Dec. 19, 1933. M. ELSKAMP 1,939,674

BARREL SANDING MACHINE

Filed March 11, 1933 4 Sheets-Sheet 1

Fig. 1.

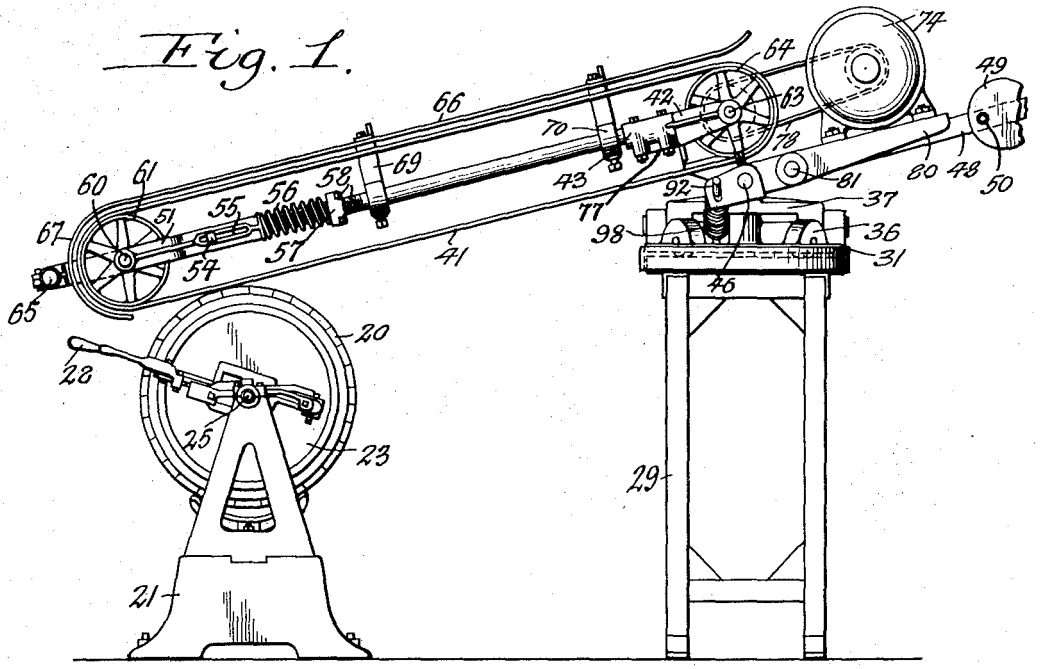
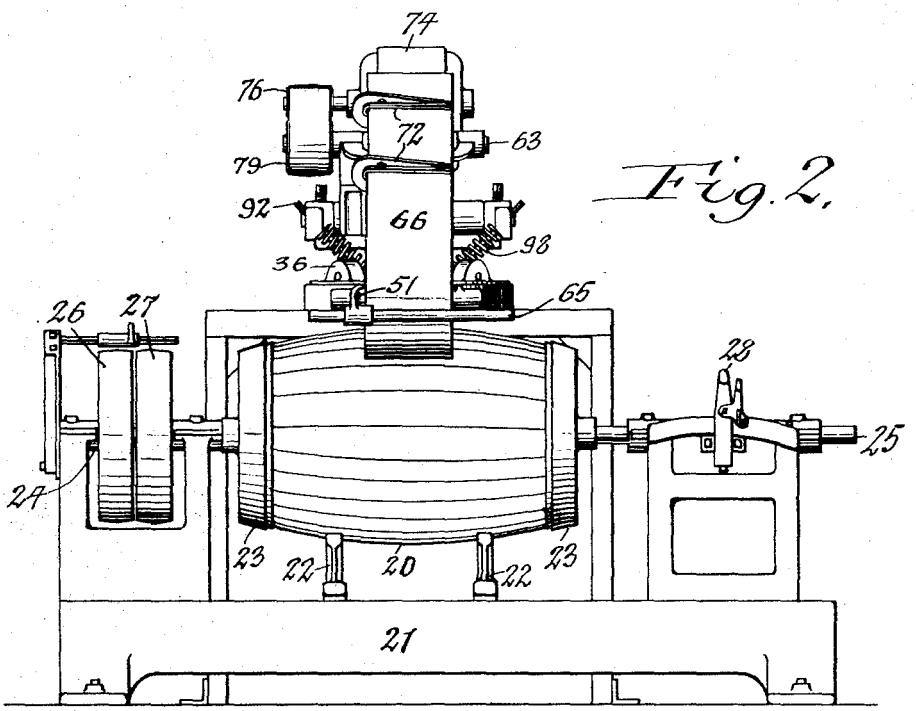


Fig. 2.



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Dec. 19, 1933. M. ELSKAMP 1,939,674

BARREL SANDING MACHINE

Filed March 11, 1933 4 Sheets-Sheet 2

Fig. 3.

