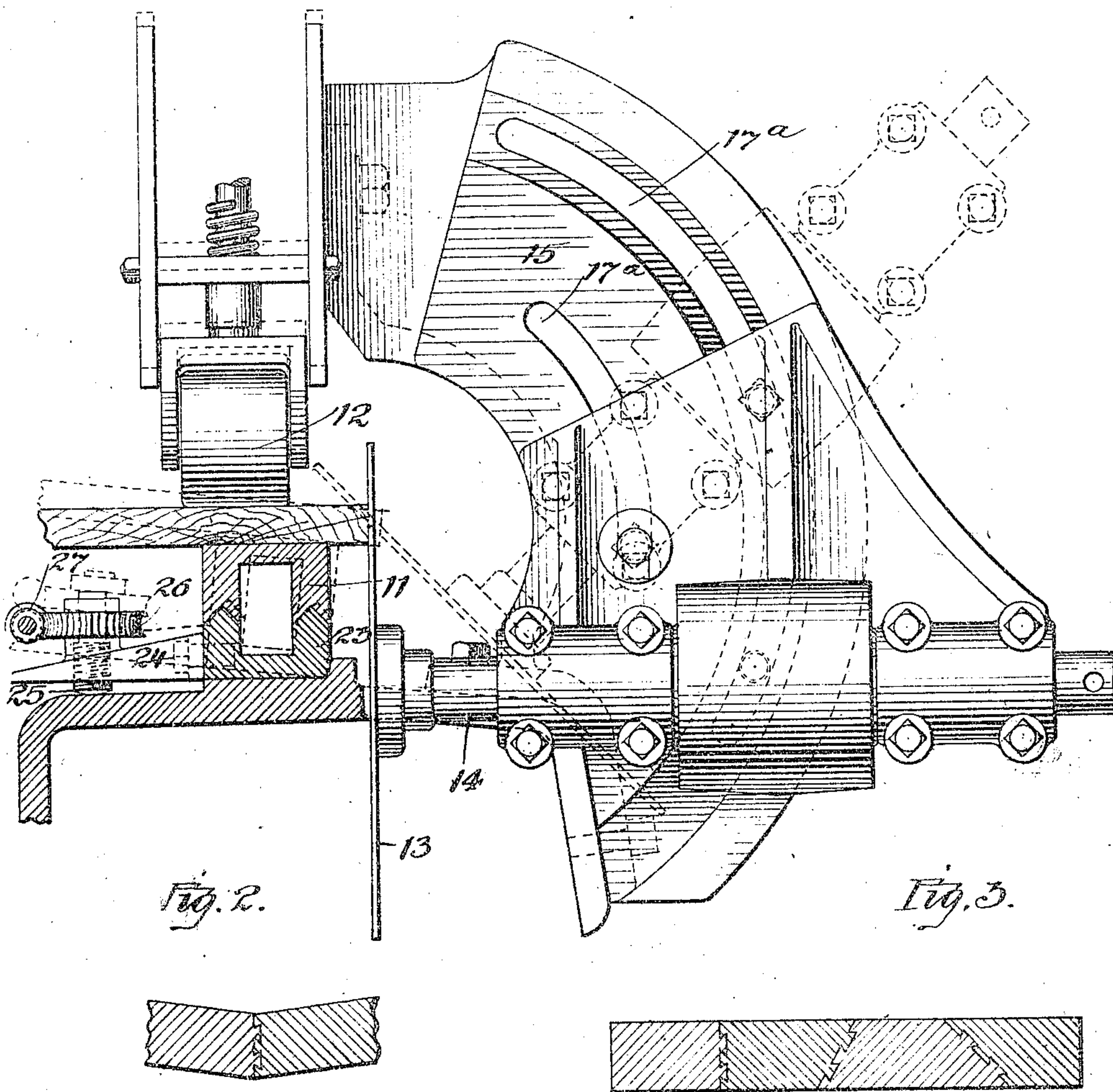


B. A. LINDERMAN.
EDGING ATTACHMENT FOR LUMBER JOINING MACHINES.
APPLICATION FILED JUNE 1, 1909.

944,489.

Patented Dec. 28, 1909.
4 SHEETS—SHEET 1.

