

W. S. SHAW, H. L. DRAKE & F. M. SHAW.

BARK PEELING MACHINE.

APPLICATION FILED DEC. 1, 1913.

1,189,395.

Patented July 4, 1916.

5 SHEETS—SHEET 1.

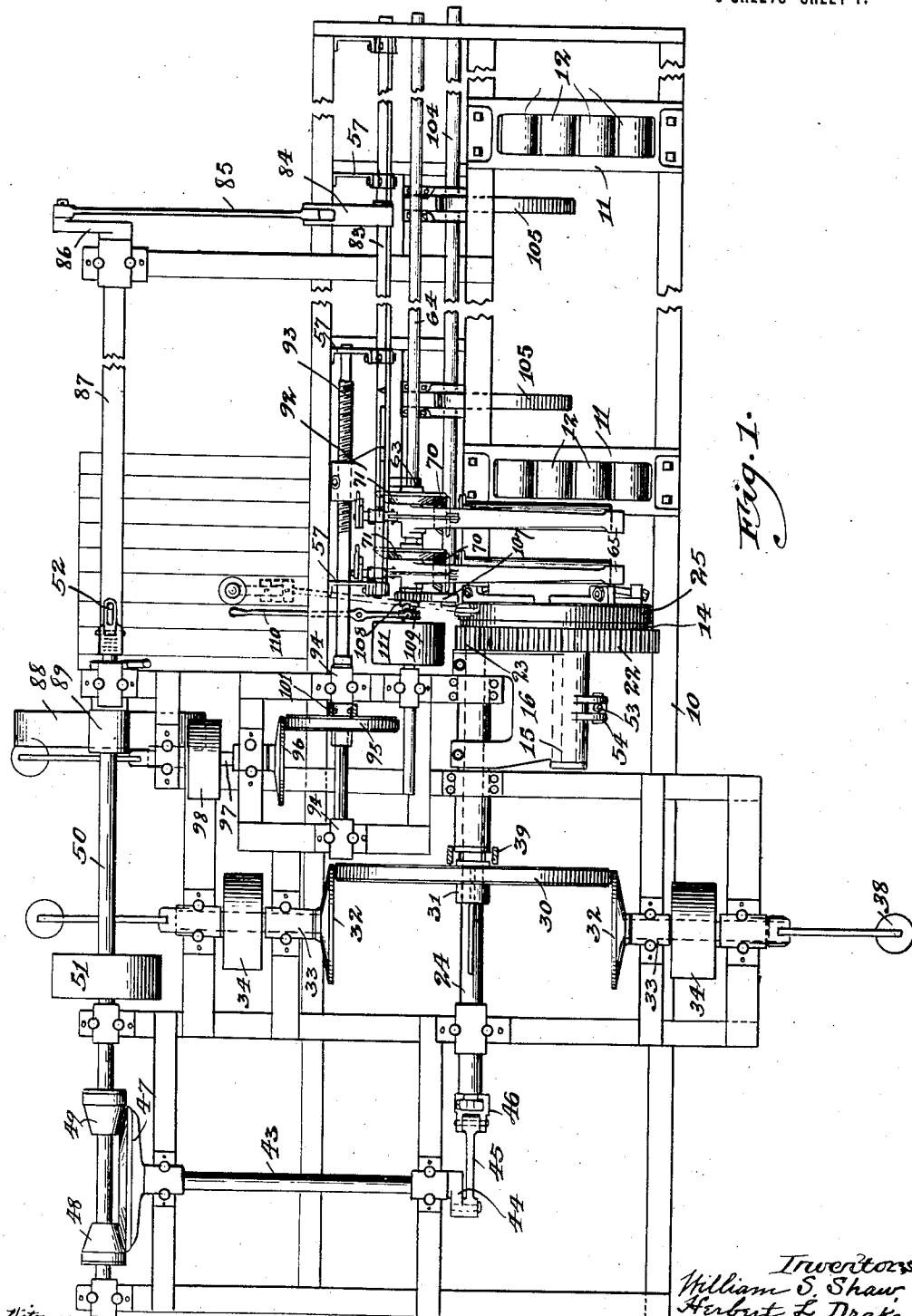


Fig. 1.

