No. 832,273. PATENTED OCT. 2, 1906.

E. PERRON.

SAWING MACHINE.

APPLICATION FILED NOV. 1, 1905.

3 SHEETS—SHEET 1.

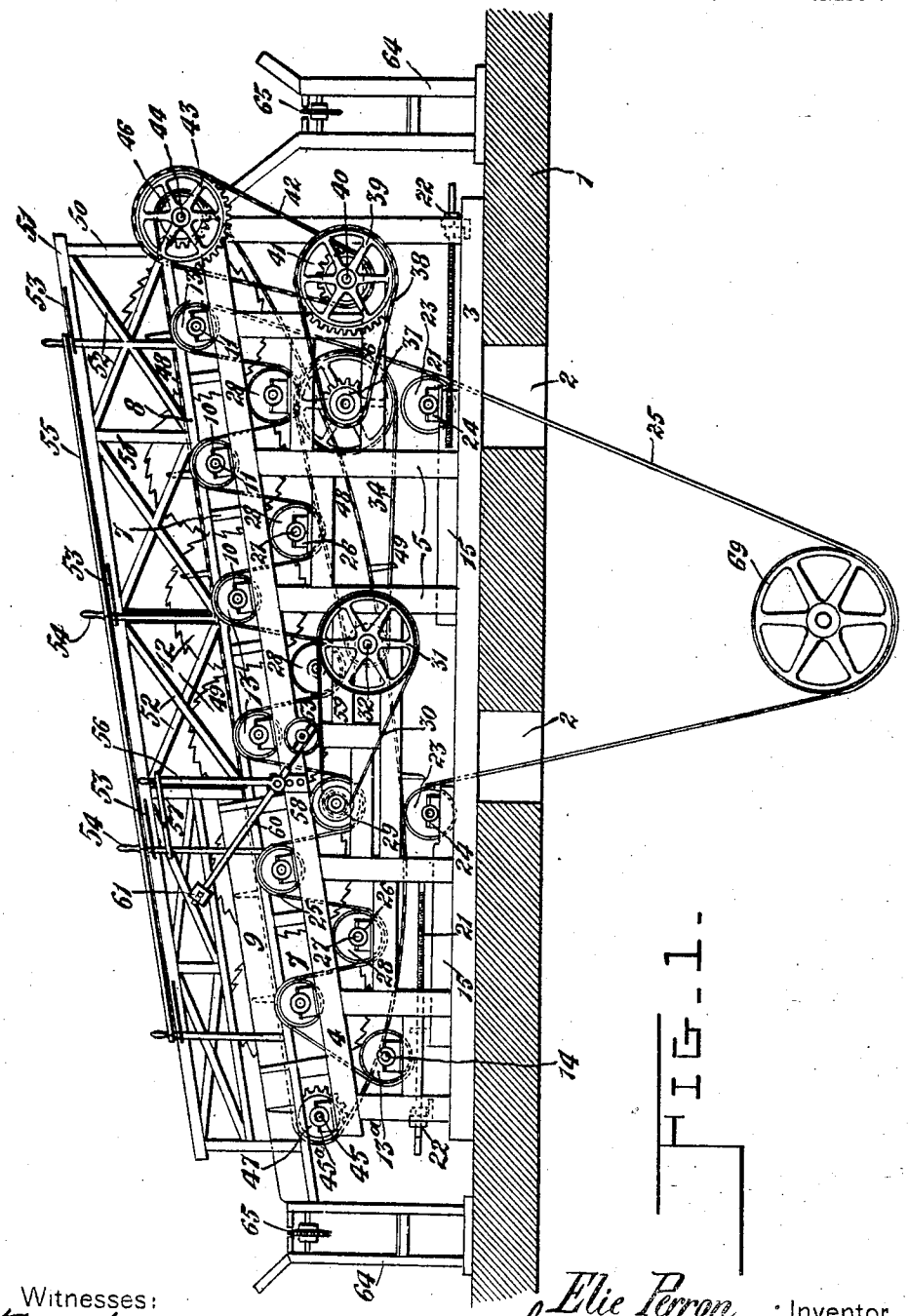

FIG. 1.