Fig. 1.



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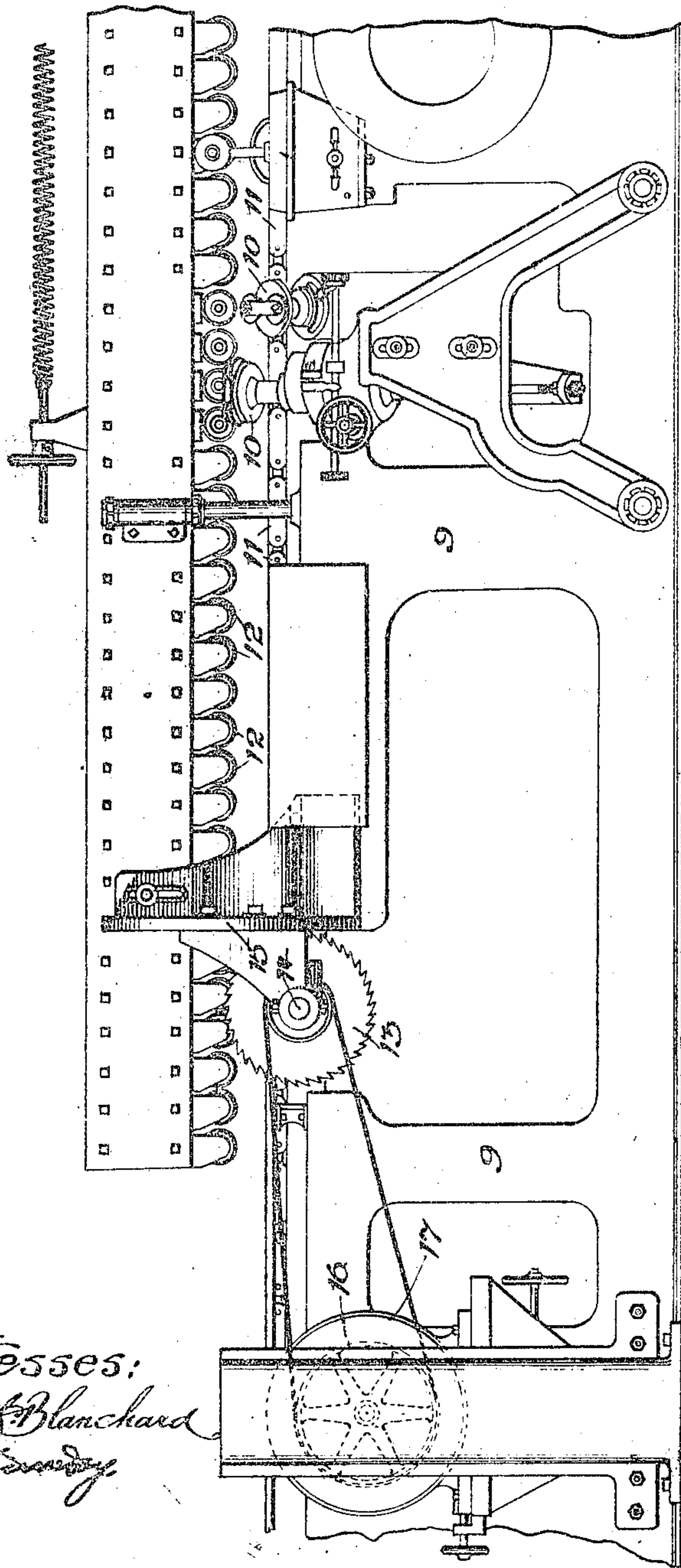
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Fig. 4.



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4 SHEETS—SHEET 3.

Fig. 5.