Witnesses,
S. N. Pond

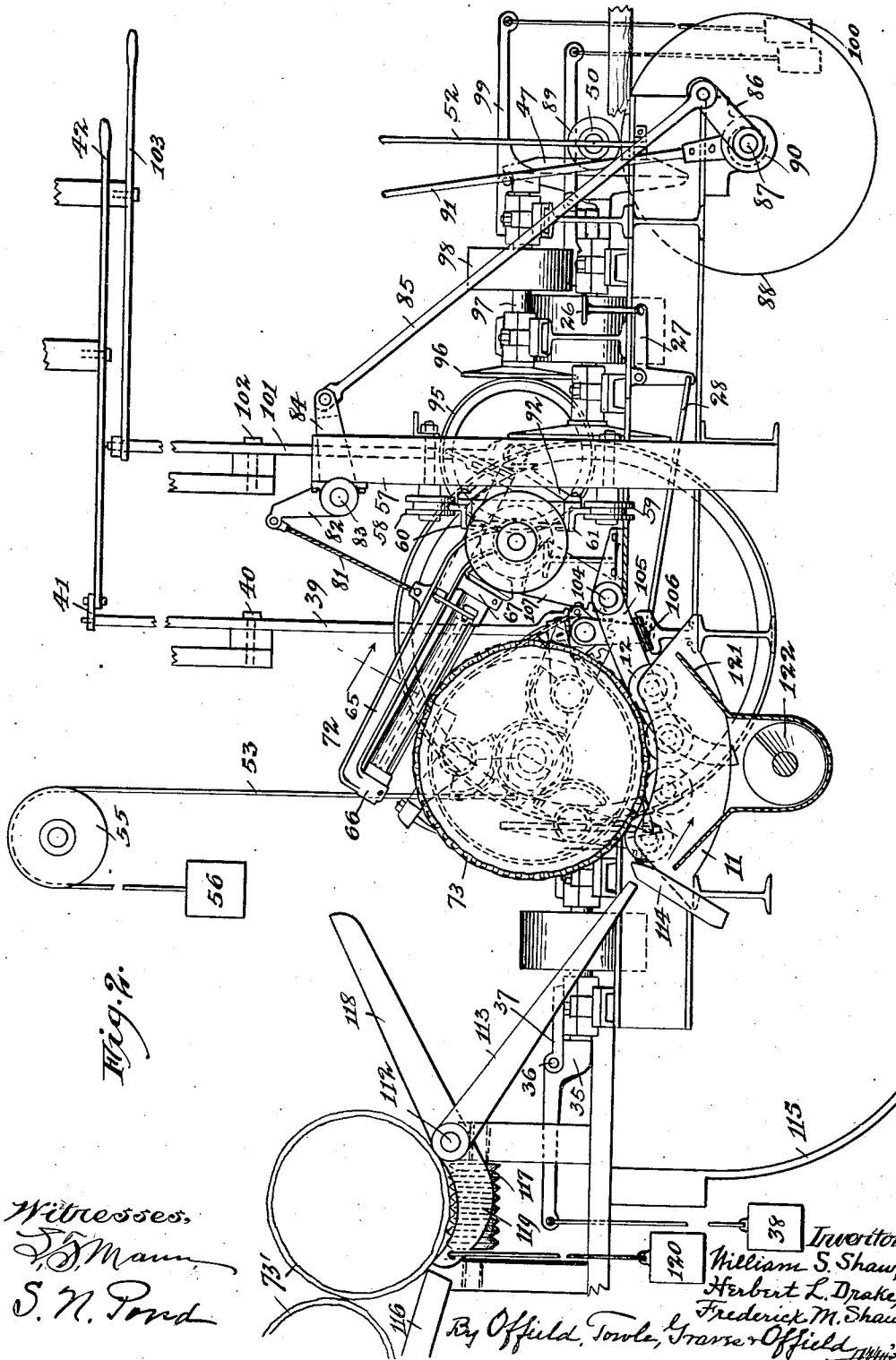
By Offield, Towle, Granger & Offield Attys.

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5 SHEETS--SHEET 2.



