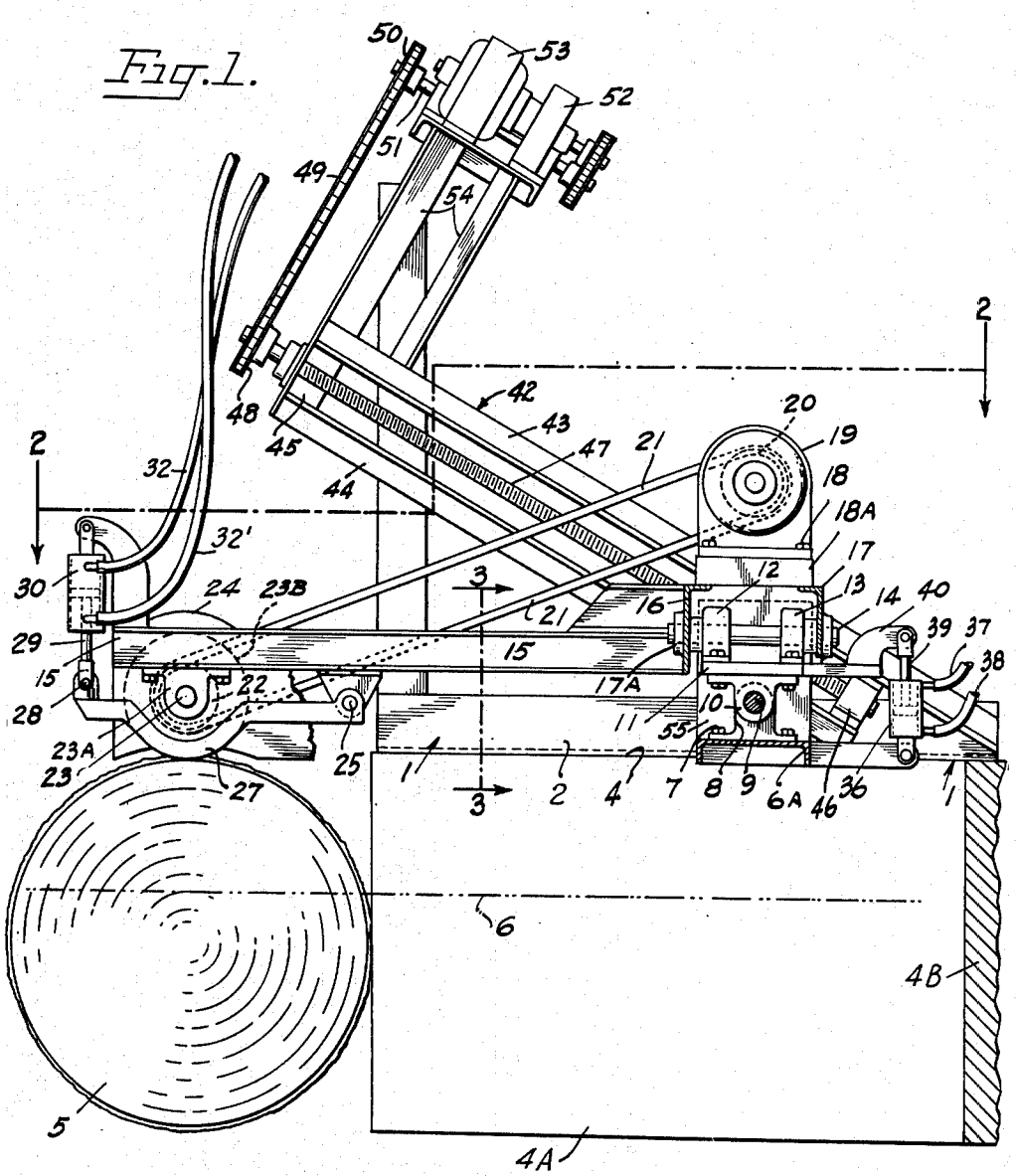
June 22, 1954 C. E. PRENTICE 2,681,670

LOG BARKING APPARATUS

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Fig. 1.