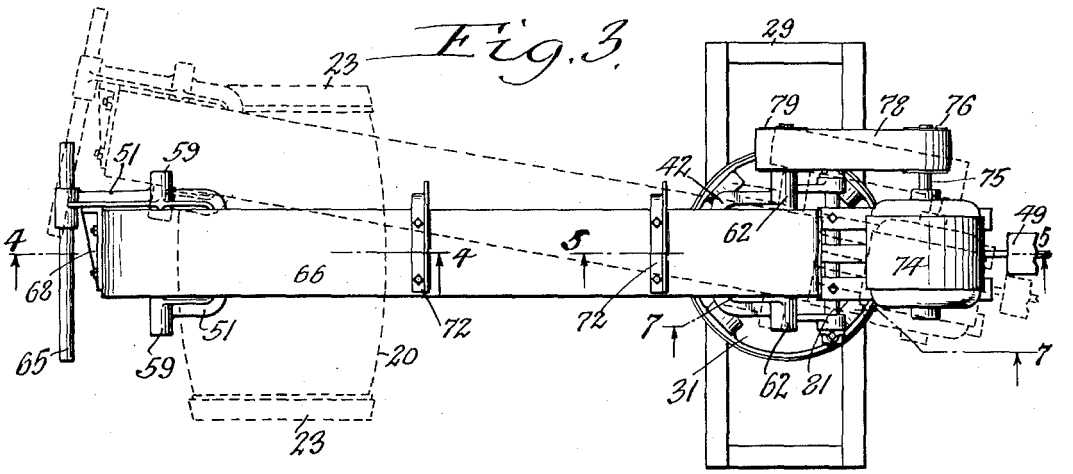
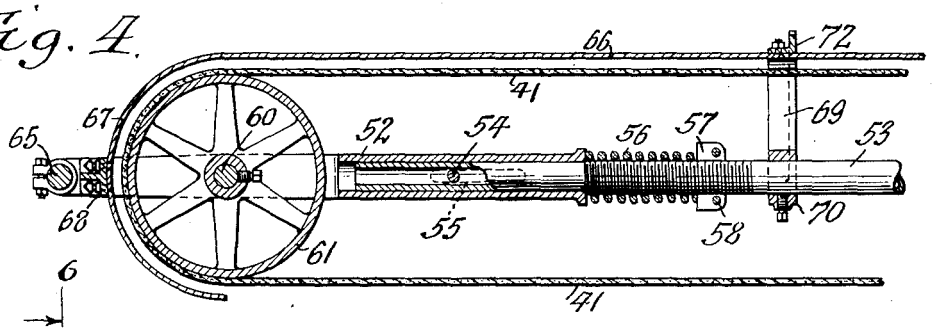


Fig. 4.



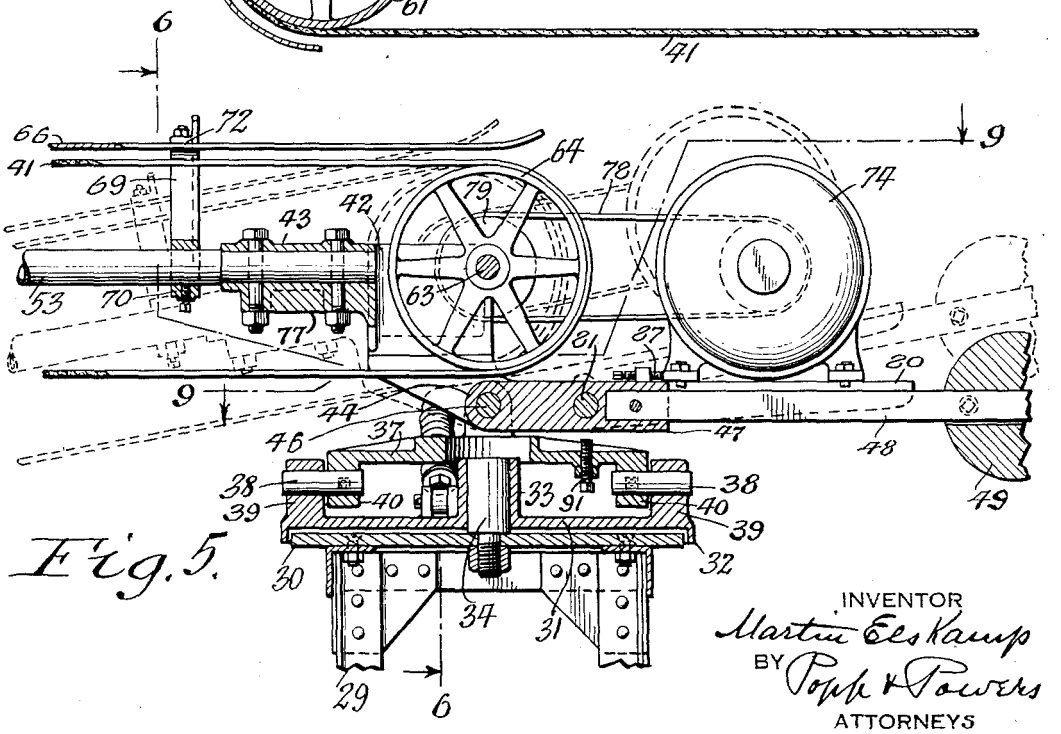


Fig. 5.

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Dec. 19, 1933. M. ELSKAMP 1,939,674

BARREL SANDING MACHINE

Filed March 11, 1933 4 Sheets-Sheet 3

Fig. 6.