Witnesses,
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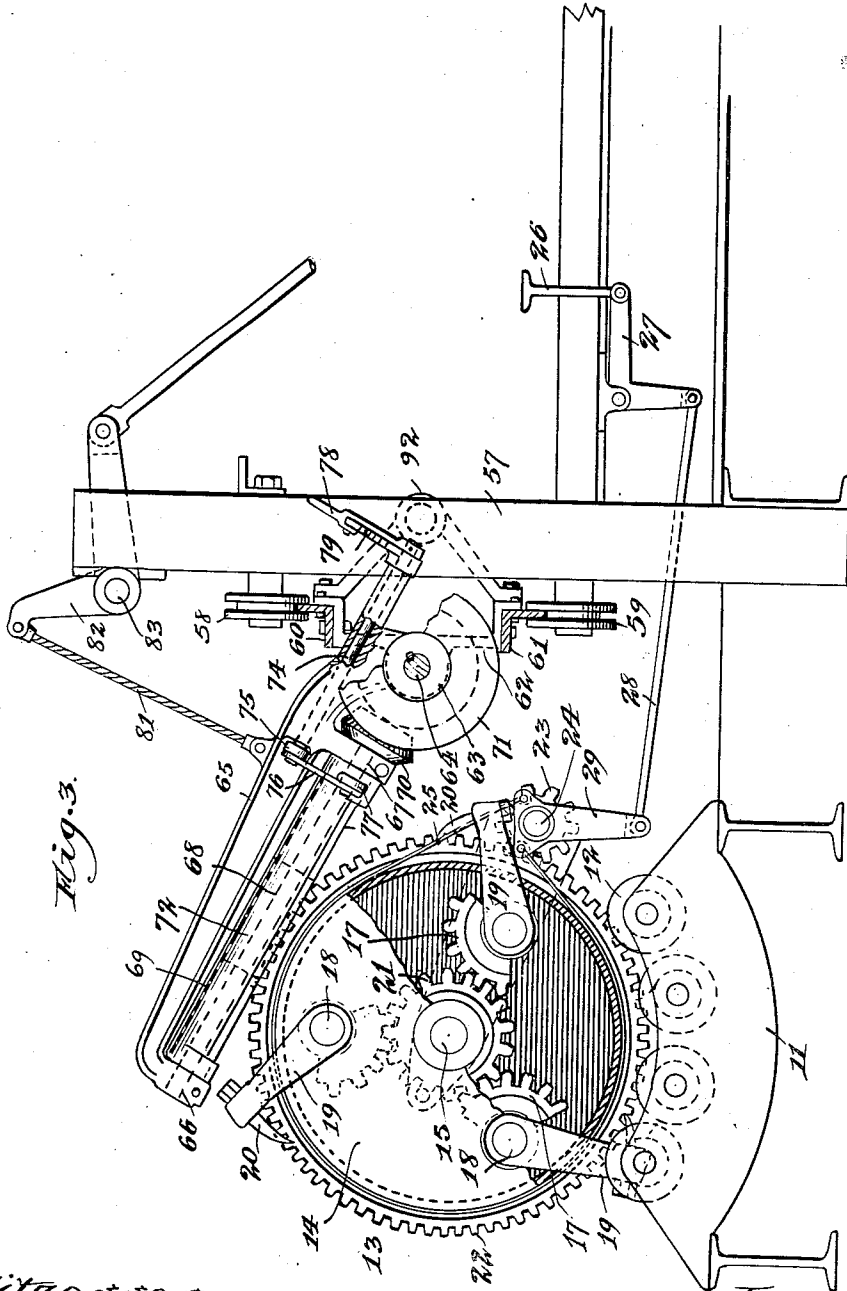
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Witnesses,
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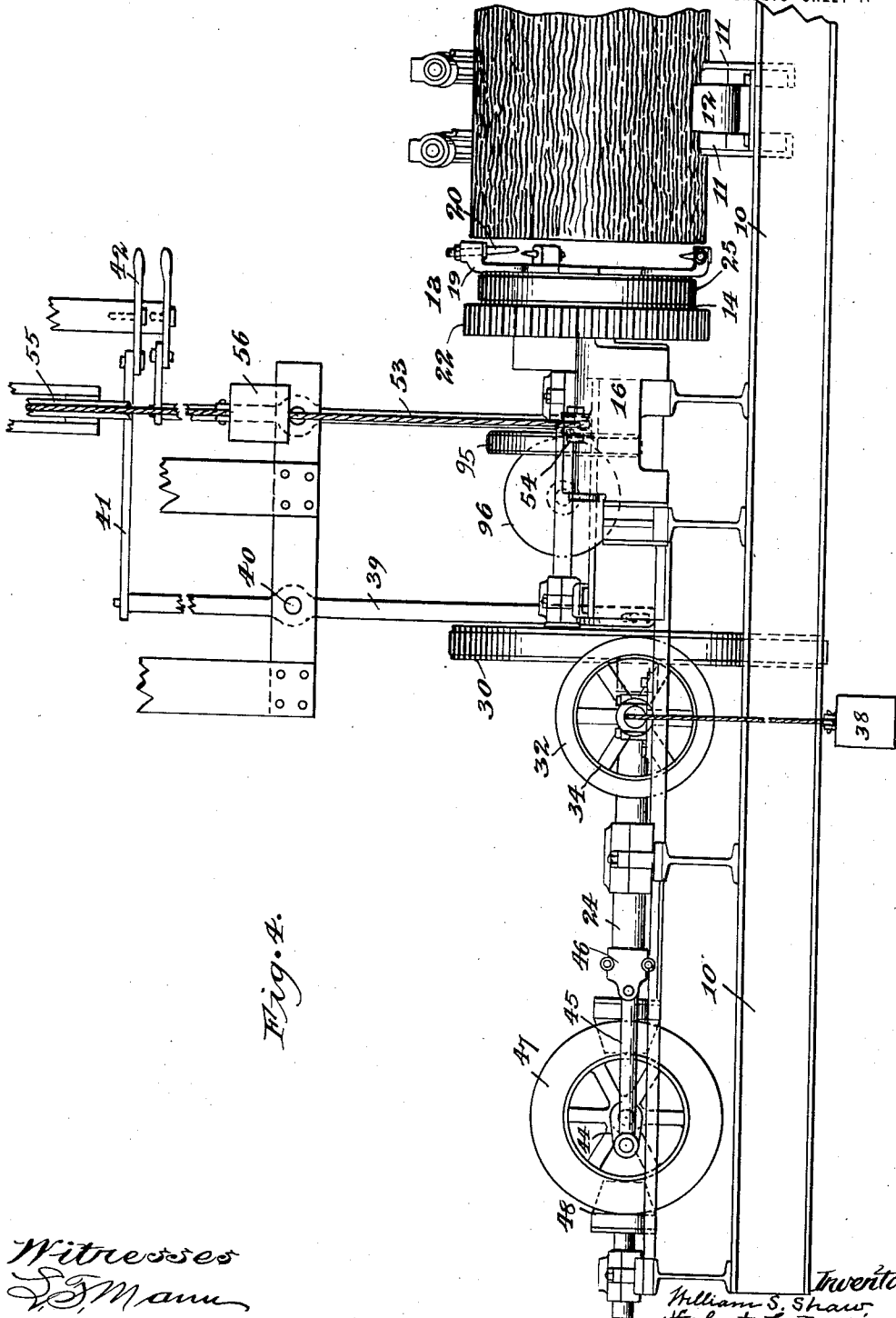


Fig. 4.

