No. 885,874. PATENTED APR. 28, 1908.

H. W. SELLE.

WOOD SHAVING MACHINE.

APPLICATION FILED DEC. 9, 1907.

2 SHEETS—SHEET 1.

Fig. 1.

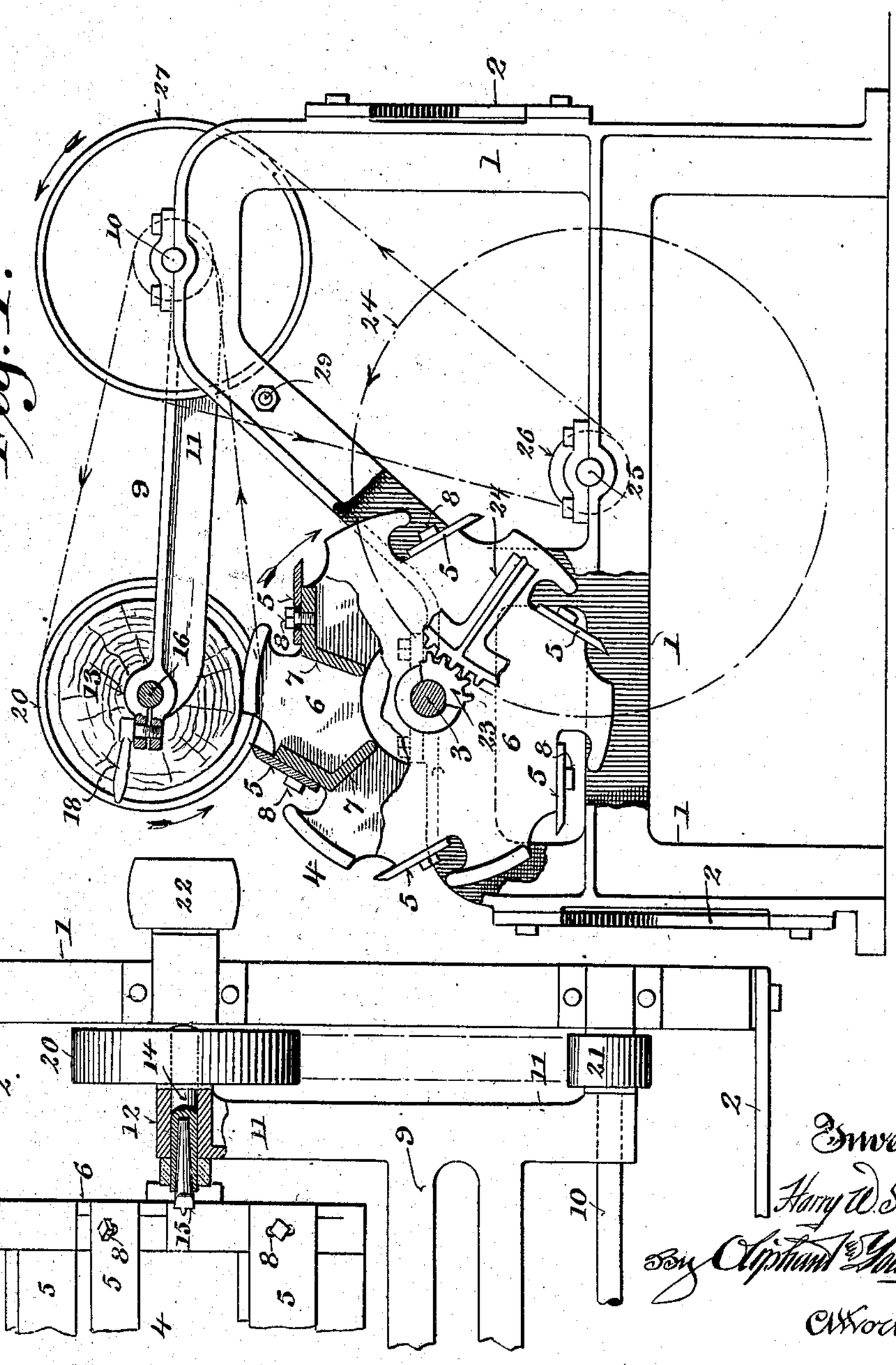

Fig. 3.