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4 Sheets-Sheet 2

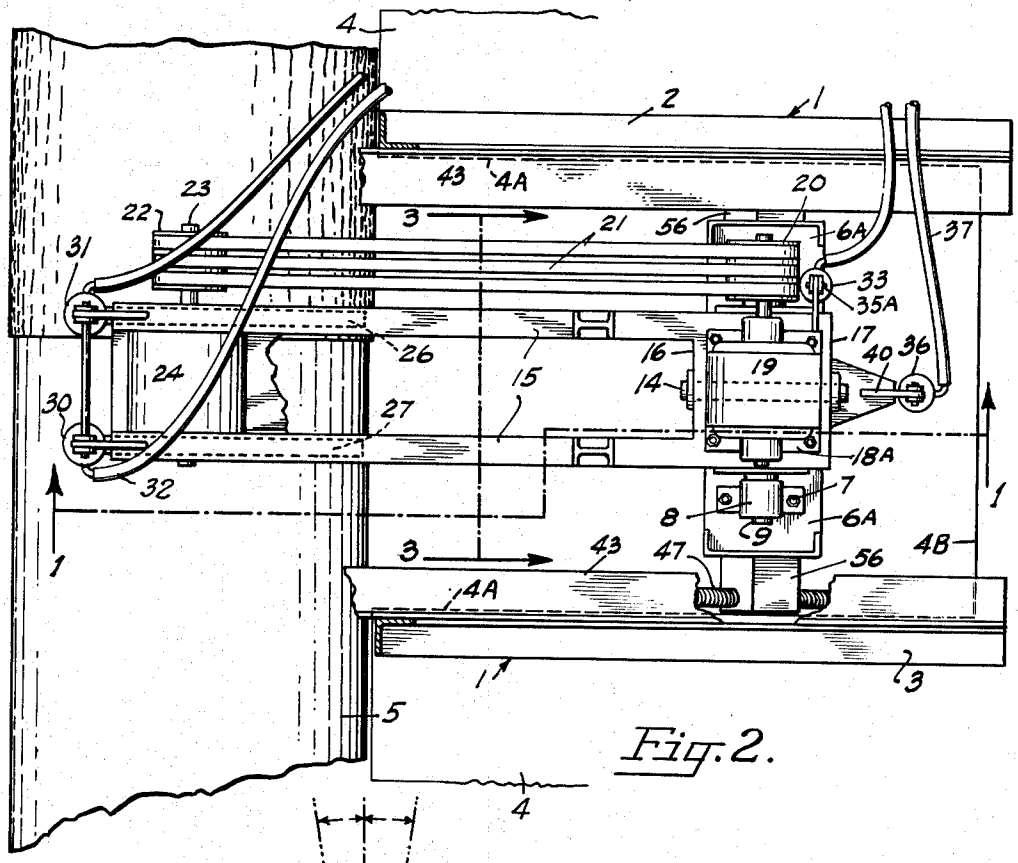


Fig. 2.

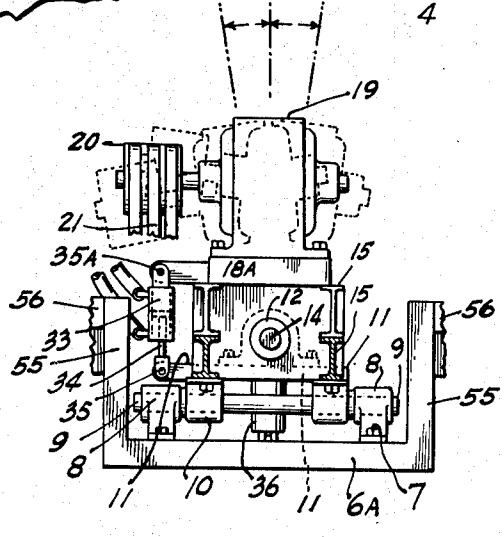


Fig. 3.