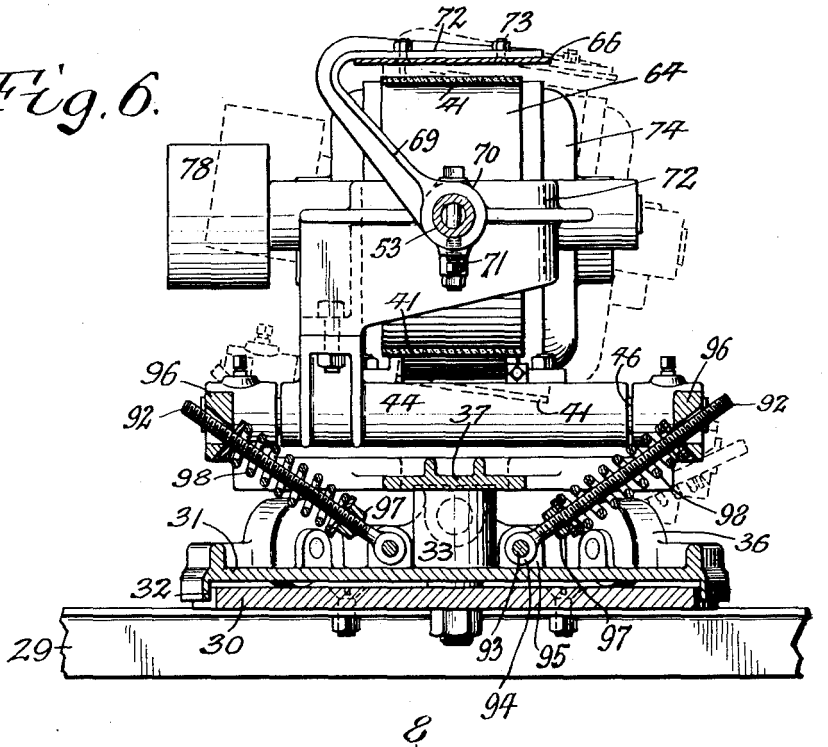


Fig. 7.

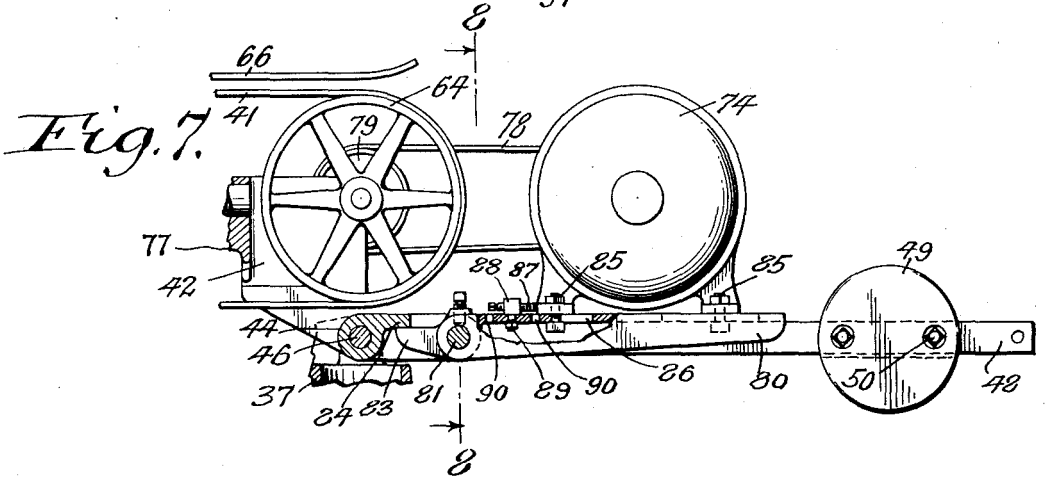
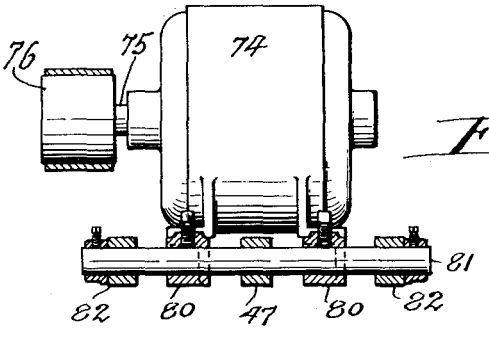


Fig. 8.



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Dec. 19, 1933. M. ELSKAMP 1,939,674