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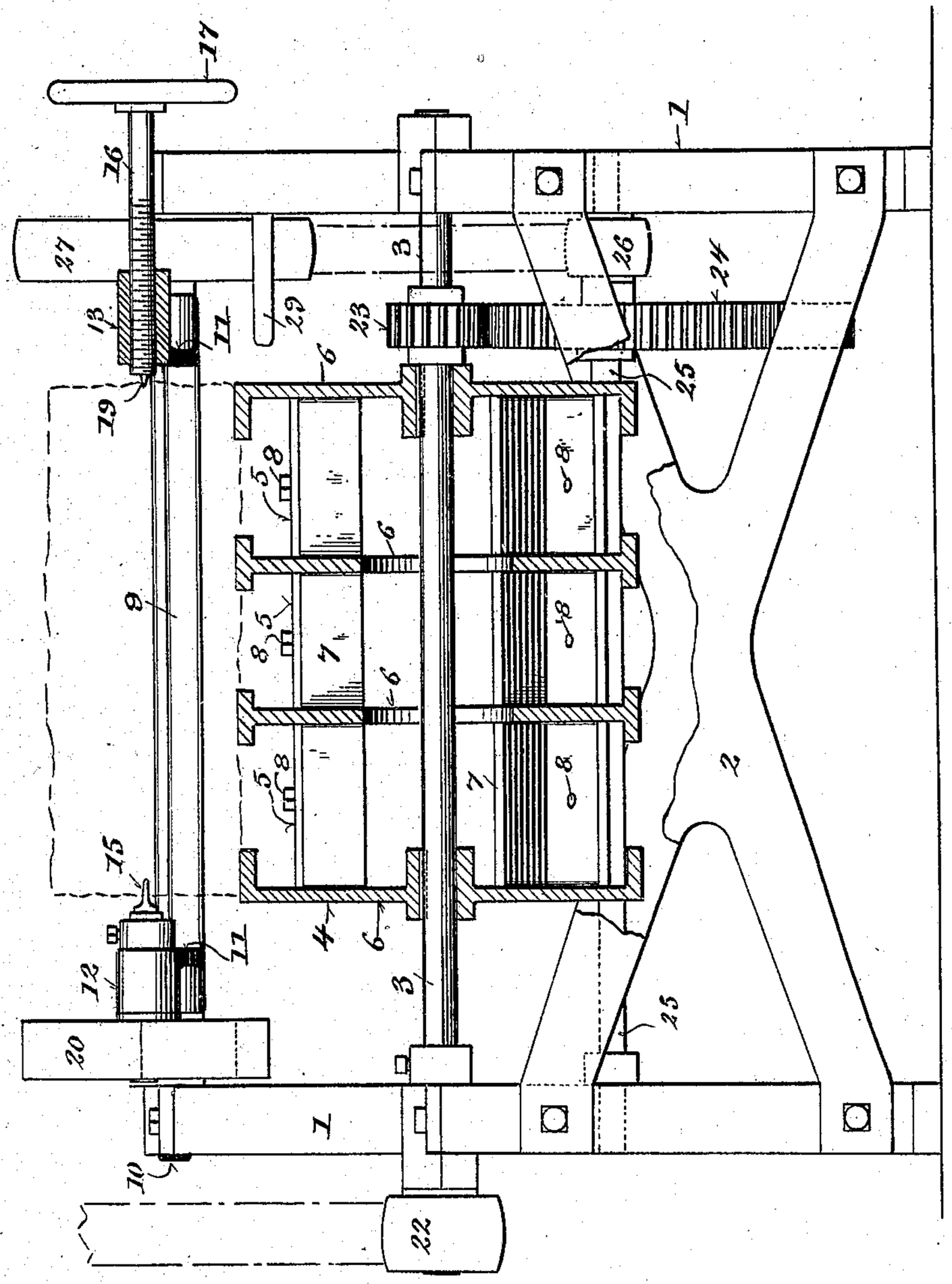
2 SHEETS—SHEET 2.

Fig. 2.



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UNITED STATES PATENT OFFICE.

HARRY W. SELLE, OF CHICAGO, ILLINOIS.

WOOD-SHAVING MACHINE.

No. 885,874. Specification of Letters Patent. Patented April 28, 1908.

Application filed December 9, 1907. Serial No. 405,675.

To all whom it may concern:

Be it known that I, HARRY W. SELLE, a citizen of the United States, and resident of Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Wood-Shaving Machines; and I do hereby declare that the following is a full, clear, and exact description thereof.

The object of my invention is to provide simple, economical and effective machines for cutting excelsior or shavings from wood blocks for commercial usage, the construction and arrangement of the machine being such that, the wood block is fed, by gravity, to a rotary drum carrying knives, so positioned with relation to the block or log as to cut shavings from the log parallel to the grain thereof, the log being slowly rotated by a positive drive.

The invention therefore consists in certain peculiarities of construction and combination of parts as hereinafter fully set forth with reference to the accompanying drawings and subsequently claimed.

In the drawings: Figure 1 represents a side elevation of a machine embodying the features of my invention, parts being broken away and parts in section to better illustrate the details; Fig. 2, a front view of the machine, and Fig. 3, a plan view of a portion of the same.

