses.

ASHLEY B. MINER.

Witnesses:

H. McCLELLAN,
E. P. MINER.