

1,033,206.

C. R. SPEIGHT.
LOG TURNING MACHINE.
APPLICATION FILED MAY 26, 1911.

Patented July 23, 1912.

2 SHEETS-SHEET 1.

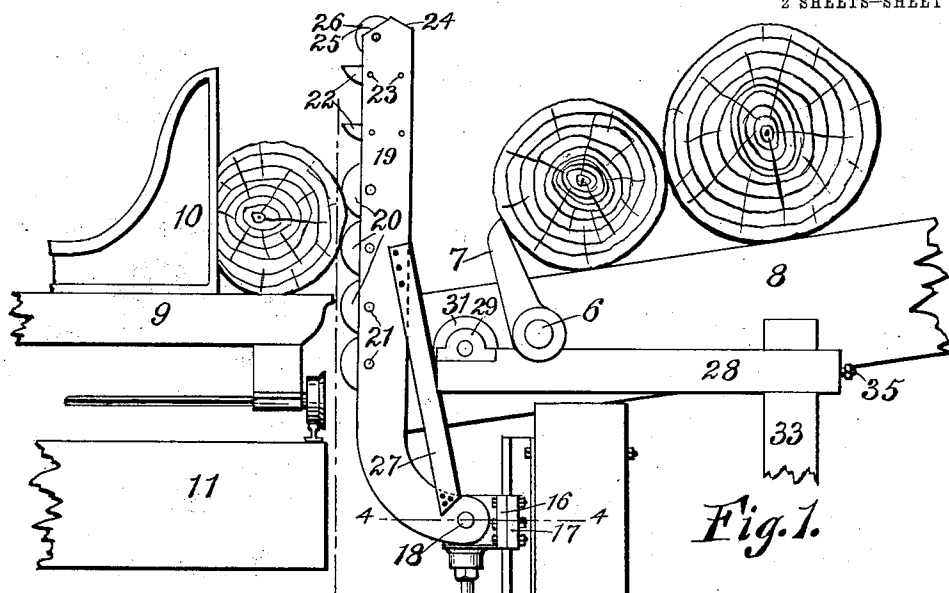


Fig. 1.

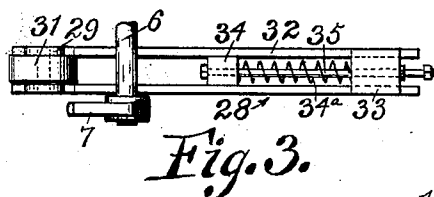


Fig. 3.

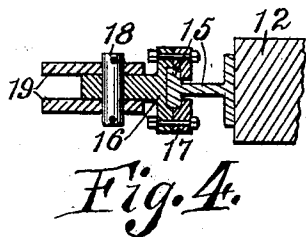


Fig. 4.

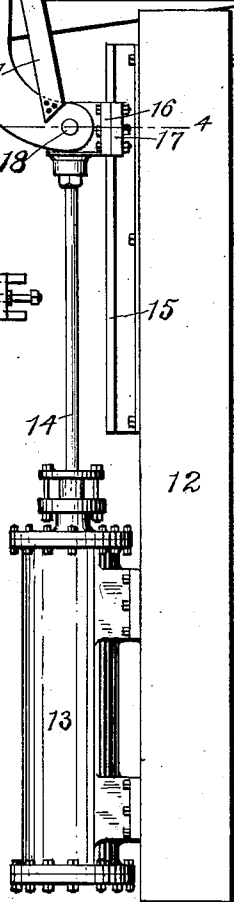


Fig. 2.