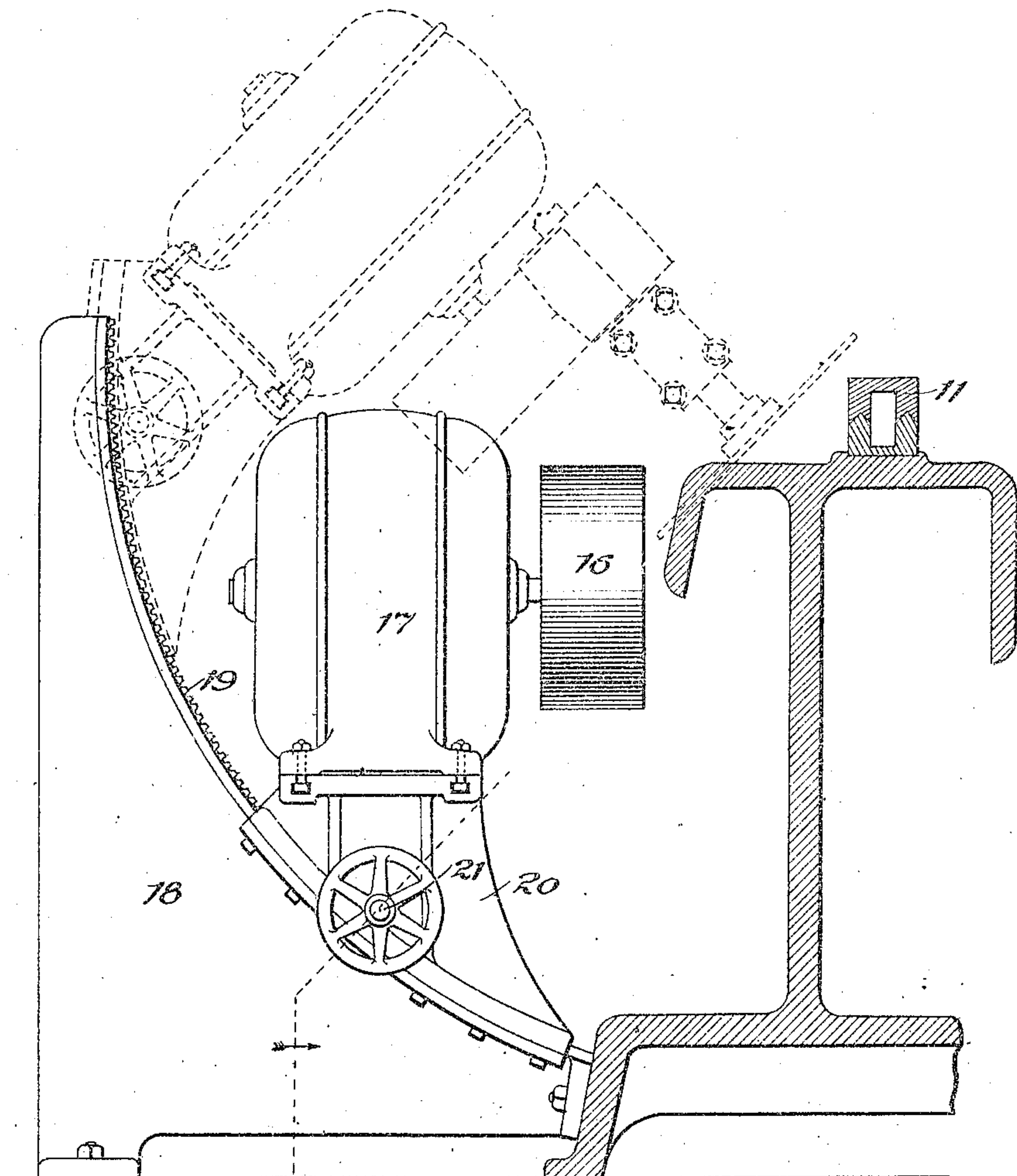
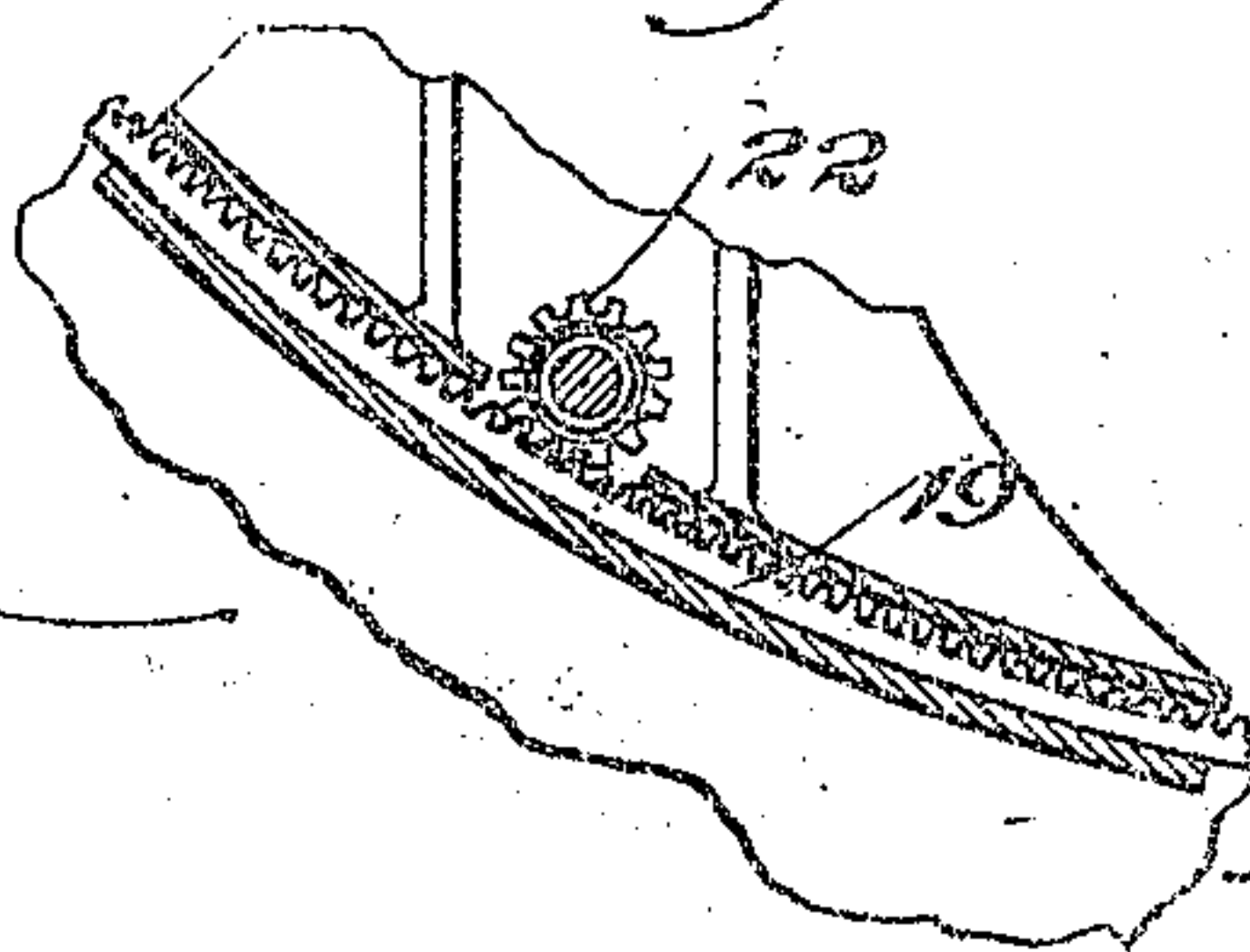