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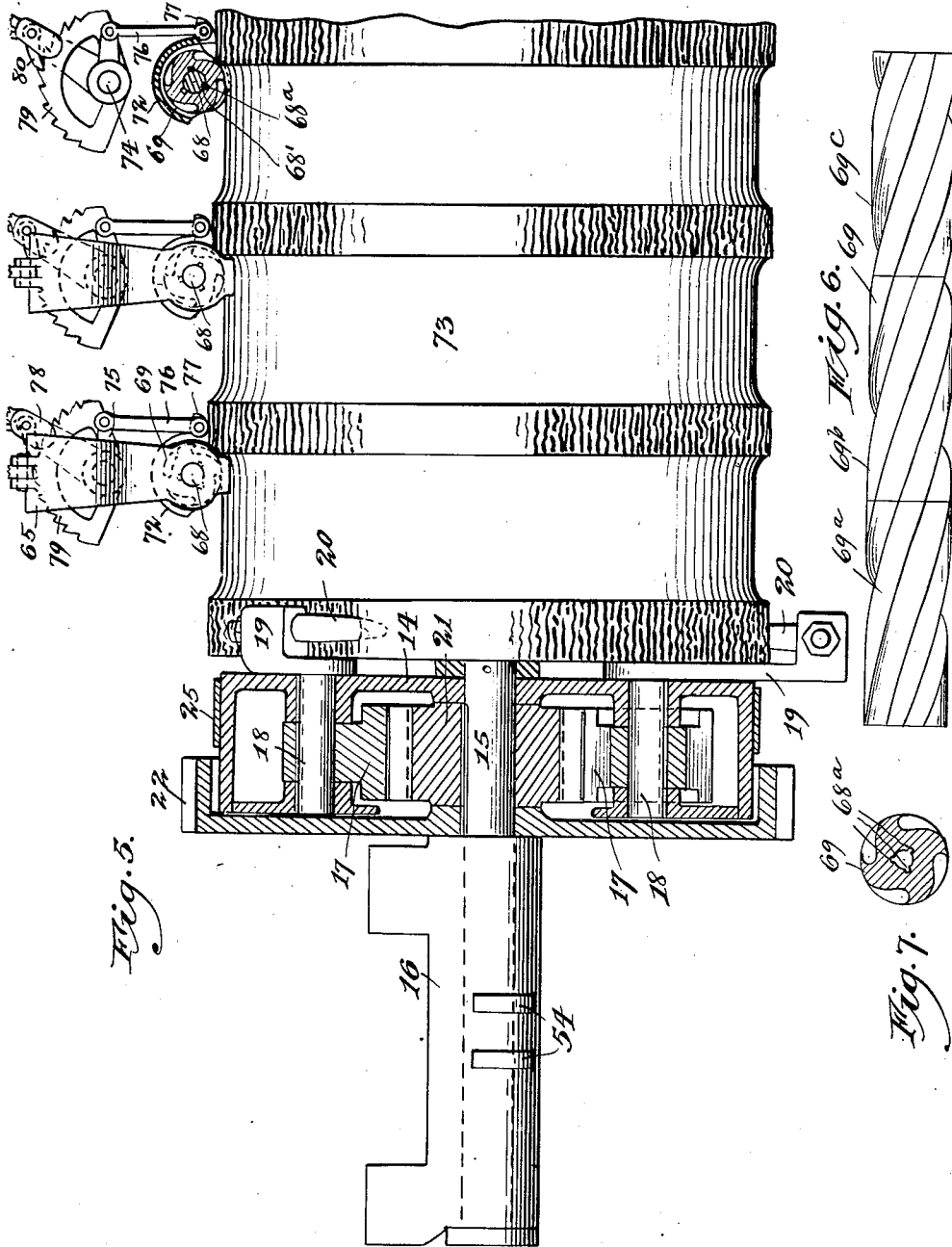
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5 SHEETS—SHEET 5.

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Witnesses,
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UNITED STATES PATENT OFFICE.

WILLIAM S. SHAW, OF BOYNE CITY, HERBERT L. DRAKE, OF WELLS, AND FREDERICK M. SHAW, OF ESCANABA, MICHIGAN.

BARK-PEELING MACHINE.

1,189,395.

Specification of Letters Patent.

Patented July 4, 1916.

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To all whom it may concern:

Be it known that we, WILLIAM S. SHAW, of Boyne City, county of Charlevoix, and State of Michigan, HERBERT L. DRAKE, of Wells, county of Delta, and State of Michigan, and FREDERICK M. SHAW, of Escanaba, county of Delta, and State of Michigan, all citizens of the United States, have jointly invented certain new and useful Improvements in Bark-Peeling Machines, of which the following is a specification.

This invention relates to a machine for peeling bark from all kinds of logs, and is designed for use mainly in obtaining bark for use in tanning operations; the machine when used for this purpose serving not only to separate the bark from the log, but also to simultaneously comminute the bark and present it in suitable condition for the tanning leaches. The machine is also applicable for the peeling of all kinds of bolts, pulp wood, railway ties, posts, poles, and other similar timber, with slight variations in design to adapt it to different specific uses.

The chief novel principle of the machine resides in the provision of a rotary chuck adapted to hold the work operated upon at one end and to effect a suitably timed rotation thereof, with one or more swinging cutter frames and cutters that, when in operative position, lie transversely of the log or timber to be peeled and effect the chipping of the bark therefrom.

Other ancillary detail features of the machine reside in a special construction of chuck adapted to automatically effect a secure grip upon the end of the log, an improved device for delivering logs from a suitable chute to a bed or support disposed in working relation to the chuck, means for effecting a gradual relative movement of the cutter frame or frames and the log lengthwise of and during the rotation of the latter by the chuck, whereby the log is peeled in a continuous spiral or spirals, means for discharging the peeled log from its bed or support, means for varying the speed of rotation of the log according to the diameter of the latter, a novel construction of cutter or chipper, and various other auxiliary features, all of which will be readily apparent from the following detail description of the apparatus.

A machine embodying our invention in a practical and approved form is illustrated in the accompanying drawings, in which—

Figure 1 is a top plan view of the apparatus. Fig. 2 is an end elevation, partly in section, as seen from the right of Fig. 1, to which is added the apparatus for automatically effecting the delivery of a new log simultaneously with the discharge of a peeled log. Fig. 3 is an enlarged elevation of the chuck, log-supporting bed, and one of the cutter-frames and cutters, also showing in part the actuating mechanism of the chuck and cutter-frame and cutter. Fig. 4 is an enlarged side elevation of the parts shown on the left-hand half of Fig. 1, including the chuck and the actuating mechanism thereof. Fig. 5 is an axial sectional view of the chuck, enlarged, showing also a partially peeled log engaged thereby, with the peeling devices operatively engaged therewith. Fig. 6 is a side elevation, and Fig. 7 a cross-section of a sectional cutter preferably employed.

