No. 720,815. PATENTED FEB. 17, 1903.

W. E. JONES.

SAWMILL.

APPLICATION FILED SEPT. 30, 1902.

NO MODEL. 2 SHEETS—SHEET 1.

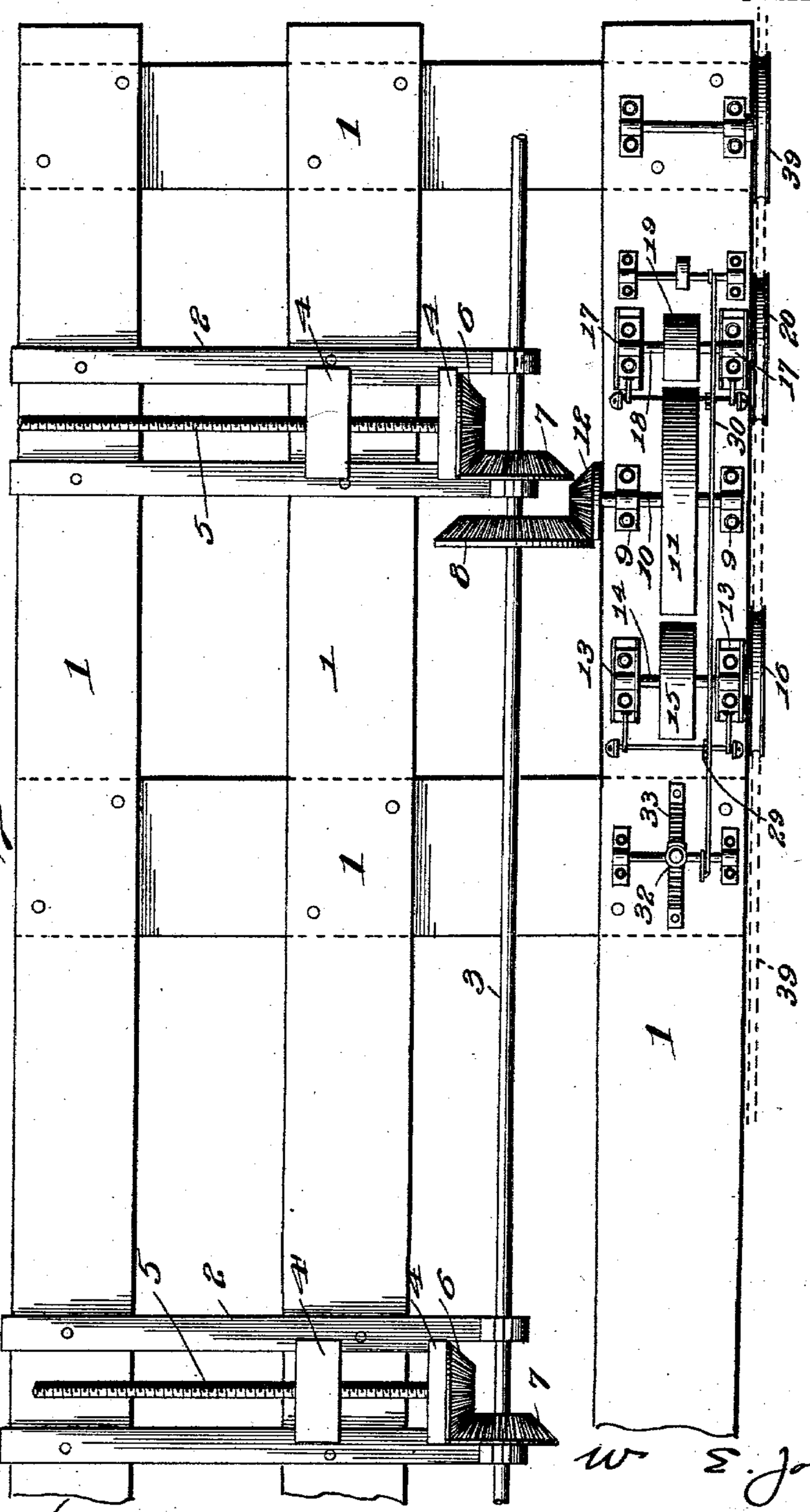

Fig. 1.