Referring by numerals to the drawings, 1 indicates standards connected by cross-braces 2, constituting a frame having bearings for a driven shaft 3, to which shaft is secured a skeleton drum 4 that carries a series of knives 5 about its periphery. The drum comprises a series of heads 6 connected by integral L-shaped strips 7 which are faced to receive the knives 5, said knives consisting of flat straight blades of the same length as the drum and having slots therein for the reception of set bolts 8, the bolts being in threaded-engagement with apertures in the faces of the strips. The faces of the drum-strips on which the knives rest, are tangentially disposed with relation to the drum-axis, all of the heads being cut away to permit seating of the knives so that their cutting-edges may be set beyond the circumferential diameters of said heads if desired. By this construction it will be seen that the heads serve as supports on which the log or block rests, acting also to gage the depth of cut of the knives, said log being suspended above the drum in a floating yoke 9, as follows:

The frame-standards 1 are provided with bearings for a shaft 10, upon which shaft are loosely mounted arms 11 of the yoke, the free ends of the arms terminating with apertured hubs 12 and 13. The apertured hub 12 is adapted to receive a spindle 14 that is provided with a tapered bore for the reception of a corresponding tapered shank of a spur 15, which spur constitutes one member of a log-chuck. The opposite member comprises a threaded stem 16 which is fitted into the aperture of the hub 13, said aperture being threaded for this purpose and also split so that when the stem is adjusted by means of a hand-wheel 17, it is held in such adjusted position by a clamp-screw 18 that is in threaded connection with the split hub.

One end of the log is forced against the spur 15, the opposite end being held in position by a cone-point 19 of the stem, upon which point the log is revolved by the spindle 14. The spindle 14 is slowly rotated by a pulley 20 fast on the aforesaid spindle and in belt-connection with a smaller pulley 21 fast on the shaft 10. The knife-drum 4 is driven at a high speed by a pulley 22 from any suitable source of power, and motion is transmitted to the log, which preferably rotates in the same direction as the drum, by a system of back-gearing, from the drum-shaft 3. This is accomplished through a spur-pinion 23 fast on the drum-shaft and in mesh with a spur-wheel 24, secured to a counter-shaft 25, the latter being mounted in bearings of the standards. The counter-shaft also carries a small pulley 26, that is in belt-connection with a large pulley 27 secured to the shaft 10 as shown.

The yoke as will be seen from the drawings, is horizontally disposed, and when a log or block is in position thereon, its axis is approximately parallel with and directly over the drum-axis, hence when the machine is in operation it will be readily understood that a longitudinal shaving will be cut from the log in the form of straight strips, as each knife or blade passes the underside of said log, the latter being sustained in its relative position with regards to the cutting-edges of the knives by the drum heads. These shavings consequently have the grain of the wood running lengthwise thereof and therefore will not chip or break when subjected to other

operations, such as crimping or the like, a result which is very desirable, especially as the shavings may be cut to the thinnest possible degree, and having great toughness they will more readily assume a curl without breaking. This result is not attainable in machines wherein a spiral cut shaving is made, for the reason that such shavings must necessarily be cut so that the grain of the wood therein is diagonally disposed with relation to the width, and while I am aware of such machines, they do not produce the results which I desire to attain and do attain by the arrangement of axially parallel knife-drum and log. Another advantage of the machine as herein described, is that the relative speed of rotation of the knife-drum and log may be varied by changing the driving-pulley of log for one of a different diameter whereby the width of the shaving is regulated to a greater or less degree. When said log or block has been reduced to its minimum diameter for practical purposes the floating-yoke 9 will be checked in its downward course by a stop-pin 29, which pin projects in the path of one of the yoke-arms, the pin being fast to the adjacent standard 1 of the frame.

While I have shown and described the log or block as being driven by a series of belts from the counter-shaft 25, it is obvious that equivalent gearing may be substituted without departing from the spirit of my invention, and in some instances in place of rotating the log in the same direction as the drum-knives it may be reversed.

I claim:

1. In a wood-shaving machine, a horizontally disposed rotary drum, knives carried by the drum, having cutting-edges parallel to said drum-axis, a horizontally disposed swinging yoke above the aforesaid drum, and a revoluble log-chucking mechanism carried by the yoke, the axis of the log-chucking mechanism being parallel to the drum-axis.

2. In a wood-shaving machine, a frame, a drive-shaft mounted therein, a horizontally disposed rotatory drum secured to the drive-shaft, knives carried by the drum, having cutting-edges parallel to the drum-axis, a shaft carried by said frame, a floating yoke pivotally mounted about the shaft, a revoluble log-chucking mechanism carried by the yoke at its free end, the axis of the log-chucking mechanism being parallel to said drum-axis, driving means for the shaft in connection with the driven shaft on which is secured the drum, and driving means for the chucking-mechanism in connection with the first named shaft.

3. In a wood-shaving machine, a horizontally disposed drum comprising a series of heads connected by strips, adjustable knife-blades, having cutting-edges parallel to the axis of the drum secured to the strips, a horizontally disposed swinging yoke above the drum, revoluble log-chucking mechanism carried by the yoke, the log-chucking mechanism being parallel to said drum-axis, and driving-means connecting the log-chucking mechanism and drum, whereby said log-chucking mechanism is rotated at a reduced speed relative to that of the drum.

In testimony that I claim the foregoing I have hereunto set my hand at Chicago in the county of Cook and State of Illinois in the presence of two witnesses.

HARRY W. SELLE.

Witnesses:
J. V. PIAZZA,
I. C. KREYSCHER.