Referring to the drawings, 10 designates as an entirety a suitable skeleton bed frame upon which the various parts of the machine are supported and carried. Near one end of the frame is located a bed for the log to be dressed, this bed comprising a pair of cradles 11 in which are rotatably mounted anti-friction rolls 12 to facilitate the turning of the log when resting thereon during the peeling operation. Opposite one end of this bed is located a chuck designated as an entirety by 13, which chuck is so supported as to be capable of a limited bodily movement in directions both crosswise and lengthwise of the bed to adapt it for engagement with the ends of logs of differing diameters and more or less irregular forms. As best shown in Figs. 1 and 5, this chuck comprises a hollow head 14 loosely mounted on a spindle 15 extending therethrough and also journaled in a swinging bearing member 16, a series (three as herein shown) of segment gears 17 mounted on studs 18 journaled in the head 14, chuck jaws on the outer ends of the studs 18 (each jaw comprising an arm 19 carrying a spur 20 adapted to pierce and grip the end of the log), a central gear 21 keyed on the spindle 15, and a large driving gear 22 also keyed on the spindle 15. The gear 22 is driven by a pinion 23 fast

on the inner end of a driving shaft 24 suitably journaled in and lengthwise of the main supporting frame; and also pivotally mounted on the same shaft 24 is the swinging bearing member or yoke 16 that journals the spindle 15 of the chuck.

25 designates a band brake encircling the chuck-head 14, and operable by a pedal 26 (Fig. 3) acting through a bell-crank 27, link 28, and arm 29, to opposite points of which latter the ends of the brake band are secured. From the foregoing it will be seen that when the chuck gear 22 is rotated in one direction the chuck jaws will first be swung inwardly to pierce and grip the end of the log, whereupon the chuck-head and log will both be rotated; while when the gear 22 is turned in the opposite direction, the brake 25 having been applied, the chuck jaws will be swung outwardly to release the log or receive the end of a new log.

The shaft 24 is rotated by means of a friction disk 30, the hub 31 of which is splined thereon, as best shown in Fig. 1, and a pair of friction disks 32 on the inner ends of counter shafts 33 journaled in the main frame and engaging the periphery of the disk 30 at diametrically opposite points. The shafts 33 are driven simultaneously and with equal speeds in opposite directions through pulleys 34 from straight and crossed belts (not shown) on an overhead shaft, or from any other suitable and convenient source of power. As best shown in Fig. 2, the shafts 33 carrying the driving disks 32 are pressed inwardly by weighted bell-crank levers 35 pivoted at 36 to supporting brackets 37. From the long arms of the bell-crank levers 35 are hung weights 38, while the short arms of the bell-cranks exert a thrust of the weights 38 upon the inner ends of the shafts 33, thus forcing the driving disks 32 into frictional engagement with the main disk 30. We prefer to employ a pair of driving disks 32 operating upon diametrically opposite points of the periphery of the disk 30 to secure a balanced thrust and obviate side pressure upon the shaft 24. The speed is varied by shifting the disk 30 radially of the disks 32, which may be done by means of a lever 39 pivoted at 40 to an overhead portion of the frame, a link 41 secured to the upper end of the lever 39, and a suitably pivoted hand-lever 42 connected to the link 41.

The shaft 24, on the inner end of which the chuck and its driving mechanism are bodily mounted, is shifted endwise to an extent sufficient to carry the chuck jaws into and out of engagement with the end of a log by the following mechanism. 43 (Fig. 1) designates a shaft journaled in the frame at right angles to the shaft 24 and having on one end a crank arm 44 connected to a pitman 45 in turn swiveled at 46 upon the

outer end of shaft 24. The shaft 43 at its other end carries a bevel friction wheel 47 alternately engaged by a pair of bevel friction wheels 48 and 49 fast on a counter-shaft 50 journaled in the machine frame and driven by a pulley 51 from a suitable overhead source of power. The shaft 50 is shiftable lengthwise to throw either of the pinions 48 and 49 into driving engagement with the bevel gear 47 by a hand-lever 52 (Fig. 2) operatively connected to the end of the shaft 50.

The bearing member or yoke 16 is supported at its free end by a cable 53 (Figs. 2 and 4) attached to a lug 54 on the end of the yoke and carried upwardly over a sheave 55, the other end of said cable having attached thereto a weight 56 that substantially balances the weight of the chuck and its supporting and driving mechanism.

Referring next to the cutters and their supporting and actuating mechanism, best shown in Figs. 1 and 3, mounted on up-rights 57 opposite the inner side of the bed are a series of upper and lower grooved rolls 58 and 59 which form a supporting and guiding way for a reciprocating cutter-carrier herein shown as comprising upper and lower parallel angle-bars 60 and 61 engaging the guides 58 and 59, respectively, spaced and connected at intervals by cross bars 62. Each of the cross bars 62 has a forwardly projecting boss 63, in which is journaled a shaft 64. Loosely mounted on the shaft 64 at spaced intervals are the lower ends of a series of cutter frames 65 that extend at right angles to the axis of the shaft 64 and are each provided with journals 66 and 67 in which is mounted a shaft 68 carrying a revoluble cutter 69. This cutter, which may be structurally generally similar to an ordinary planer-head cutter, is, as best shown in the detail views Figs. 6 and 7, preferably made in three interchangeable endwise abutting sections 69^a, 69^b and 69^c, since the work falls mainly on the intermediate section 69^b; and when this is dull, it can be interchanged with one of the sharper end sections 69^a and 69^c, until all three sections have been dulled to a point requiring re-sharpening. To facilitate this interchange, the cutter shaft 68 is formed with a single straight longitudinal feather or key 68', and each of the cutter sections (when made with spiral cutting edges) is provided with the necessary number of keyways 69^a to insure registration of the ends of the cutting edges of the several sections in any interchanged position. On the inner end of shaft 68 is a bevel friction gear 70 that meshes with and is driven by a bevel friction gear 71 keyed on the shaft 64. Loosely mounted on shaft 68 and surrounding the upper portion of the cutter is a hood-like bark gage 72, one lon-