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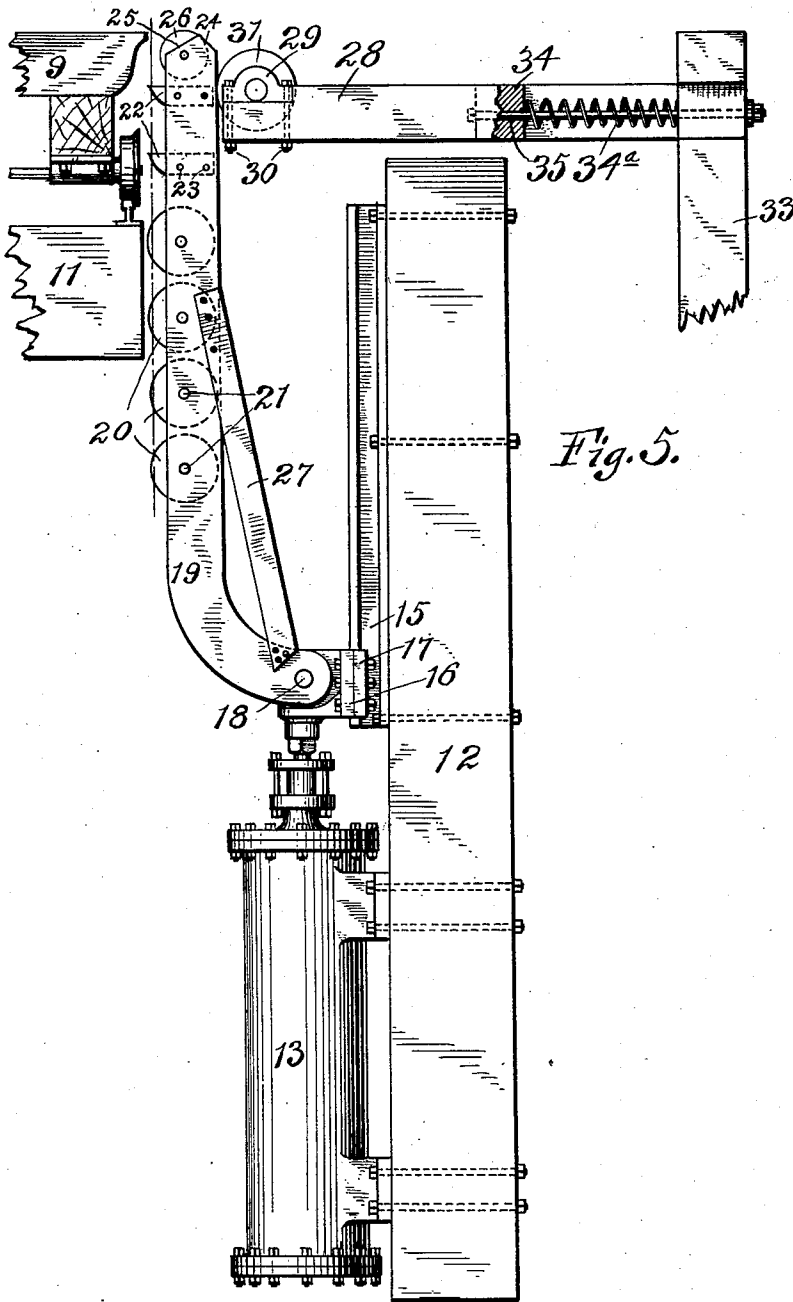


Fig. 5.

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UNITED STATES PATENT OFFICE.

CRITTENDEN R. SPEIGHT, OF BURGAW, NORTH CAROLINA.

LOG-TURNING MACHINE.

1,033,206.

Specification of Letters Patent.

Patented July 23, 1912.

Application filed May 26, 1911. Serial No. 629,706.

To all whom it may concern:

Be it known that I, CRITTENDEN R. SPEIGHT, a citizen of the United States of America, and resident of Burgaw, in the county of Pender and State of North Carolina, have invented certain new and useful Improvements in Log-Turning Machines, of which the following is a specification.

This invention relates to an attachment designed for use in turning logs on carriages of saw mills.

An object of this invention is to provide a log turning mechanism which may be utilized in connection with small mills or those having light log carriages and designed to operate in such a manner as to preclude injury to any portion of the mill, due to the movement of the logs.

It is well recognized in practice that two cylinder log turning machines cause severe shock to the carriage and other portions of a saw mill and it is the purpose of the inventor, therefore, to obviate such shock by the production of a log turning apparatus, preferably having one cylinder and parts associated therewith which will prove as effective as the ordinary two cylinder log turner without communicating the usual vibration and severe shock of the two cylinder type.

A still further object of this invention is to provide a log turning apparatus which will prove effective in changing the position of logs, the same also containing novel means for crowding or pressing the log into engagement with the knee of the carriage, a yielding pressure device being associated with the log turner whereby, regardless of the size of the log within predetermined bounds, the pressure on the log may be regulated by the action of the apparatus.

With the foregoing and other objects in view, the invention consists in the details of construction, and in the arrangement and combination of parts to be hereinafter more fully set forth and claimed.

In describing the invention in detail, reference will be had to the accompanying drawings forming part of this specification wherein like characters denote corresponding parts in the several views, and in which—

Figure 1 illustrates a view in elevation of a fragment of a frame and track for a carrier and a fragment of a carriage and the log turning and pressing mechanism in elevation; Fig. 2 illustrates a view in ele-

vation of the edge of the log engaging and pressing member; Fig. 3 illustrates a plan view of the tension device for the log turning and pressing member; Fig. 4 illustrates an enlarged sectional view on the line 4—4 of Fig. 1; and Fig. 5 illustrates a view in elevation, partly in section of the log turning mechanism shown in Fig. 1 in a different position of adjustment and with parts of the mechanism omitted.