BARREL SANDING MACHINE

Filed March 11, 1933 4 Sheets-Sheet 4

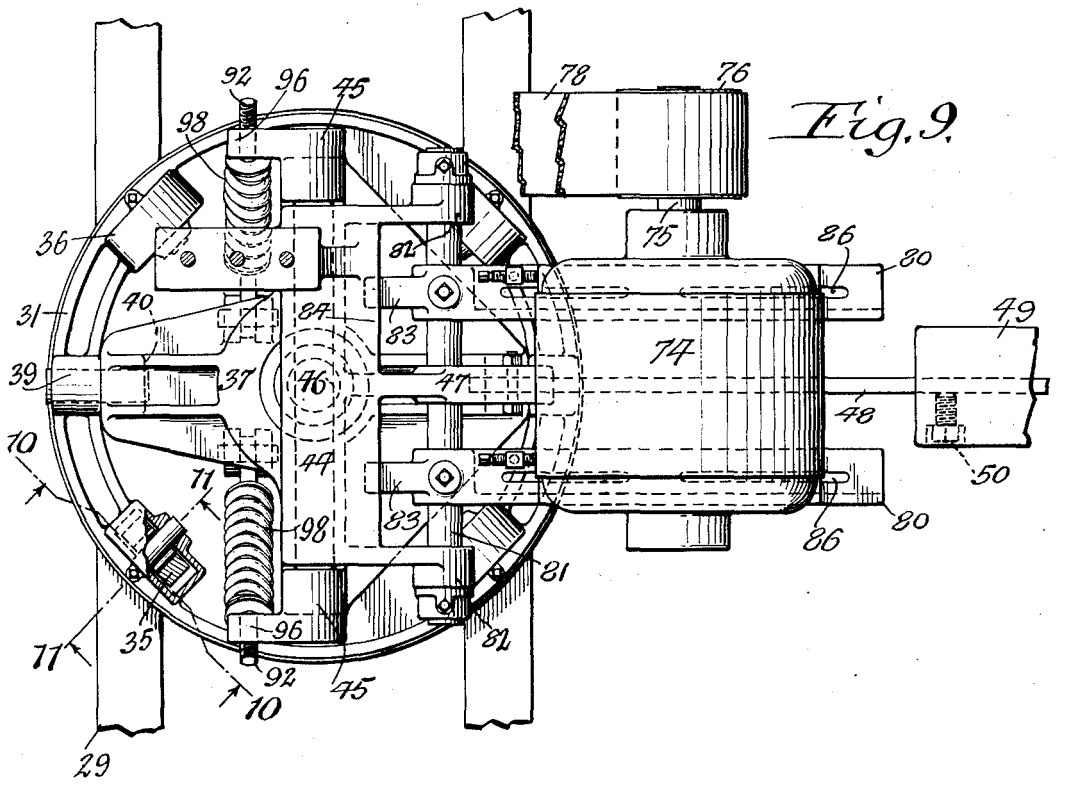


Fig. 9.

Fig. 10.

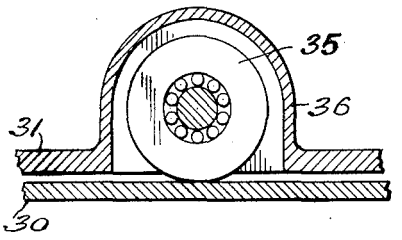
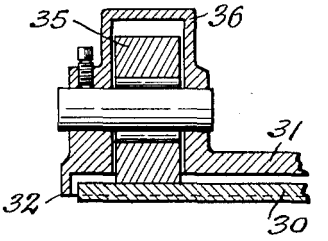


Fig. 11.



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Patented Dec. 19, 1933 1,939,674

UNITED STATES PATENT OFFICE

1,939,674

BARREL SANDING MACHINE

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Application March 11, 1933. Serial No. 660,391

9 Claims. (Cl. 51—145)

This invention relates to a machine for sanding or polishing the exterior of barrels having a bilged or bulging center part and narrow reduced or tapering ends on opposite sides of this bilge, such barrels being commonly used for containing beer and other liquids.

Sanding of the periphery of such barrels has heretofore been effected by machines which included a travelling sanding belt which was engaged by one of its stretches with the periphery of the barrel for the purpose of smoothing or polishing the same by means of the abrasive on the outer surface of this belt. In these prior machines the sanding belt was only capable of moving in horizontal and vertical planes for the purpose of engaging the belt with different parts of the barrel surface, and in the operation of such machines the operative stretch of the sanding belt was tilted or inclined in one direction or the other relative to the supporting pulleys for engaging the operative stretch with one or the other of the tapering ends of the barrel. This is objectionable in that it causes an uneven strain on the sanding belt and also produces an uneven wear on the abrasive surface.

One of the objects of this invention is to so mount the sanding belt that the same can be tilted bodily toward either side so that the operative stretch of the belt can be tilted transversely at an angle which is substantially parallel with either of the tapering or inclined ends of the barrel and thus enable these inclined or tapering surfaces to be sanded, polished or smoothed without deflecting one part of the sanding belt more than another, and thus insuring an even strain thereon and uniform wear of its abrading surface.

Another object of this invention is to provide simple and efficient means for yieldingly holding the sanding belt in a normal central position in which the lower or operative stretch of the belt is arranged transversely in a horizontal position and is free to be tilted laterally by the operator in either direction for engaging the sanding belt with a uniform pressure against either inclined end of the barrel which is to be sanded.

A further object of this invention is to so drive the sanding belt by means of a motor which is mounted and operatively connected with the sanding belt in such manner that the weight of the motor is utilized to keep taut the belt which transmits the power of the motor to the sanding belt.

An additional object of this invention consists in the provision of certain improved details of construction as will hereinafter more fully appear.

In the accompanying drawings:

Figure 1 is a side elevation of a barrel sanding machine embodying my improvements.

Figure 2 is a front elevation of the same.

Figure 3 is a top plan view thereof.

Figure 4 is a fragmentary vertical longitudinal section of the front part of the sanding machine, taken on line 4—4 Fig. 3, on an enlarged scale.

Figure 5 is a similar view of the rear part of the machine, taken on line 5—5 Fig. 3.

Figure 6 is a vertical transverse section, taken on line 6—6 Fig. 5.

Figure 7 is a fragmentary vertical longitudinal section, on an enlarged scale, taken on line 7—7 Fig. 3.

Figure 8 is a fragmentary vertical transverse section, taken on line 8—8 Fig. 7.

Figure 9 is a fragmentary horizontal section, on an enlarged scale, of the rear part of the machine, taken on line 9—9 Fig. 5.

Figures 10 and 11 are fragmentary vertical sections, taken on the correspondingly numbered lines in Fig. 9.

In the following description similar characters of reference indicate like parts in the several figures of the drawings:

The numeral 20 represents a barrel of the form which this sanding machine is more particularly intended to sand, smooth or polish on its peripheral outer surface, which barrel bulges or is of large diameter midway of its length and tapers or inclines from its central or large part toward opposite ends thereof. This barrel may be supported in position for operation thereon by the sanding machine in any suitable manner and the means for this purpose which are shown in the drawings are therefore to be merely regarded as an example of those now in common use.

As there shown, these holding means comprise a main frame 21 provided with two saddles 22 upon which the barrel rests with its underside, two clamping heads 23 engaging with opposite ends of the barrel and provided respectively with horizontal spindles or trunnions 24, 25 which are journaled in suitable bearings on the holder frame 21, means for rotating the barrel during the sanding operation and arresting this rotation when the sanding operation is completed which include tight and loose pulleys 26, 27 mounted on the shaft 24, and means for moving the shaft 25 toward and from the shaft 24 for the purpose of clamping the barrel between the heads 23 or releasing the same, which means include a lever 28 mounted on the main frame and operatively connected with the spindle 25.