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NO MODEL. 2 SHEETS—SHEET 2.

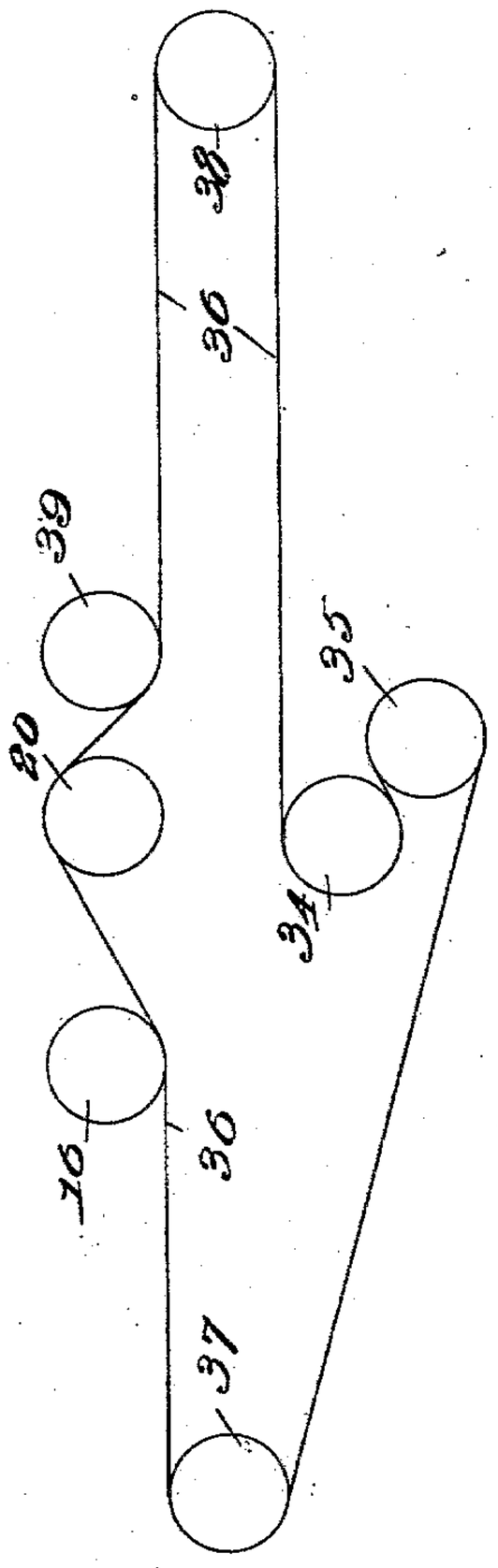


Fig. 3.