In these drawings I have shown a kicker shaft 6, a log stop 7 and an inclined way 8 for the logs in conjunction with which the log stop operates but as these form no part of the present invention, they will not be described in detail.

The carriage 9, knee 10 and support 11 for the carriage likewise are not parts of the present invention and it need only be said that any appropriate mechanism or carriage may be employed, in conjunction with which the log turning apparatus may be installed.

One form of the log turning apparatus, forming the subject matter of the invention, is illustrated in operative relation to the carriage, log trip, etc., and the said embodiment comprises a standard or post 12 to which a cylinder 13 is anchored, preferably in a vertical position so that the piston rod 14 associated therewith may be projected upwardly and allowed to descend with relation to the carriage. The post or standard 12 is further provided with a guide rail 15 on which the cross head 16 is slidable, the said cross head being secured on the guide rail by the plate 17. The cross head is provided with a pin 18 forming a pivot for the arms 19 which are spaced apart a distance equal to the width of the cross head but the space between the arms 19 is immaterial so long as it provides space for accommodating the receiving and anti-friction rollers 20 which are journaled on pins 21 supported by the arms. The arms 19 are further provided with spurs or teeth 22 near their upper ends, the said spurs or teeth being inserted between the arms and being secured thereto by fastenings 23 of any appropriate type, here shown in the form of pins which extend through the arms. The upper ends of the arms 19 are oppositely beveled to form the inclined surfaces 24 and 25 designed to prevent logs from lodging on the upper ends of said arms, and as a further guard against said lodgment of the logs on

the ends of the arms, a roller 26 is rotatably mounted between the upper ends of the said arms, the said roller being in such position as to have a tendency to throw the logs toward the carriage when, during its upward movement, the said wheel contacts with said log. The arms are further provided with a brace 27 which constitutes a cam, adapted to contact a plunger, to be presently explained, the said brace having its ends attached to the arms 19.

From what has been stated heretofore and by referring to the drawing, it will be observed that the piston rod 14 will effect a reciprocation of the cross head and such reciprocation will communicate motion to the arms 19 thus moving the said arms at right angles to the length of the carriage or vertically and with the teeth 22 will so engage a log on the carriage as to partially rotate or turn the same a predetermined distance and thereafter the antifriction rollers will ride over the surface of the log and, under the influence of the pressing mechanism, to be presently explained, the log will be forced into engagement with the knee 10.

The log forcing or tensioning device consists of a plunger 28 having journal bearings 29 on its ends secured thereto in any appropriate manner, here shown as through the medium of the bolts 30, the said journal bearings supporting a roller 31, the periphery of which extends or projects beyond the end of the plunger and into engagement with the arms 19 when the said arms are in their lowermost position but into engagement with the brace 27 as the arms are elevated. In describing the brace 27, it was not stated that it was in an inclined position, but obviously this is the position of the brace as will be found by reference to the drawing so that the edge thereof presents a camming surface which is engaged by the roller 31 and therefore as the arms are elevated, the roller acting on the brace serves to press the arms toward the carriage. In order to exert pressure on the plunger 28, the said plunger, which is here shown as comprising two parallel plates 32, guided by, and slidable with relation to, the upright or support 33

and having a block 34 therebetween and secured thereto, is provided with a spring 34^a for holding the said plunger normally projected, the said spring being interposed between the block 34 and the support or upright 33, and the said spring 34^a further encircling a rod 35 which extends through the block 34 and is slidable in the support or upright 33. As the arms 19 and the brace attached thereto are being elevated, the said brace engages the roller 31 and the pressure of the spring 34^a will force the plunger so that it will exert pressure on the brace and force the arms 19 toward the carriage as stated, such pressure increasing as the said arms are elevated so that by operation of the arms proper, pressure can be brought on the arms to hold the log in engagement with the knee.

I claim—

1. In a log turning and pressing device, arms having teeth adapted to engage a log, means for raising the arms, a brace having a cam surface thereon, the cam surface being disposed on the opposite side of the arms from the teeth, a yieldable plunger in the path of travel of the cam surface and adapted to contact therewith for pressing the arms toward the log.

2. In a log turning and pressing device, arms spaced apart, teeth mounted between the said arms, a brace on the arms having a cam surface, a means for exerting pressure on the cam surface for forcing the arms toward a log, and means for reciprocating the arms.

3. In a log turner, a cylinder, a piston therein, a guideway, a cross head on the guide way actuated by the piston, arms spaced apart and secured to the cross head, teeth mounted between the said arms, a cam connected with the arms, and a spring pressed member for contacting the brace and forcing the arms toward a log.

In testimony whereof, I affix my signature in the presence of two witnesses.

CRITTENDEN R. SPEIGHT.

Witnesses:

H. P. WOODSON,
W. A. STILLEY.