The sanding machine which embodies my improvements includes a main frame 29 which is arranged in rear of the barrel holder and supported upon the floor or otherwise and may be of any suitable or approved construction. The operative mechanism of the sanding machine

embodying my improvements is mounted on the upper end of the main frame 29 and extends forwardly therefrom over the barrel holder into a position which permits the operator to manipulate the same while standing in front of the barrel. The preferred form of this sanding apparatus, as shown in the drawings, is constructed as follows:—

On top of the main frame 29 is arranged a horizontal supporting plate or table 30 which preferably consists of sheet metal having the form of a circular disk, and may be secured to the frame in any suitable manner so as to form an annular track or surface upon which the supports for the sanding mechanism may be rotated in a horizontal plane. Above this supporting plate is arranged a turret 31 which is rotatable in a horizontal plane and provided at its margin with an annular depending flange 32 which overhangs the edge of the supporting plate 30, as best shown in Figs. 5 and 6. This turret is of circular form and provided with a central tubular hub 33 which turns on the vertical pivot 34 projecting upwardly from the central part of the plate 30 into the hub 33. The marginal part of the turret is supported at suitable intervals by rolling members engaging the upper side of the marginal part of the plate 30, which rolling members are preferably four in number and each of these consisting of a roller 35 journaled in a pocket 36 on the turret and engaging its lower part with the upper surface of the plate 30, as best shown in Figs. 6, 9, 10 and 11.

Above the turret is arranged a yoke 37 which is pivotally connected with the turret so as to be capable of rocking vertically and laterally relatively to the length of the machine, this being preferably accomplished by means of two longitudinal horizontal pivot pins or trunnions 38, each of which turns with its outer end in a bearing formed in a lug 39 projecting upwardly from a marginal part of the turret while its inner end is secured in a lug 40 depending from the marginal part of the yoke 37 and arranged adjacent to the inner side of the respective turret lug, 39, as best shown in Fig. 5.

Upon this yoke is mounted a vertically swinging operating frame which carries the means whereby the sanding belt is movably supported so that the latter may be propelled and engaged with different parts of the periphery of the barrel which is to be sanded. Although this operating frame may be variously constructed the same is preferably so organized that the same is capable of moving bodily in a vertical plane lengthwise of the machine for the purpose of moving the sanding belt into and out of engagement with the periphery of the barrel, also capable of moving bodily horizontally for engaging the sanding belt with different parts of the barrel throughout the length thereof, and also tilting the sanding belt transversely the length of the machine for the purpose of inclining the operative stretch of the sanding belt to conform with the inclination of either of the tapering ends of the barrel on opposite sides of its central bilge.

In its preferred form this operating frame is constructed as follows:

Referring more particularly to Figs. 1, 4 and 5, the numeral 77 represents the rear section of the operating frame which is pivotally connected with the yoke 37 so as to be capable of swinging in a vertical plane lengthwise of the machine, and a front section which is adjustably connected with the rear frame section so as to permit of tightening the sanding belt 41 which is mounted on the operating frame. The rear section of the operating frame has generally the form of a rearwardly extending fork 42, the central part of which is provided with a forwardly projecting sleeve 43 and the arms of which are connected on their underside by a cross-piece or bridge 44 arranged between two upright lugs 45 on the yoke 37 at right angles to the depending lugs 40. This cross-piece 44 is pivotally connected with the lugs 45 by means of a horizontal transverse pin 46 and is provided with a rearwardly projecting lug 47 to which the front end of a counterbalancing bar or arm 48 is secured. Upon the rear end of the arm 48 is mounted a counterbalancing weight 49 which may be adjusted horizontally and lengthwise of the machine toward and from the axis 46 for the purpose of counterbalancing the operating frame and the parts which are mounted thereon, said counterbalancing weight being provided with set screws 50 for engaging the arm 48 and holding the counterbalancing weight in position after it is adjusted to the desired position.

The front section of the operating frame also has the general form of a forwardly extending fork 51, the rear cross bar of which is provided with a rearwardly projecting guide tube 52 which is operatively connected with the rear section of the operating frame by means which permit this front fork to move lengthwise relative to the rear fork, but prevent these parts from turning in a vertical transverse plane relatively to each other.

In the preferred construction these means include a horizontal longitudinal supporting rod 53 having the form of a tube or pipe which is connected at its rear end with the sleeve 43 of the rear section of the operating frame, while the front end of this supporting bar 53 extends into the sleeve 52 of the front fork of the operating frame and is connected therewith by means of a transverse pin 54 passing horizontally through the bar or pipe 53 and projecting through longitudinal slots 55 in the adjacent part of the front fork tube 52, as shown by dotted lines in Fig. 5 and by full lines in Fig. 1, thereby forming a spline joint between the front and rear sections of the operating frame which permits the front section to move lengthwise relative to the rear section but prevents the front section from turning relatively to the rear section.

The front section of the operating frame is also yieldingly moved forwardly relatively to the rear section by means of a spring 56 surrounding the front part of the bar 53 and bearing at its front end against the rear end of the fork tube 52, while its rear end bears against a split adjusting nut 57 which may be turned on the screw threaded front part of the bar 53 for obtaining the desired tension in the spring 56, after which this nut is held against displacement by tightening the screws 58 which connect the sections thereof and press them against opposite sides of the bar 53.