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LOG BARKING APPARATUS

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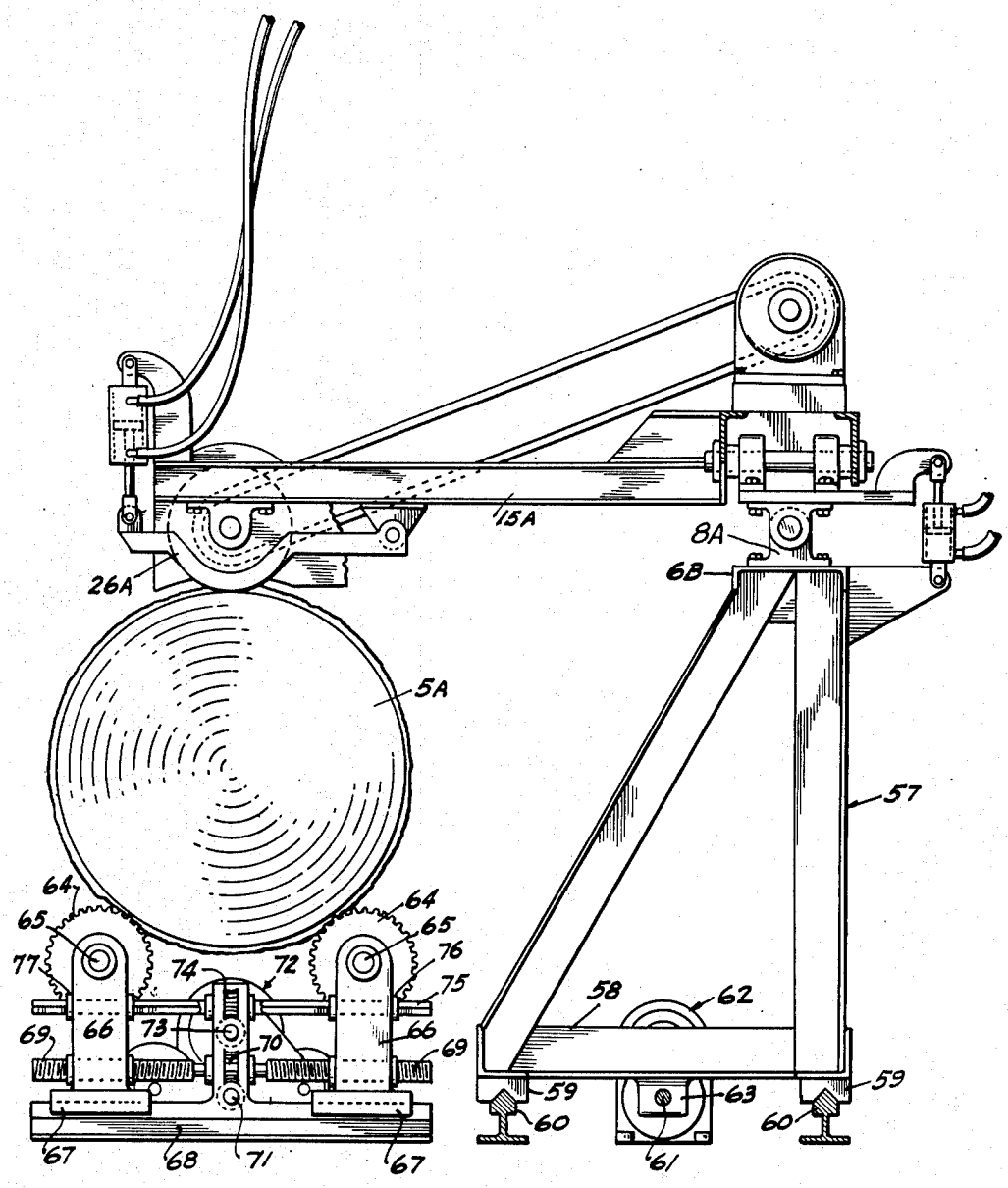


Fig. 4.