Fig. 6.



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4 SHEETS—SHEET 4.

Fig. 7.

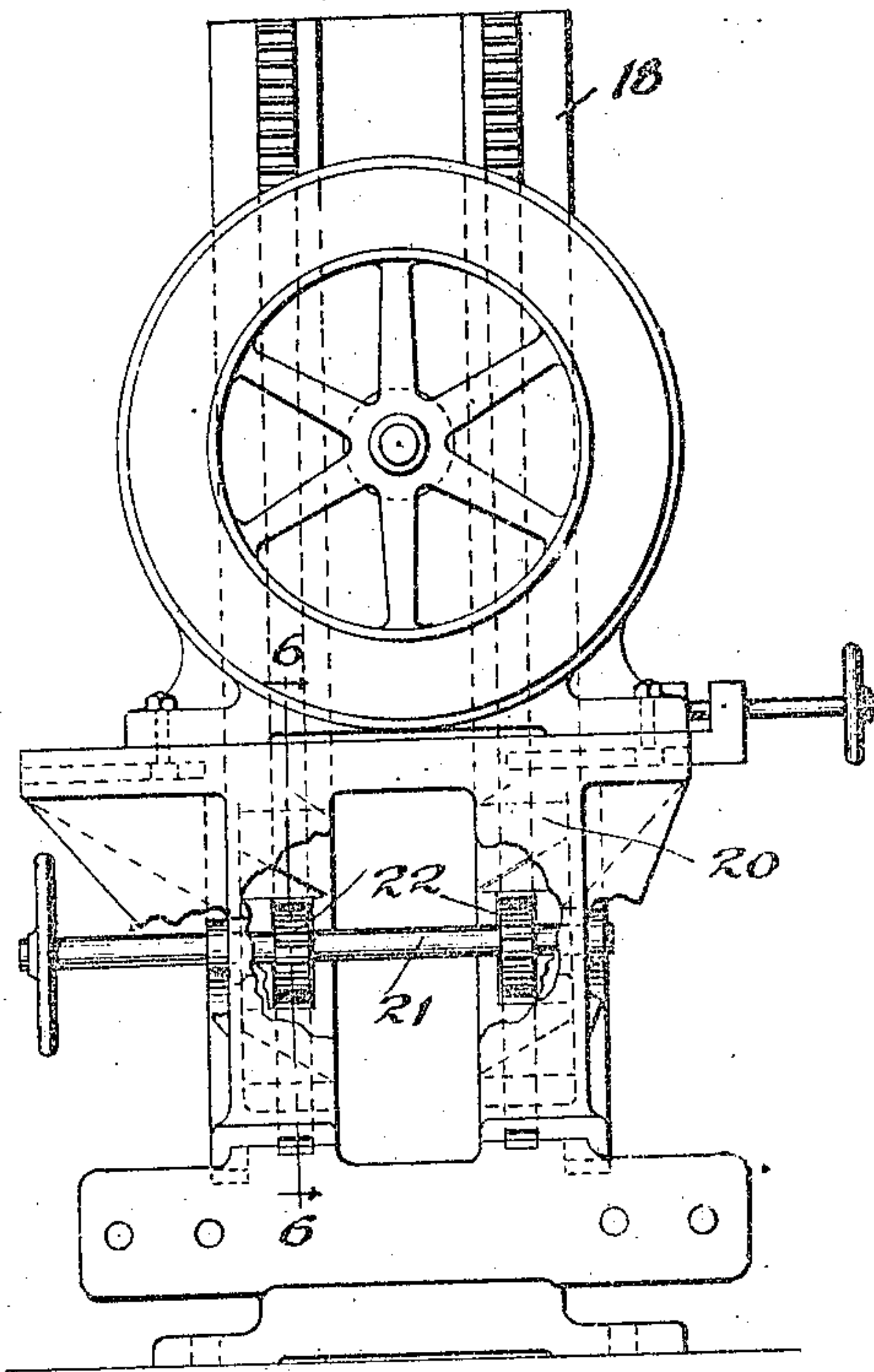
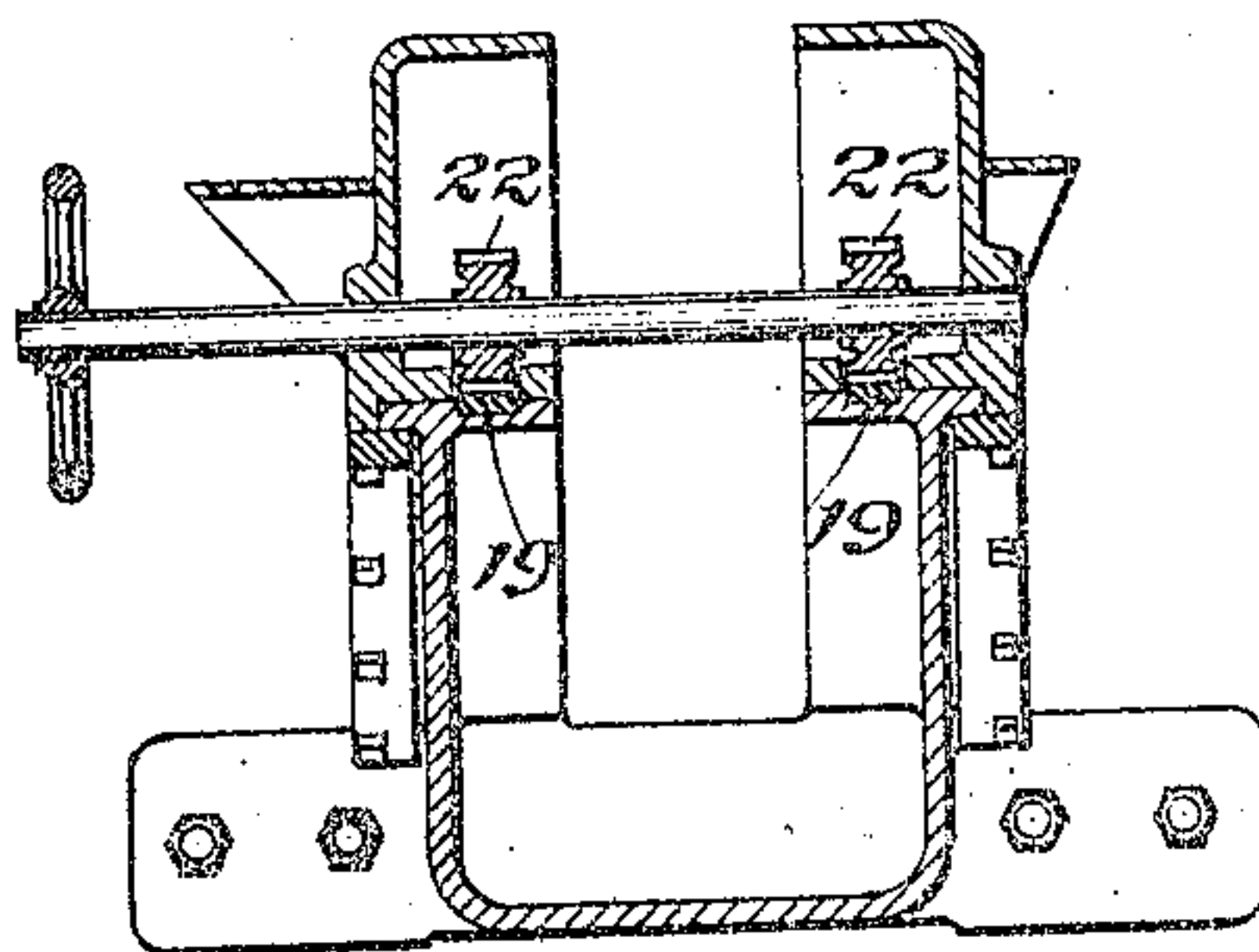