The arms of the front fork are provided with bearings 59 in which is journaled a transverse pulley shaft or axle 60, and on this shaft is mounted a front pulley 61 which is arranged between the arms of the front frame fork. The rear ends of the arms of the rear fork of the operating frame are provided with bearings 62 in which are journaled the opposite ends of a rear transverse pulley shaft 63. Upon this rear shaft 63 is secured a rear sanding belt pulley 64

which is arranged between the arms of the rear fork 42. The sanding belt 41 passes with its front and rear turns around the sanding belt pulleys 61 and 64 so as to provide a lower longitudinal operative stretch and an upper longitudinal return or inoperative stretch.

This sanding belt may be of any suitable and well-known construction so as to provide a comparatively smooth inner side which runs in contact with the supporting pulleys 61 and 64, while its outer side is provided with an abrasive coating of sand, emery or similar material for engagement with the periphery of the barrel which is to be sanded, and producing a sanding, smoothing or polishing effect on the same. This belt is of such a length that when applied to the pulleys 61, 64 the front pulley 61 will be somewhat in rear of its foremost position in which the cross pin 54 is arranged rearwardly of the front ends of the slots 55, as shown in Fig. 1, and the spring 56 is under tension and thereby enables the latter to exert a constant forward pressure on the front fork for keeping the sanding belt taut and automatically taking up any slack which may occur therein.

Means are provided for manipulating the operating frame for engaging the lower operative stretch of the sanding belt with different parts of the periphery of the barrel and also tilting the operating frame laterally in one direction or the other for the purpose of bringing the sanding belt in substantial parallelism with either of the inclined or tapering end portions of the barrel, these means consisting preferably of a handle or cross bar 65 mounted on the front end of one of the arms of the fork 51, as shown in Figs. 1, 2 and 3.

In order to protect the operator, who is handling the machine, from being injured by contact with the upper and front parts of the belt while the machine is in operation and also preventing injury to the operator in case the belt should break and parts of the same fly forward, protective means are provided which preferably include a flat longitudinal guard plate or wall 66 arranged lengthwise over the upper stretch of the sand belt, and a front wall 67 projecting downwardly in a curve from the front end of the top wall 67 and around the adjacent side of the front turn of the sanding belt, as best shown in Figs. 1—7. This guard may be supported in any suitable manner, but in the preferred construction the downwardly projecting front part of this guard is connected with one of the arms of the front fork 51 by means of a bracket 68 and the longitudinal upper part of this guard is supported by angular brackets, preferably two in number, each of which has an upright angular lower part 69 extending between the stretches of the sanding belt and provided at its lower end with a sleeve 70 which is secured by a set screw 71 with the adjacent part of the supporting bar 53, and a horizontal upper part 72 which extends from the upper end of the inclined part across the top of the upper guard plate 66 and is secured thereto by means of bolts 73, or any other suitable means.

Although various means may be provided for driving the sanding belt it is preferable to employ for this, driving means which also operate as part of the means for counterweighting the operating frame and the parts mounted thereon, and this form of driving mechanism, as shown in the drawings, is constructed as follows:

The numeral 74 represents an electric motor arranged in rear of the rear section of the operating frame and having its transverse shaft 75 provided with a driving pulley 76 from which motion is transmitted by a belt 78 to a driven pulley 79 on one end of the rear shaft 63 of the rear pulley, as best shown in Figs. 1, 2, 3, 5 and 8. This motor is mounted on a platform or base which projects rearwardly from the rear section of the operating frame so that the weight of the motor serves as an aid to counterbalance the weight of the operating frame and the parts mounted thereon, and this platform or base is also pivotally mounted on the rear part or section of the operating frame so that the weight of the motor and the platform on which it is mounted serves as a means for keeping the driving belt 78 taut and taking out any undue slack in the same.

In its preferred construction this motor platform includes a pair of horizontal longitudinal supporting bars 80 which carry the motor 74 on the upper sides thereof and which are connected at their front ends to a horizontal transverse rock shaft 81 which is journaled in suitable bearings 82 arranged on the rear section of the operating frame, as best shown in Figs. 1, 7, 8 and 9. The weight of the motor and its platform tend constantly to turn around the axis of the shaft 81 as a center which is arranged in rear of the axis of the horizontal shaft 46 which connects the operating frame with the yoke 37, whereby a rearward pull is constantly maintained upon the driving belt 78, so that the same is kept taut and the full power of the motor is transmitted to the sanding belt.

In order to prevent the platform and the motor from dropping too far in case of breakage of the belt 78 or while setting up the machine for making repairs, stop means are provided which limit the descent of the motor platform, which stop means, as shown in Figs. 7 and 9, consist of stop fingers 83 projecting forwardly from the arms 80 of the motor platform and adapted to engage with a stop flange 84 on the cross piece 42 when the motor and platform reach the predetermined downward limit of their bodily movement for tightening the belt, as shown in Fig. 7.

The electric motor is also capable of being moved lengthwise on the arms 80 of the supporting platform for the purpose of taking up the slack in the driving belt, which means in the present case comprise clamping bolts 85 passing through the legs of the motor and through longitudinal slots 86 in the arms of the motor platform. In addition to this, positive abutment means are provided on the motor platform for engagement with the motor and thereby positively hold the same against forward motion under the pull of the motor belt. These abutment means consist of horizontal abutment screws 87, each of which bears at its rear end against the front side of a motor leg, an abutment screw nut 88 which receives the abutment screw 87 and an abutment bolt or shank 89 projecting downwardly from the respective abutment screw 88 and adapted to engage with one or the other of a plurality of adjusting holes 90 formed in an annular row in the respective platform arm 80, as shown in Fig. 7. By shifting the motor rearwardly while the bolts 85 are loose the motor can be adjusted lengthwise on the platform within the limits of the slots 86, after which the bolts 85 may be tightened for holding the motor in place. After such adjustment of the motor has been effected, each of the shanks

or bolts 89 is engaged with the most available opening 90 in the respective platform arm 80 and then the screw 87 is turned so as to engage the adjacent leg or front part of the motor so as to positively hold the motor in its adjusted position and prevent the latter from slipping forward if the clamping bolts 85 are not sufficiently tight for this purpose.