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LOG BARKING APPARATUS

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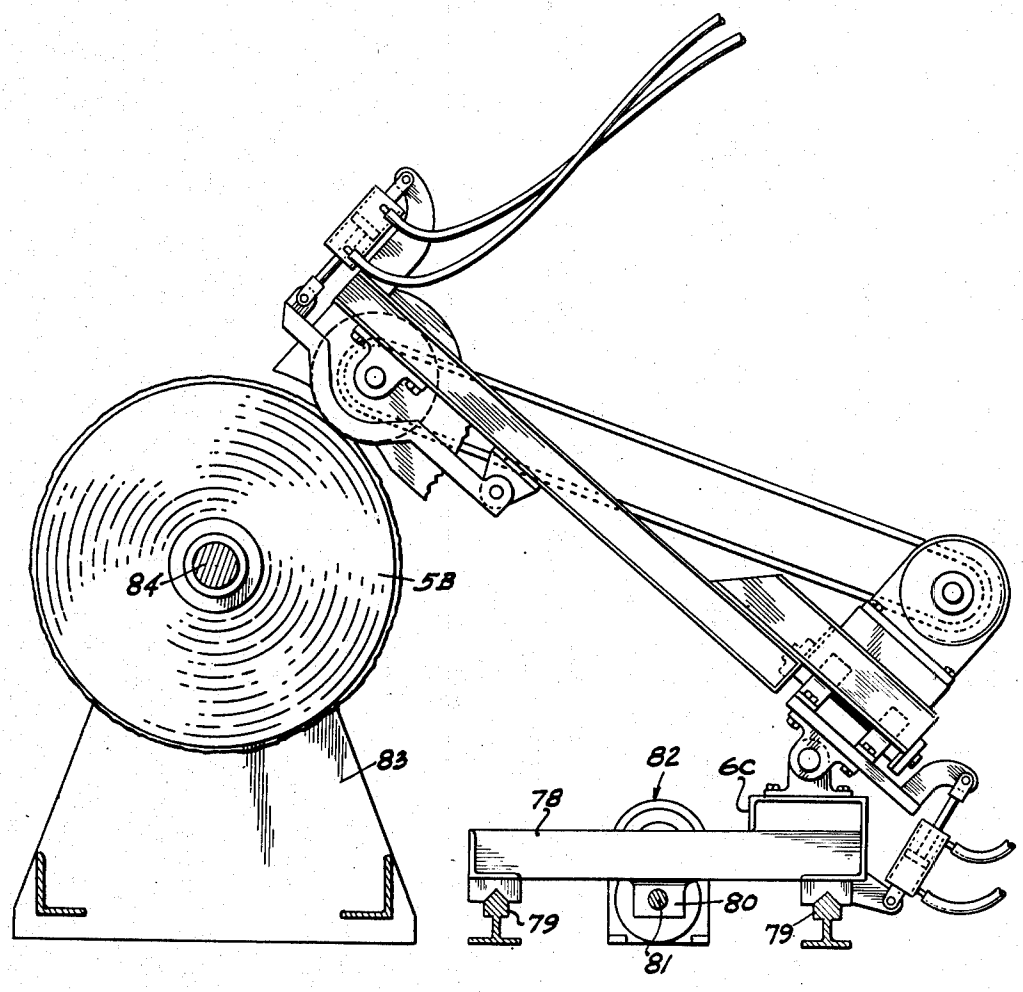


Fig. 5.

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UNITED STATES PATENT OFFICE

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LOG BARKING APPARATUS

Charles E. Prentice, Portland, Oreg.

Application May 21, 1951, Serial No. 227,297

1 Claim. (Cl. 144—208)

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This invention relates to improvements in log barking apparatus of the type shown and described in United States Patent No. 2,259,584 dated October 21, 1941. As therein pointed out the invention relates particularly to log barking machines of the type described wherein a power driven rotary tool is employed to remove the bark from successive areas presented by rotation of the log in combination with longitudinal movement thereof in progressive process.

It is one of the principal objects of the present invention to provide apparatus of this character which is of simple, efficient, durable, compact construction and accurately adjustable to logs of all diameters and also wherein the cutting tool is adjustable in lateral inclination in conformity with the taper of a log in the direction of its length.

The foregoing and other objects will appear as my invention is more fully hereinafter described in the following specification, illustrated in the accompanying drawing and finally pointed out in the appended claim.

In the drawings:

Figure 1 is a side elevation of the invention shown operatively engaged with a rotatable log. This view is partly in section and is taken approximately along the line 1—1 of Figure 2.