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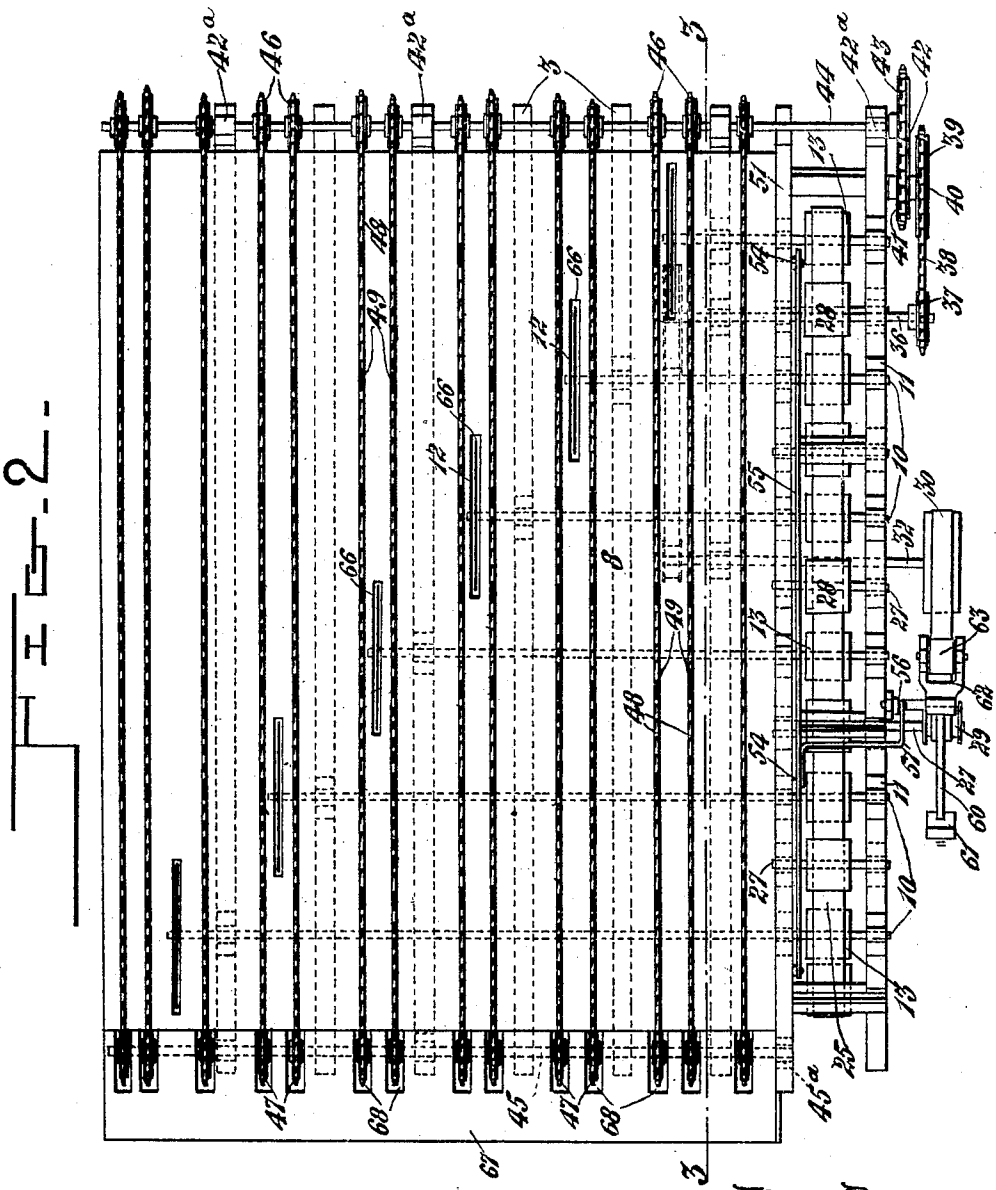
3 SHEETS—SHEET 2.