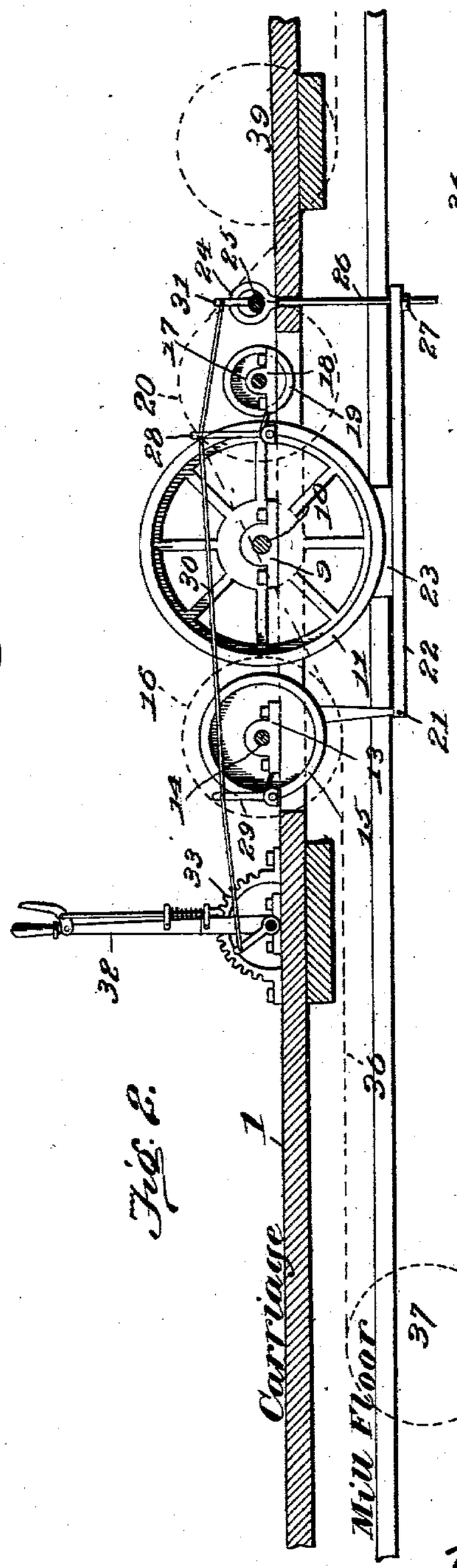
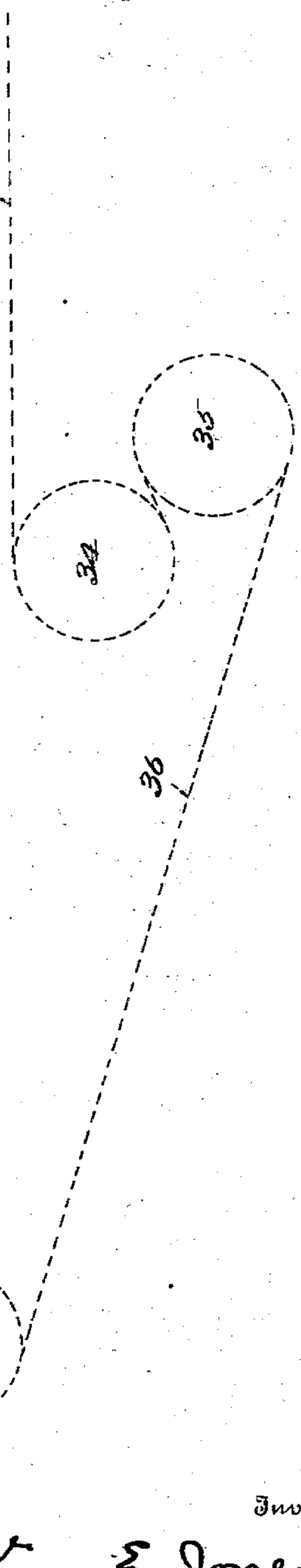


Fig. 2.



Witnesses

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UNITED STATES PATENT OFFICE.

WILLARD E. JONES, OF CLEARLAKE, WASHINGTON.

SAWMILL.

SPECIFICATION forming part of Letters Patent No. 720,815, dated February 17, 1903.

Application filed September 30, 1902. Serial No. 125,360. (No model.)

To all whom it may concern:

Be it known that I, WILLARD E. JONES, a citizen of the United States, residing at Clearlake, county of Skagit, and State of Washington, have invented certain new and useful Improvements in Sawmills, of which the following is a specification.

My invention relates to sawmills.

The object of the invention is the provision of an improved, novel, and more efficient sawmill, but more particularly to provide novel set-works wherein provision will be made for rapid receding of the knees and firm locking thereof where adjusted and to provide a novel and improved brake or lock which will hold the friction-wheel, but which will be released on the operation of the lever to cause the feeding of the knees on the head-blocks.

To accomplish the foregoing and other objects not specifically mentioned, I provide certain improved mechanisms fully set forth hereinafter and recited in the appended claims.

In the accompanying drawings, Figure 1 is a plan; Fig. 2, a side elevation, dotted lines representing the driving-rope pulleys; and Fig. 3, a diagrammatic view of the sheaves and rope.