Figure 2 is a fragmentary top plan view of Figure 1 taken approximately along the line 2—2 of Figure 1.

Figure 3 is a sectional end elevation taken approximately along the line 3—3 of Figure 1.

Figure 4 is a side elevation of a modified form of the invention including means for rotatably supporting a log to be dealt with.

Figure 5 is a view similar to Figure 4 illustrating a further modified form of the invention and rotatable log-supporting means.

Referring now more particularly to the drawings:

In the form of the invention illustrated in Figures 1, 2 and 3 reference numeral 1 indicates generally a base made up of spaced-apart parallel members in the form of angle irons 2 and 3 or channel sections if so desired. These base members are secured in spaced-relation to each other and mounted upon a support indicated at 4 which may be either in the form of a float anchored in a mill pond or a platform extending out into the pond and against the outside surface of which a log 5 may be drawn, the log being rotated with respect to the platform by any approved means, such, for example, as the chains shown and described in the above identified

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United States patent, or by the mechanical means forming part of this present invention as hereinafter pointed out. The front of the support is formed with an inwardly extending recess having vertical side walls 4A and a back wall 4B to permit the apparatus to operate below as well as above the top surface of the float.

The approximate water level in relation to the support 4 and the log 5 is indicated at 6. A movable cross member 6A is arranged transversely between the base members 2 and 3 and secured as at 7 to the cross-member is a pair of aligned bearings 8 through which is rotatably mounted a shaft 9. Secured as at 10 to the shaft 9 and rockable therewith is a platform 11 and to this platform is secured a pair of aligned bearings 12 and 13 arranged at right-angles to the shaft 9. Within the bearings 12 and 13 is rotatably mounted a shaft 14 to which is secured one end of a swingable carriage generally indicated at 15 by means of spaced-apart end plates 16 and 17 secured as at 17A to the shaft. The carriage is made up of spaced apart I beams whose inner ends are welded to the plate 16. It is to be noted (see Fig. 1) that the plates 16 and 17 are spaced apart from the platform 11 and free to move with respect thereto. By this arrangement the carriage 15 may be swung upwardly and downwardly in a vertical plane about the shaft 9 and tilted transversely to either side about the shaft 14.

Secured as at 18 across the end plates 16 and 17 of the carriage 15 by means of a base 18A and movable therewith in both directions as aforesaid is an electric motor 19 provided with a driving pulley 20 embraced by a belt or belts 21 also embracing a driven pulley 22 secured to a shaft 23 rotatably mounted by means of bearings 23A to the opposite or outer end of the carriage 15. Secured to the shaft 23 and rotatable therewith is any approved type of rotary cutterhead 23B covered by a hood 24 and adapted for cutting engagement with the bark of logs of any diameter by reason of the swingable adjustment of the carriage in a vertical plane as aforesaid.

For minutely adjusting the cutterhead with respect to the periphery of the log for regulating the depth of cut of the cutterhead I pivotally attach as at 25 to the underside of both beams of the carriage 15, the inner ends of a pair of shoes 26 and 27 whose opposite or outer ends are pivotally connected as at 28 to alternately operable piston rods 29 mounted by means of their pistons within operating cylinders 30 and 31 each of which is in open communication with

pressure and exhaust lines 32 and 32' controllable by any approved type of operating mechanism, not shown.

The rocking of the carriage 15 to either side is accomplished by a double-acting pressure cylinder 33 (see Fig. 3) having a piston therein connected by means of its piston rod 34 as at 35 to the platform 11 upon which the bearings 12—13 and shaft 14 are mounted. The top end of the cylinder is connected as at 35A to the motor base 18A secured across the end plates 16 and 17 of the carriage.

The swinging of the frame upwardly and downwardly in a vertical plane as aforesaid is accomplished by a cylinder 36 in open communication with alternate pressure and exhaust lines 37—38 and provided on its interior with a piston connected by means of its rod 39 to an arm 40 extending rearwardly from the end of the platform 11 which as aforesaid is secured to the shaft 9 which is rockable in the bearings 8 and 9.