FIG. 2.



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3 SHEETS—SHEET 3.

Fig. 3.

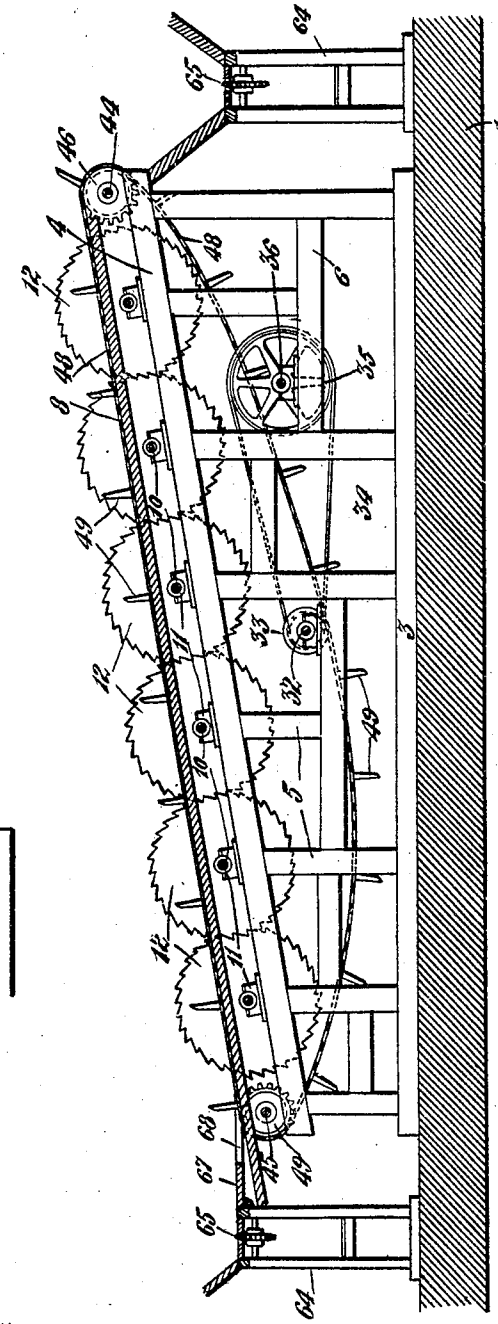
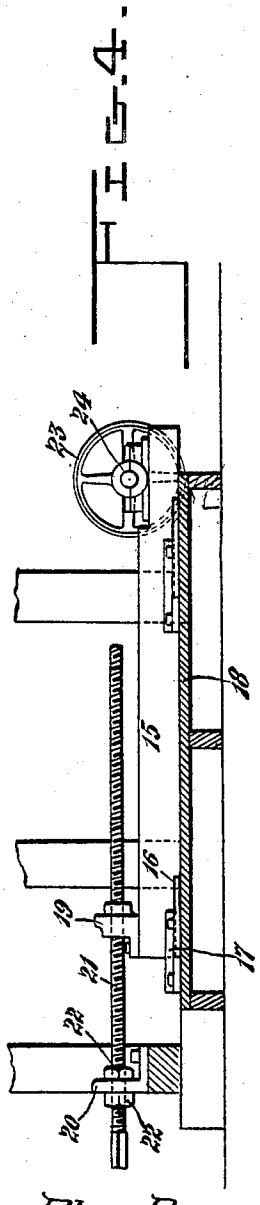


Fig. 4.



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UNITED STATES PATENT OFFICE.

ELIE PERRON, OF CHICOUTIMI BASIN, QUEBEC, CANADA, ASSIGNOR OF ONE-HALF TO JOSEPH GAGNON, OF CHICOUTIMI, CANADA.

SAWING-MACHINE.

No. 832,273. Specification of Letters Patent. Patented Oct. 2, 1906.