longitudinal edge of which normally rests upon
 the outer or bark surface of the log 73, as
 best shown in Fig. 5. The bark gage 72 is
 adjustable to vary the working depth of the
 cutter according to the thickness of the
 bark on the log; such adjusting means comprising a shaft 74 (Fig. 3) journaled in and
 lengthwise of the lower end of the cutter-
 frame 65, an arm 75 on the outer end of
 shaft 74, a link 76 connecting the arm 75 to
 lug 77 on the side of the bark gage 72, an
 operating arm 78 on the inner or lower end
 of the shaft 74, a fixed segment rack 79 on
 the inner or lower end of the bearing of
 shaft 74, and a detent pawl 80 pivoted on
 the arm 78 and cooperating with rack 79.
 As stated, the lower edge of the gage 72
 rests upon the bark of the log during the
 peeling operation, and the distance between
 this lower edge and the fixed shaft 74, determined by the position of the arm 78 on
 the segment rack 79, establishes the depth
 of cut of the cutter 69. Any number of
 these cutters (which are all alike) may be
 employed, depending upon the length of the
 log sections to be peeled, or upon the length
 of the sidewise reciprocating movement,
 hereinafter described, given to the cutter-
 frames and cutters, or both. When a new
 log is to be introduced into the machine,
 or a peeled log discharged therefrom, the
 cutter-frames and cutters are swung up-
 wardly out of the way sufficiently for this
 purpose. To this end, each cutter-frame 65
 is connected, as best shown in Figs. 2 and 3,
 by a cable link 81 to an arm 82 fast on a
 rock shaft 83 that is journaled on the upper
 ends of the upright frame members 57; and
 also fast on the shaft 83 is an arm 84 that is
 connected by a long link 85 to an arm 86
 fast on a countershaft 87. On the opposite
 end of shaft 87 from the arm 86 is a friction
 wheel 88 adapted to be engaged and
 driven by a small friction wheel 89 fast on
 the countershaft 50. The friction wheels 88
 and 89 are normally disengaged; but the
 end of the shaft 87 bearing the friction
 wheel 88 is mounted in an eccentric bearing
 90 (Fig. 2), operated by a hand-lever
 91, whereby the friction wheel 88 can be
 shifted into and out of driven engagement
 with the continuously driven friction wheel
 89. By this means the cutter-frames and
 cutters can be positively swung upwardly
 away from the log; their return movement
 being effected by their gravity, controlled
 by a gradual release of the friction wheel 88
 from the friction wheel 89 through the lever
 91.
 Referring next to the mechanism for
 effecting the sidewise reciprocating movement
 of the cutters, whereby the bark is
 chipped from the logs in continuous spirals,
 which mechanism is best shown in Fig. 1,
 92 designates a broad nut that is rigidly se-

cured to the cutter-carrier or slide 62, and
 engages a threaded rod 93 that is rotatably
 mounted in bearings 94 of the frame and in
 auxiliary bearings in the upright frame
 members 57. Splined on the shaft 93 so as
 to be shiftable lengthwise of the latter is a
 friction disk 95 driven by a cooperating
 friction disk 96 fast on a shaft 97 carrying
 a driving pulley 98. The disk 96 is pressed
 into frictional engagement with the disk 95
 by a pivoted lever 99 (Fig. 2) engaging the
 outer end of the shaft 97 and having suspended
 from its outer end a weight 100. The disk 95
 is shiftable crosswise of the driving disk 96
 to vary the speed of rotation of the threaded
 shaft 93, and also to reverse the direction of
 rotation of the latter by means of a lever 101
 (Fig. 2) pivoted at 102 to an overhead portion
 of the frame and connected at its upper end to a
 pivoted operating lever 103.

The log, when peeled, is ejected from its
 bed in the machine by the following mechanism.
 Journaled in the frame opposite the
 inner side of the bed is a horizontal shaft
 104, fast on which are a pair of kicker arms
 105, best shown in Fig. 1, that extend beneath
 the bed and normally rest against fixed stops
 106 (Fig. 2). Fast on the inner end of the
 shaft 104 is a segment gear 107 that is
 engaged by a small gear 108 loose on the
 cutter driving shaft 64. The gear 108 can be
 made rotatable with the shaft 64 through
 the agency of a clutch 109 splined on the
 shaft 64 and operated by a hand-lever 110.
 The shaft 64 is driven by overhead belting
 through a pulley 111 fast thereon. When the
 log has been ejected and the clutch 109
 released, the kicker arms 105 return to normal
 position under their own gravity.