Mounted to the inner ends of the base members 2 and 3 by welding, bolting, or the like, are two angularly disposed frames generally indicated at 42 each made up of a pair of vertically spaced-apart angle irons 43 and 44 secured in spaced relation to each other by bearing blocks 45 and 46 at each of their ends. Rotatably mounted within each pair of bearing blocks in each frame is a screw shaft 47, each of which is provided at one of its ends with a driven sprocket wheel 48 embraced by a sprocket chain 49 embracing and driven by a driving sprocket 50 connected by means of a shaft 51 through any approved type of gear reduction or power transmission means 52 operatively engaged with and driven by a motor 53. The motor and transmission are mounted upon any approved type of support 54 secured to the outer end of the frames 42 and extending upwardly therefrom.

Secured to each end of the cross member 6A is an upright member 55 and the upper end of each upright member is provided with a squared projection 56 bored and internally threaded for operative engagement with the screw shafts 47 for movement therealong in either direction in the manner of a traveler nut, when the shafts are rotated. By this arrangement and upon operation of the motor 53 the carriage and its related parts may be advanced forwardly and upwardly with respect to the base 1 to accommodate the diameter of the log 5 being dealt with.

In the modified form of the invention illustrated in Figure 4 the cutterhead, the adjusting shoes 26A, the carriage 15A and its related parts, and the operating mechanism for swinging and tilting the carriage are the same as those shown in the first form of the invention. However, the cross member 6B and the aligned bearings 8A are fixedly mounted upon an elevated vertical support in the form of an A frame 57. The base 58 of the frame is provided with shoes 59 slidable along parallel tracks 60 by means of a worm or screw shaft 61 driven by a motor and power transmission means as at 62 and extending through a threaded block 63 secured to the bottom of the base 58. In this form of the invention the log 5A instead of floating in water adjacent a float is rotatably mounted upon and supported by aligned pairs of worm gears 64 secured to shafts 65 rotatably mounted in the upper ends of standards 66 whose bases 67 are slidably mounted on parallel tracks 68. The standards and their worm gears 64 in each pair are adjustable toward and away from each other along their respective track by means of an adjusting screw shaft 69 provided with a worm gear 70 driven by a screw shaft 71 which in turn is driven by any approved motor and power transmission means generally indicated at 72. One shaft 73 of the power transmission means is engaged with a worm gear 74 secured to a shaft 75 which is provided with worms 76 and 77 operatively engaged with the worm gears 64 and adapted to actuate the same for rolling the log while at the same time the barking apparatus is being moved along the tracks 60.

In the further modification illustrated in Figure 5 the carriage and its related parts and operating mechanisms are the same as those shown and described in the other forms of the invention but the cross member 6C is mounted upon a base 78 movable along tracks 79 by means of a traveler block 80 secured to the underside of the base and engaged with a worm 81 driven by motor and power transmission means generally indicated at 82. The log 5B being dealt with in connection with this form of the invention is rotatably mounted between a pair of standards 83 in whose upper ends are journaled inwardly extending shafts 84 pointed on their inner ends and driven into the end of the log so that the log may rotate in the same manner as a work piece supported between lathe centers.

While I have shown a particular form of embodiment of my invention, I am aware that many minor changes therein will readily suggest themselves to others skilled in the art without departing from the spirit and scope of the invention. Having thus described my invention, what I claim as new and desire to protect by Letters Patent is:

Log barking apparatus comprising in combination, a base, a pair of tracks secured to one end of said base and extending forwardly and upwardly therefrom, an elongated carriage pivotally attached at one of its ends to a second base for swinging movement in a vertical plane and in lateral inclination with respect to said second base, a cutting tool rotatably mounted at the opposite end of said carriage and operatively connected with a motor carried by said second base, said second base being slideably mounted within said tracks for movement in the direction of the length of said tracks for presenting said cutting tool to logs of various diameters.

References Cited in the file of this patent

UNITED STATES PATENTS

Number	Name	Date
1,294,275	Johnson et al.	Feb. 11, 1919
1,358,993	Shaw	Nov. 16, 1920
1,673,265	Pangborn	June 12, 1928
2,259,584	Prentice	Oct. 21, 1941
2,576,967	Pauley	Dec. 4, 1951