Application filed November 1, 1905. Serial No. 285,390.

To all whom it may concern:

Be it known that I, ELIE PERRON, a subject of the King of Great Britain, residing at Chicoutimi Basin, county of Chicoutimi, in the Province of Quebec, Canada, have invented certain new and useful Improvements in Sawing-Machines; and I do hereby declare that the following is a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to gang-saws, particularly adapted for sawing billets for pulp manufacture.

The object of my invention is to provide means for holding the log against successive saws to cut the log into billets and to transport the billets to a conveyer at the end of the saw-table.

A further object is to provide means operable at a plurality of points at the side of the table, whereby the holding and conveying mechanism may be stopped or the speed thereof increased or diminished.

A further object is to provide means for tightening the main belt of the apparatus without stopping the sawing operation; and my invention consists of the construction, combination, and arrangements of parts, as herein illustrated, described, and claimed.

In the accompanying drawings, forming part of this application, I have illustrated one form of embodiment of my invention, in which drawings similar reference characters designate corresponding parts, and in which—

Figure 1 is a side elevation. Fig. 2 is a plan. Fig. 3 is a vertical section on line 3 3 of Fig. 2. Fig. 4 is a fragmentary detail, partly in vertical section and partly in side elevation, illustrating the means for tightening the main belt of the apparatus.

Referring to the drawings, 1 designates the floor or other supporting medium, which is provided with openings 2, through which the main driving-belt of the apparatus may pass. Supported on the supporting medium is a plurality of base-plates 3, over each of which is disposed a top plate 4, supported by vertical standards 5 of different lengths, their lower ends resting on the base-plates 3. The vertical standards 5 are connected by cross-braces 6. Disposed on the top plates 4 are short standards 7, adapted to support the saw-table 8, which, as shown, is inclined and is provided at its lower end with the log-guides 9. Disposed transversely of the saw-table 8 is a plurality of saw-shafts 10, the ends of which are carried in bearings 11, disposed on the top plates 4, and each of the shafts is provided with a saw 12, said saws being staggered in relation to each other as viewed from two sides. Disposed on the shafts 10 are pulleys 13, and disposed on one of the cross-braces 6 adjacent the lower end of the saw-table is a shaft 14, also carrying a pulley 13^a. Disposed at either end of the structure described are the slidable blocks 15, provided with flanges 16, working in guides 17, secured on platforms 18, which are disposed adjacent the base-plates 3. Secured on the slidable blocks 15 are interiorly-screw-threaded brackets 19, and disposed adjacent the standards 5 in alinement with the slidable blocks 15 are interiorly-screw-threaded brackets 20. Disposed through the brackets 19 and 20 are the screw-threaded members 21, by means of which the slidable blocks 15 may be moved, suitable check-nuts 22 being disposed on the screw-threaded member 21 on opposite sides of the interiorly-screw-threaded bracket 20, by means of which the blocks 15 may be locked in position. Disposed adjacent the ends of the slidable blocks 15 are pulleys 23, carried in bearings 24. Running over the pulleys 13 and one of the pulleys 23 and under the pulleys 28 13^a and one of the pulleys 23 is a main driving-belt 25, adapted to rotate all of the shafts 10 at the same time and from the same source of power.

Disposed on some of the cross-braces 6 are bearings 26, in which are disposed stub-shafts 27, carrying on their outer ends the pulleys 28. On the outer end of one of the stub-shafts 27 is a pulley 29, over which is run a belt 30, adapted to actuate a pulley 31, secured on a shaft 32, carried on one of the cross-braces 6. Disposed on the shaft 32 is a pulley 33, over which is run a belt 34, connecting with and adapted to actuate a pulley 35 on a shaft 36. Secured on the shaft 36 is a sprocket-wheel 37, over which is run a chain 38, connected to and adapted to actuate a sprocket-wheel 39 on a shaft 40, supported by one of the cross-braces 6. Disposed on the shaft 40 is a sprocket-wheel 41, over which is run a chain 42, connecting with and adapted to actuate a sprocket-wheel 43 on a shaft 44, extending across the entire