Fig. 8.



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UNITED STATES PATENT OFFICE.

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EDGING ATTACHMENT FOR LUMBER-JOINING MACHINES.

944,489.

Specification of Letters Patent. Patented Dec. 28, 1909.

Application filed June 1, 1909. Serial No. 499,269.

To all whom it may concern:

Be it known that I, BERT A. LINDERMAN, a citizen of the United States, residing in Muskegon, in the county of Muskegon and State of Michigan, have invented a new and useful Improvement in Edging Attachments for Lumber-Joining Machines, of which the following is a specification.

This invention relates to the class of lumber joining machines of which the machine shown in the Patent No. 827,738, granted to Albert T. Linderman on August 7th, 1906, is a type. My endeavor in the invention has been to provide such machines with means whereby greater economy in the lumber used may be gained.

The nature of my improvement is fully disclosed in the description given below, and is illustrated in the accompanying drawing in which latter—

Figure 1 is a side elevation partly in section of my improvement. Figs. 2 and 3 illustrate the work accomplished by the machine. Fig. 4 is a front elevation of a portion of the lumber joining machine having my improvements attached. Fig. 5 is a side elevation of the motor devices for operating the improvement. Fig. 6 is a section on the line C—C of Fig. 7. Fig. 7 is a rear elevation of the motor devices and Fig. 8 is a detail section of the motor supporting and edging devices.