The apparatus also includes an automatic
 mechanism for delivering new logs successively
 to the machine through the agency of the
 peeled logs discharged therefrom. This
 mechanism is clearly shown in Fig. 2, wherein
 112 designates a rock shaft journaled parallel
 with the log-bed opposite the outer side of
 the latter. Fast on shaft 112 are a pair of
 parallel downwardly and inwardly extending
 arms 113 extending approximately to the outer
 edge of the bed. On said outer edge of the bed
 are downwardly and outwardly inclined skid
 blocks 114 adapted to direct the discharged log
 against an oppositely disposed downwardly
 curved guide 115; from which latter they roll
 into a receiving pit (not shown) or other place
 of deposit beneath the machine. The logs to be
 peeled, indicated by 73', roll down an inclined
 chute 116 onto a temporary rest 117. Fast on
 the shaft 112 are another pair of skid arms
 118 extending at substantially the angular
 relation to the arms 113 shown in Fig. 2.
 Also fast on the shaft 112 are arms 119
 extending crosswise of the temporary

log-rest 117 and having depending from their free ends weights 120, by means of which the arms 113 and 118 are normally maintained in elevated position shown in Fig. 2. When the peeled log is discharged by the kicker arms 105, said log strikes the arms 113, and, by virtue of its superior weight, overcomes the effect of the counter-weights 120 and the foremost log 73' and swings both arms 113 and 118 downwardly, the arms 113 swinging down approximately parallel to the upper end of the guide 115, and the arms 118 swinging down substantially to the elevated position of the arms 113. At the same time the weighted arms 119 swing upwardly and tilt the foremost log 73' forwardly to a position in which it rolls down the skid arms 118 onto the bed; the weights 120 thereupon restoring the parts to normal position. Beneath the log-bed is preferably located a receiving hopper 121 for the chips, lengthwise of the bottom of which is a spiral screw conveyer for transferring the chips to any desired point of delivery.

The operation of the various parts of the machine has been set forth in connection with the description of the structures thereof; and it only remains to set forth the connected and continuous operation of the machine as a whole. Assuming that the peeling of one log has been completed, by means of the lever 91 the cutter-frames and cutters are swung to elevated position off the peeled log, the driving disk 30 of the chuck-head is, by means of lever 42, shifted to the opposite side of the centers of the driving disks 32, which stops the rotation of the chuck-head, and, the brake 25 being applied, retracts the chuck spurs from the end of the log, and, by means of lever 52, the entire chuck-head and its immediate driving mechanism are bodily retracted from the end of the log. By means of lever 110, the clutch 109 is engaged with the gear wheel 108, whereby the kicker arms 105 are actuated, and the log is thrown sidewise from its bed. Through the specific mechanism last described, the peeled log is delivered to the pit beneath the machine, and the foremost unpeeled log 73' is rolled down onto the bed of the machine. As soon as this log comes to rest, the chuck is advanced upon the end of the log, and the chuck spurs or jaws are caused to grip the same, whereupon the log begins to slowly rotate. The cutter-frames and cutters are then lowered upon the log, the bark gages having been suitably adjusted to the thickness of the bark of the log. The cutter driving shaft being in continuous rotation, the cutters operate upon the bark as soon as they are lowered into contact therewith, and at the same instant, through the lever 103, the driving disk 95 of the screw shaft 93 is adjusted in proper

relation to its driving disk 96 to effect a gradual outward lateral travel of the cutter-frames and cutters over the surface of the log; this resulting in the chipping of the bark from the latter in continuous spiral paths, this cutting being continued until each spiral merges into the initial end of the next adjacent spiral, at which point the log is completely denuded of its bark. By means of lever 103, the screw driving disk 95 is then shifted to the opposite side of the center of its driving disk 96, which reverses the direction of the rotation of the screw 93, returning the cutters to initial position. Thereupon, the described cycle of operations is repeated with the next log, and so on.

The friction driving mechanism for the chuck and for the feed screw of the cutters enables the speed of rotation of the log to be adjusted according to its diameter, and also enables the speed of bodily travel of the cutters to be very nicely adjusted relatively to the speed of rotation of the log, so as to accommodate variations in the diameters of different logs and in the thickness of the bark to be chipped therefrom, and secure a clean and complete denuding of the logs of their bark.

It will be manifest to those skilled in the art that many of the specific details of the apparatus herein shown and described may be variously modified without involving any change in the principles of operation or lessening the efficiency and utility of the apparatus. As stated at the outset, the machine is capable of use advantageously in other relations and for other purposes than that of denuding a log of its bark, and hence we wish it clearly understood that any and all uses of which the machine is capable are contemplated as within the purview of the invention as defined in the appended claims.

We claim:

1. In a machine of the character described, the combination of a supporting bed, a rotary chuck adapted to grip one end of a log supported on said bed, a cutter-frame mounted to swing in a direction transverse to the bed, a rotary cutter carried by said cutter-frame adapted to chip the surface of the log, the arrangement being such as to permit automatic relative displacement of the bed and chuck transversely of the log as said log is continuously rotated.
2. In a machine of the character described, the combination of a bed, a rotary chuck adapted to grip one end of a log supported on said bed, means for shifting said chuck toward and from the end of the log, a cutter-frame mounted to swing in a direction transverse to the bed, and a rotary cutter carried by said cutter-frame adapted to chip the surface of the log, said chuck and bed being adapted automatically to permit mutual approachment or separation be-

tween them while said log is continuously rotating.

3. In a machine of the character described, the combination of a bed, a rotary chuck adapted to grip one end of a log supported on said bed, a cutter-frame mounted to swing in a direction transverse to the bed, a rotary cutter carried by said cutter-frame, and means for effecting a relative movement between said chuck and said cutter-frame in the direction of the axis of the chuck, the arrangement of said bed, chuck, and cutter-frame such as to permit automatic relative approachment or separation of said cutter-frame and chuck on the one hand and the bed on the other hand while said log continuously rotates.

4. In a machine of the class described, the combination of a rigid foundation, a rotary chuck for gripping the end of a log to be operated upon, said chuck being flexibly mounted with reference to said foundation and adapted to swing in a plane crosswise of the axis of said chuck, means for rotating said chuck, anti-friction bearing means on said foundation intermediate the ends of said log and adapted to rotatably support the log and maintain the same with its axis substantially in the same vertical plane as the axis of said chuck, and a cutter for operating upon the surface of said log and adapted to be traversed along said foundation substantially parallel with the axis of said log.