Raising of the operating frame and the parts associated therewith is limited by means of a stop screw 91 arranged on the yoke 37 and adapted to be engaged by the underside of the arm 47 which projects rearwardly from the cross-piece 44 on the rear fork-shaped section of the operating frame, as shown in Fig. 5.

Due to the universal coupling of the operating frame with the main frame of the machine it is possible to shift the sanding belt in all directions and thus permitting this belt to be engaged into any position which enables the same to be engaged flatwise with all surfaces of a barrel, regardless of the position of the same relative to the horizon, and also enables the sanding belt to be engaged with all parts of the periphery of the barrel throughout the length thereof.

This universal motion is possible due to the vertical pivot 34 between the main frame and the turret 31 which permits the latter to turn in a horizontal plane, the longitudinal pivots 38 permit the yoke 37 to turn in a vertical plane crosswise of the turret, and the transverse pin 46 connecting the yoke with the operating frame permits the latter to be moved vertically.

When swinging the operating frame about the horizontal transverse pivot 46 the lower operative stretch of the sanding belt may be moved toward and from the periphery of the barrel which is to be operated upon, as shown by full lines and dotted lines in Fig. 5. Upon turning the operating frame and associated parts horizontally about the vertical pivot 34 as an axis, the sanding belt may be engaged with different parts of the periphery of the barrel throughout the length thereof, as shown by full and dotted lines in Fig. 3, and by turning the operating frame in a vertical plane about the longitudinal pins or trunnions 38 the sanding belt may be tilted from the horizontal position shown by full lines in Fig. 6 to the laterally tilted position shown in the same figure, so that the lower operative stretch of the sanding belt may be engaged flatwise or in a parallel position relative to the inclined surface which is being sanded, smoothed or polished, such as the opposite tapering ends of the barrel, thereby enabling the entire surface of the belt to be utilized most effectively without wearing one part of this belt more than the other, and also without causing this belt to be stretched unduly at its longitudinal edge portions, but instead insuring a uniform deflection of the sanding belt at all times and causing the same to operate uniformly and wear longer.

Means are provided for normally holding the operating frame yieldingly in its normal central position in which the lower or operative stretch of the sanding belt is arranged horizontally but permitting this belt to be tilted laterally in either direction from this neutral position for engaging the same in parallelism with the inclined or tapering ends of the barrel. These yielding centering means, in their preferred form, as shown in Figs. 1, 2, 6 and 9, comprise two upwardly diverging centering rods 92 which are arranged transversely above the turret and on opposite sides of the axis thereof, and each pivotally connected at its lower end with the adjacent part of the turret by means of a pivot pin 93 passing through an eye 94 at the lower end of the respective centering rod 92 and through upwardly projecting lugs 95 on the adjacent part of the turret, two abutment eyes 96 arranged on the rear section of the operating frame on opposite sides of the pivot pin 34, and each receiving the upper part of one of the centering rods 92, an adjusting screw nut 97 arranged on the lower part of each of the centering rods 92, and a centering or balancing spring 98 surrounding each of the centering rods 92, and bearing at its lower end against the adjusting screw 97 and at its upper end against the inner side of the respective abutment eye 96, as best shown in Fig. 6.

The tension of the springs 96 is so determined that when the operating frame is free the latter will be held in its normal central position in which the underside of the lower stretch of the sanding belt is arranged horizontally, as shown by full lines in Fig. 6, but the operator is nevertheless enabled by manual power to turn the operating frame laterally in a vertical plane, as shown partly by dotted lines in Fig. 6, for the purpose of bringing the operative stretch of the sanding belt into an inclined position in which it is substantially parallel with the angle of the peripheral portion of the barrel which is to be operated upon, and thus insure even engagement of the belt with the barrel and securing uniform wear and greater durability of the belt.

It will now be apparent from the foregoing description that by the use of the universal coupling between the operating frame and the main frame of the machine the sanding belt may be shifted into any desired position and thus enable the same to operate most effectively on the surface which is to be sanded and enable this to be done economically and without irregular wear on the sanding belt, thereby increasing the life of the latter and permitting the same to do a greater amount of work before requiring renewal or repair.

Moreover, the various improvements in the details which have been provided for mounting the operating frame on the main frame, rendering the operating frame adjustable, counterbalancing the operating frame, and also the means for mounting the motor and transmitting power from the same to the driving belt, renders the machine as a whole compact in construction, not liable to get out of order, and enables sanding of the character described to be effected economically and expeditiously.

I claim as my invention:

1. A machine for sanding barrels comprising a pedestal, a sanding belt adapted to engage the barrel to be sanded, pulleys supporting said belt, an operating frame upon which said pulleys are mounted, and universal coupling means interposed between the upper side of said pedestal and the underside of said frame whereby said operating frame is pivotally mounted on said pedestal and permitting of turning said operating frame in all directions on said pedestal.

2. A machine for sanding barrels comprising a pedestal, a sanding belt adapted to engage the barrel to be sanded, pulleys supporting said belt, an operating frame upon which said pulleys are mounted, and universal coupling means whereby said operating frame is pivotally mounted on said pedestal and permitting of turning said operating frame in all directions on said pedestal, said universal coupling means including a horizontally

rotatable turret connected by a vertical pivot with said pedestal, a transversely rocking yoke connected by horizontal longitudinal pivots with said turret, and a horizontal transverse pivot connecting said operating frame with said yoke.