It has been customary heretofore to edge the stock joined in these machines by cutting the edges at right angles to the flat sides. It frequently happens, however, that in cutting out the stock, especially in the pieces which come from the outside of the log, that by edging them at other angles than the right angle, a saving of the stock can be effected, the inclining of the edging cut leaving a portion of the good stock adhering to the main body. For this purpose, I add my present improvements which will now be described.

In the drawing, 9 represents the frame of a lumber joining machine, preferably that shown in the said Linderman patent.

10—10 are the cutters for forming the dove-tails on the edge of the stock and 11—11 is one of the carriers for conveying the stock to the dovetailers and 12—12 are the pressure rollers for holding the stock down upon the carrier while it is being dove-tailed and fed through the machine.

In order to enable the complete prepara-

tion of the stock for the dovetailing which is performed in the machine, I now provide the machine with an edging saw 13 mounted upon an arbor 14 and supported by a bracket 15 projecting from the side of the machine and located where the saw will act upon the stock before it reaches the dovetailing devices, but while it is being carried by the same means which carry it to the latter. The saw is driven by a belt from the pulley 16 actuated by an electric motor 17. This edger may be used to give the edge of the stock a right angle cut, but it is also capable of use to give the edge any desired bevel or incline. As will be noticed from the specimens at Figs. 2 and 3 of the drawing, the angles of the cuts may vary quite widely, and hence the bracket 15 is provided with arc slots 17^a through which the bearings of the saw arbor may be secured and adjusted. They permit the inclining of the saw, as shown in broken lines in Fig. 1, thus enabling the cutting of the edge at such an angle as will save all the good stock embodied in the lumber. Inasmuch as the saw is capable of being tipped from the vertical in this manner, it is necessary that the motor be correspondingly tipped or inclined, and hence I mount the motor on the curved side of a standard 18, the standard being provided with racks 19 and the base 20 of the motor having a cross shaft 21 upon which are mounted pinions 22 adapted to engage said racks. By moving the base 20 up or down as needed, the motor can be changed from the position given in Fig. 5 to the one given in broken lines in the same figure or to any intermediate position, so that there will be no difficulty in keeping the belt which the saw is operated, in action. After the stuff has been edged, it proceeds on its way, and the dovetails are cut in it so that they can be joined with other pieces edged and dovetailed at the other side of the machine.

When the machine is working bark edge taper stock to be made into flat composite boards, such as are shown in Fig. 3, the edger saw and the dovetail cutters at one end of the machine are inclined in one direction from the perpendicular and the edger saw and dovetail cutters at the other end of the machine are inclined in the opposite direction, the dovetail cutters being adjustable as to inclination in the customary way to the extent necessary for this purpose. When

making school seats and backs and similar work in which the stuff is usually edged vertically, I tilt the endless beds transversely to enable the dovetail cutters to give the edges an inclined face at the same time that they cut the dovetails, and this latter operation I accomplish by placing under the track 23 upon which the endless bed travels, lifting devices 24 extending under the track and projecting outward at one side thereof and in such side projection I place vertical screws 25 bearing upon the frame of the machine. These devices, which I term the lifters, should be employed in such number as may be needed to keep the track inclined until the stock has been joined together, and in order that all the lifters may be operated simultaneously and to the same extent, I provide each of the screws with worm gears 26 and operate them in unison by a worm 27 extending along the series. This operation will be understood from the broken lines in Fig. 1.

I claim:—

25 1. The lumber joining machine embodying an edging saw mounted so as to be adjustable either to a vertical position, or to a position inclined to the vertical, means for

cutting dovetails in the longitudinal edges of the stock which are adapted to be inclined correspondingly with the inclination given the edging saw, and means for feeding the stock to the edging saw and the dovetail cutters. 30

2. The combination in a lumber joining machine of a lumber carrier, an edger mounted so as to be adjustable to an inclined position, and dovetail cutters, the carrier being also adjustable to an incline corresponding to that of the edger. 35 40

3. The combination in a lumber joining machine, of a lumber carrier, an edger mounted so as to be adjustable to a position inclined from the vertical and a motor belted to the edger and adjustable correspondingly with the edger. 45

4. The combination in an automatic lumber joining machine, of an endless carrier, and dovetail cutters acting on the edge of the stock and adjustable as to inclination, the carrier being also adapted to be inclined while presenting the stock to the cutters. 50

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