5. In a machine of the character described, the combination of a bed, a chuck adapted to grip one end of a log supported on said bed, mechanism for rotating said chuck, and mechanism serving to impart to said chuck and its rotating mechanism a bodily movement toward and from the end of the log on said bed, said chuck and bed being arranged to permit automatic relative movement of said chuck transversely toward and from the bed while said log is being continuously rotated by said chuck.

6. In a machine of the character described, the combination of a bed adapted to support a rotating log, a chuck-carrying frame pivotally supported opposite one end of said bed and adapted to swing in a plane transversely of the log, a chuck on said frame, means for counterbalancing said chuck-frame and chuck, mechanism for actuating said chuck, and mechanism serving to impart to said chuck and its actuating mechanism a bodily movement toward and from the end of the log on said bed.

7. In a machine of the character described, the combination of a bed adapted to support a rotating log, a rotary chuck adapted to grip one end of a log supported on said bed, a cutter-frame pivoted alongside said bed to have a swinging movement crosswise of the log and adapted to be con-

trolled in its swinging movement by the position of the log itself, a rotary cutter mounted in said cutter-frame, said bed and chuck being adapted automatically to permit relative movement thereof to compensate for eccentricities in the surface of said rotating log.

8. In a machine of the character described, the combination of a relatively stationary bed adapted to support a rotating log, a rotary chuck adapted to grip one end of a log supported on said bed, a mounting for said chuck adapted to swing in a plane crosswise of the log, a cutter adapted to engage the surface of said log and adapted to swing in a plane crosswise of the log, and means controlled by the position of the surface of said log with reference to said cutter whereby the swinging movement of said cutter is controlled.

9. In a machine of the character described, the combination of a bed adapted to support a rotating log, a rotary chuck adapted to grip one end of and rotate a log supported on said bed, said chuck being flexibly supported with reference to said bed and adapted to swing in a plane crosswise of the log to compensate for eccentricities of the rotating log, a cutter adapted to swing in a plane crosswise of the log, flexibly engaging the surface of said log independently of the position of said surface with reference to said bed, and means for traversing said cutter along the log.

10. In a machine of the character described, the combination of a bed provided with a series of anti-friction rollers adapted to support a rotating log, a frame mounted to swing in a plane crosswise of the log, a chuck on said frame adapted to grip and rotate said log, surfacing means adapted to operate upon the rough surface of said log while rotating on said bed, and means for rotating said chuck.

11. In a machine of the character described, the combination of a bed provided with a series of anti-friction rollers adapted to support a rotating log, a frame mounted to swing in a plane crosswise of the log, a chuck on said frame adapted to grip and rotate said log, a surfacing cutter adapted to operate upon the rough surface of said log while the latter is rotating on said bed, said surfacing cutter being adapted to maintain itself automatically in proper cutting relation with the surface of said log independently of the position of the surface of said log relative to said bed.

12. In a log-chipper, the combination of means for rotating a log about its axis, a shaft substantially parallel with the axis of said log, means for rotating said shaft, a frame pivotally mounted to swing about an axis co-axial with said shaft, a rotatable cutter journaled in said frame and having

its axis transversely of the axes of said log and shaft and adapted to chip the surface of the log, cooperating bevel gears operatively mounted, respectively, upon said cutter and shaft, and means for effecting relative longitudinal movement of the log and said frame, bevel gears, and cutter.

13. In a machine of the character described, the combination with a rotary chuck adapted to swing in a plane transverse to its axis and to grip one end of a log and rotate the latter, of a log-supporting bed comprising a pair of rows of anti-friction rolls disposed transverse to the axis of the chuck and supportingly engaging the circumferential surface of the log, the arrangement being such as to permit automatic relative displacement of the bed and chuck in a direction transverse to the axis of the log.

14. In a machine of the character described, the combination with a rotary chuck adapted to grip one end of a log and rotate the latter, of a log-supporting bed comprising a pair of rows of anti-friction rolls disposed transverse to the axis of the chuck, each of said rows of rolls presenting a concave upper surface supportingly engaging the convex circumferential surface of the log and a bearing mounting for said chuck pivotally mounted upon an axis substantially parallel to the axis of the rotating log, the arrangement being such as to permit mutual transverse displacement of said chuck and bed to compensate for irregularities in the surface of said log.

15. In a machine of the character described, the combination with a rotary chuck, a log-supporting bed, and a device for ejecting a peeled log sidewise of said bed, of a normally idle log-delivering de-

vice located alongside said bed and thrown into action by a log ejected from the bed.

16. In a machine of the character described, the combination with a rotary chuck, a log-supporting bed, and a device for ejecting a peeled log sidewise of said bed, of a log-rest located alongside said bed, a skid pivotally mounted alongside said log-rest and having a rear projection extending crosswise of the latter, means normally maintaining said skid in elevated or idle position, and means actuated by a log ejected from said bed for tilting said skid into operative position and simultaneously, through said rear projection, rolling a log from said log-rest down said skid and onto said bed.

17. In a machine of the character described, the combination of chucking means, a device for ejecting a completed log sidewise out of the field of said chucking means, a skid pivoted intermediate its ends to swing transversely of the axis of the chucking means, said skid having a rear projection adapted to receive a log, and a forwardly projecting portion adapted to guide a log into the field of said chucking means but normally inoperative to do so, and a forwardly projecting member connected to said skid and arranged in the path of a log ejected from said chuck and adapted to cause a pivotal movement of said skid whereby the raw log is delivered into the field of said chucking means.

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Witnesses:

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