3. A machine for sanding barrels comprising a pedestal, a sanding belt adapted to engage the barrel to be sanded, pulleys supporting said belt, an operating frame upon which said pulleys are mounted, universal coupling means whereby said operating frame is pivotally mounted on said pedestal and permitting of turning said operating frame in all directions on said pedestal, and spring means for yieldingly holding said operating frame in a central position relative to said turret.

4. A machine for sanding barrels comprising a pedestal, a sanding belt adapted to engage the barrel to be sanded, pulleys supporting said belt, an operating frame upon which said pulleys are mounted, universal coupling means whereby said operating frame is pivotally mounted on said pedestal and permitting of turning said operating frame in all directions on said pedestal, said universal coupling including a horizontal plate arranged on top of said pedestal, a rotatable turret having a disk arranged above said plate and provided centrally with an upwardly projecting tubular hub and on opposite sides of said hub with upwardly projecting lugs, a vertical pivot pin projecting upwardly from said plate into said hub, a yoke arranged above said disk and having downwardly projecting lugs on opposite sides of its center, and upwardly projecting lugs arranged at right angles to said downwardly projecting lugs and on opposite sides of said operating frame, horizontal pivot pins each pivotally connecting the downwardly projecting lugs of the yoke with one of the upwardly projecting lugs of said disk, and a horizontal pivot pin connecting said operating frame with the upwardly projecting lugs of said yoke.

5. A machine for sanding barrels comprising a pedestal, a sanding belt adapted to engage the barrel to be sanded, pulleys supporting said belt, an operating frame upon which said pulleys are mounted, universal coupling means whereby said operating frame is pivotally mounted on said pedestal and permitting of turning said operating frame in all directions on said pedestal, said universal coupling including a horizontal plate arranged on top of said pedestal, a rotatable turret having a disk arranged above said plate and provided centrally with an upwardly projecting tubular hub and on opposite sides of said hub with upwardly projecting lugs, a vertical pivot pin projecting upwardly from said plate into said hub, a yoke arranged above said disk and having downwardly projecting lugs on opposite sides of its center, and upwardly projecting lugs arranged at right angles to said downwardly projecting lugs, and on opposite sides of said operating frame, horizontal pivot pins each pivotally connecting the downwardly projecting lugs of the yoke with one of the upwardly projecting lugs of said disk, and a horizontal pivot pin connecting said operating frame with the upwardly projecting lugs of said yoke, and rolling bearing members mounted on said disk and running on the upper side of said plate.

6. A machine for sanding barrels comprising a pedestal, a sanding belt adapted to engage the barrel to be sanded, pulleys supporting said belt, an operating frame upon which said pulleys are mounted, universal coupling means whereby said operating frame is pivotally mounted on said pedestal and permitting of turning said operating frame in all directions on said pedestal, said universal coupling including a turret pivoted to turn horizontally on said pedestal and a yoke pivoted on said turret to turn vertically about a longitudinal axis thereon and pivoted to said operating frame so that the latter turns vertically about a transverse axis relative thereon, and resilient centering means for balancing said operating frame relatively to said turret including two upwardly diverging centering rods pivotally connected at their lower ends with said turret on opposite sides of the center of the latter, abutment eyes arranged on said operating frame on opposite sides of the longitudinal center thereof and receiving the upper ends, respectively, of said centering rods, screw nuts arranged on said centering rods, and springs each arranged upon one of said centering rods and engaging its opposite ends with the screw nut thereon and the respective abutment eye.

7. A barrel sanding machine comprising a pedestal, an operating frame having its rear end pivotally mounted on said pedestal to turn vertically and projecting with its front end from one side of said pedestal, a driving shaft journaled on the rear part of said frame and having a driving pulley, sanding belt pulleys mounted respectively on the driving shaft and the front end of said frame, a vertically swinging platform pivoted on said frame below said driving shaft, a motor mounted on said platform and having a motor pulley, a belt passing around said motor pulley and said driving pulley, and stop means for limiting the turning action of said platform under the weight of said motor.

8. A barrel sanding machine comprising a pedestal, an operating frame having its rear end pivotally mounted on said pedestal to turn vertically and projecting with its front end from one side of said pedestal, a driving shaft journaled on the rear part of said frame and having a driving pulley, sanding belt pulleys mounted respectively on the driving shaft and the front end of said frame, a vertically swinging platform pivoted on said frame below said driving shaft, a motor mounted on said platform and having a motor pulley, a belt passing around said motor pulley and said driving pulley, and means for adjusting said motor on said platform toward and from the axis of the latter.

9. A barrel sanding machine comprising a pedestal, an operating frame having its rear end pivotally mounted on said pedestal to turn vertically and projecting with its front end from one side of said pedestal, a driving shaft journaled on the rear part of said frame and having a driving pulley, sanding belt pulleys mounted respectively on the driving shaft and the front end of said frame, a vertically swinging platform pivoted on said frame below said driving shaft, a motor mounted on said platform and having a motor pulley, a belt passing around said motor pulley and said driving pulley, and means for adjusting said motor on said platform toward and from the axis of the latter, including bolts secured to said motor and passing through longitudinal slots in said platform, abutment screw nuts having threaded adjusting shanks each adapted to be secured in one or another of a longitudinal row of openings in said platform, and tightening screws each working in one of said abutment screw nuts and engaging with the inner side of said motor.

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