width of the saw-table and supported by bearings 42[a], which bearings are carried on the upper faces of the upper plates 4. A corresponding shaft 45 is disposed in bearings 45[a] at the opposite end of the saw-table, said bearings being also carried by the top plates 4. Disposed on the shaft 44 is a plurality of sprocket-wheels 46, and disposed on the shaft 45 is a plurality of sprocket-wheels 47 in alinement with the sprocket-wheels 46. Disposed over and connecting the sprocket-wheels 46 and 47 in pairs are chains 48, provided with the projecting fingers 49, which extend upwardly from the saw-table 8, the said chain running on the upper surface of the table.

Disposed on the saw-table at one side thereof is a plurality of standards 50, on which is disposed a top rail 51, said standards being connected by the braces 52. Disposed on the top rail 51 is a plurality of guides 53, adapted to guide the upper ends of levers 54, which are pivoted at their lower ends to the saw-table 8. Secured to the levers 51 adjacent their upper ends is a connecting-bar 55. Disposed on one side of the saw-table adjacent the levers 54 is a handle 56, which is connected to one of the levers 54 by a link 57. The lower end of the handle 56 is carried on a bushing 58, which bushing is pivotally supported by a bracket 59, which in turn is secured to the top plate 4. Disposed on the bushing 58 is an arm 60, provided with a weight 61 on its upper end and having its lower end bifurcated, at at 62, Fig. 2. Carried by the bifurcated end 62 of the arm 60 is a pulley, 63 adapted to bear on the belt 30.

Disposed on the supporting medium 1 at the opposite ends of the base-plates 3 are vertical standards 64, adapted to support the conveyers 65, which run transversely to the length of the saw-table 8. The saw-table 8 is provided with a plurality of slots 66, through which are disposed the saws 12. The conveyer 65 adjacent the lower end of the saw-table is provided with an extension or table 67 having therein slots 68, through which run the conveyer-chains 48. The belt 25 is run by a suitable driving-pulley 69, which may be actuated from any suitable source of power.

In the operation of my invention the logs are brought to the saw-table at its lower end by a conveyer 65 and are carried from the lower end of the table upward by the fingers 49 on the conveyer-chains 48. The force of gravity retains the logs on the table and they are carried against the saws 12 and cut into suitable lengths and are deposited on the conveyer 65 at the upper end of the apparatus. The weight 61 on the arm 60 would normally actuate the pulley 63 away from the belt 30, so that the conveyer-chains 48 would not be actuated from the pulley 29, but by means of the handle 56 and the levers 54. The pulley 63 may be maintained on the belt 30, and the conveyer-chains 48 kept moving. In case of accident in order to stop the machine quickly the levers 54 are placed along the side of the apparatus at different intervals, so that the conveyer-chains may be readily stopped. In order to provide for tightening the belt 25 for the purpose of increasing the speed of rotation of the saws 12 and increasing the speed of movement of the conveyer-chains 48, I have provided the slidable blocks 15 with means for sliding and locking the same in any desired position, so that this adjustment may be secured without stopping the apparatus.

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

In a device of the character described, the combination comprising a supporting-frame, a plurality of shafts supported by the frame, a saw on each of the shafts, a pulley on each of the shafts, a plurality of other pulleys supported by the said frame, a belt adapted to drive all of said pulleys, a second pulley supported by said shafts, a belt connecting one of said former pulleys and said second pulley, a plurality of levers disposed above said frame, guides for said levers, a rod connecting said levers, a handle connected to one of said levers and secured on a bushing, means pivotally supporting said bushing, a weighted arm secured to said bushing and provided with a bifurcated lower end, a pulley on said bifurcated lower end, and conveying means driven from said second pulley.

In witness whereof I have hereunto set my hand in the presence of two witnesses.

ELIE PERRON.

Witnesses:
J. E. CLOUTIER,
ELISE CLONAN.