The numeral 1 designates the carriage, having head-blocks 2, and 3 is the line-shaft. The knees 4 are advanced by the screws 5, having gears 6 meshing with gears 7 on the line-shaft, and on the line-shaft is the gear 8.

Journaled in stationary boxes 9 is the shaft 10 of the friction-wheel 11, which has pinion 12 meshing with gear 8 and through which motion is imparted to the knees to advance and recede the same.

Journaled in sliding boxes 13 is a shaft 14, carrying friction-wheel 15 and rope-pulley 16. Journaled in sliding boxes 17 is shaft 18, carrying friction-wheel 19, considerably smaller than wheel 15, and rope-pulley 20. The friction-wheels 15 and 19 are adapted to be made to bear against the friction-wheel 11 at different times, the wheel 19 being for advancing the knees and the wheel 15 for receding them, and by reason of the wheel 15 being considerably larger than the wheel 19 the knees can be receded much faster than advanced, which is advantageous.

Pivoted at 21 is a brake-beam 22, having a shoe 23, adapted to bear against the face of the wheel 11, and 24 is an eccentric on a shaft 25, and said eccentric is connected by rod 26 to the beam 22 by the adjustable connection 27.

For moving the sliding boxes 13 and 17 I provide pivoted levers 28 and 29, connected by rod 30, which also connects to lever 31 on the eccentric-shaft, and 32 is an ordinary type of hand-lever for operating the rod 30 and which is locked by notched segment 33.

The driving-rope pulleys are shown at 34 and 35, over which passes the rope 36, said rope passing over lead-pulleys 37 and 38 and under the rope-pulley 16 and over rope-pulley 20 and under an idler rope-pulley 39.

The knees and log will remain firm during the sawing operation, because the brake-beam 22 is normally locked against the brake-wheel 11, and the wheels 15 and 19 are both out of contact with the wheel 11. When it is desired to advance the knees on the head-block, the lever 32 is manipulated to shift the sliding boxes and bring the friction-wheel 19 into contact with wheel 11, whereupon wheel 11 will be turned and the knees advanced. Moving the lever in the opposite direction brings the wheel 15 into contact with wheel 11 and causes the knees to recede. Movement of the lever in either direction from its normal or neutral point will cause the turning of the eccentric and release of the brake-knee from wheel 11; but when the lever is in its upright position the brake is applied to the wheel 11. Thus the sawing of planks of equal thickness is insured at all times, as there can be no creeping of the knees and log.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. The combination with the knees of a sawmill, of normally inoperative means for advancing and receding said knees, independent devices adapted to independently engage and operate said normally inoperative knees-advancing means, a brake or lock for said mechanisms, and means for releasing said brake or lock on bringing either the advancing or receding devices into engagement with the knees advancing and receding means.

2. The combination with the knees of a sawmill, a wheel for advancing and reced-

ing said knees, and advancing and receding wheels adapted to independently engage said wheel, of a brake or lock for said wheel, and means for releasing said brake or lock on bringing either of said advancing or receding wheels into engagement with the wheel which advances or recedes the knees.

3. The combination with the knees of a sawmill, of a wheel for advancing and receding said knees, independent advancing and receding wheels to engage with the wheel aforesaid, independently of each other, means for shifting said advancing and receding wheels simultaneously so that when one of them is brought into engagement with the wheel for setting the knees, the other is thrown out of engagement therewith, and a brake or lock actuated by said means and securing the knees-advancing wheel when the other wheels are out of engagement therewith and automatically unlocked or released on shifting said wheels.

4. The combination with the knees of a sawmill, of a wheel for advancing and receding said knees, independent wheels adapted to engage therewith at different times, one for advancing the knees and the other for receding the knees, an eccentric, a brake-beam governed by the eccentric and adapted to lock the knees-operating wheel, and means for shifting the advancing and receding wheels simultaneously to bring one or the other into engagement with the knees-operating wheel, said means also operating the eccentric to cause disengagement or release of the brake on shifting the said wheels.

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

WILLARD E. JONES.

Witnesses:
WILLIAM A. BODDY,
CHAS. E. LIND.