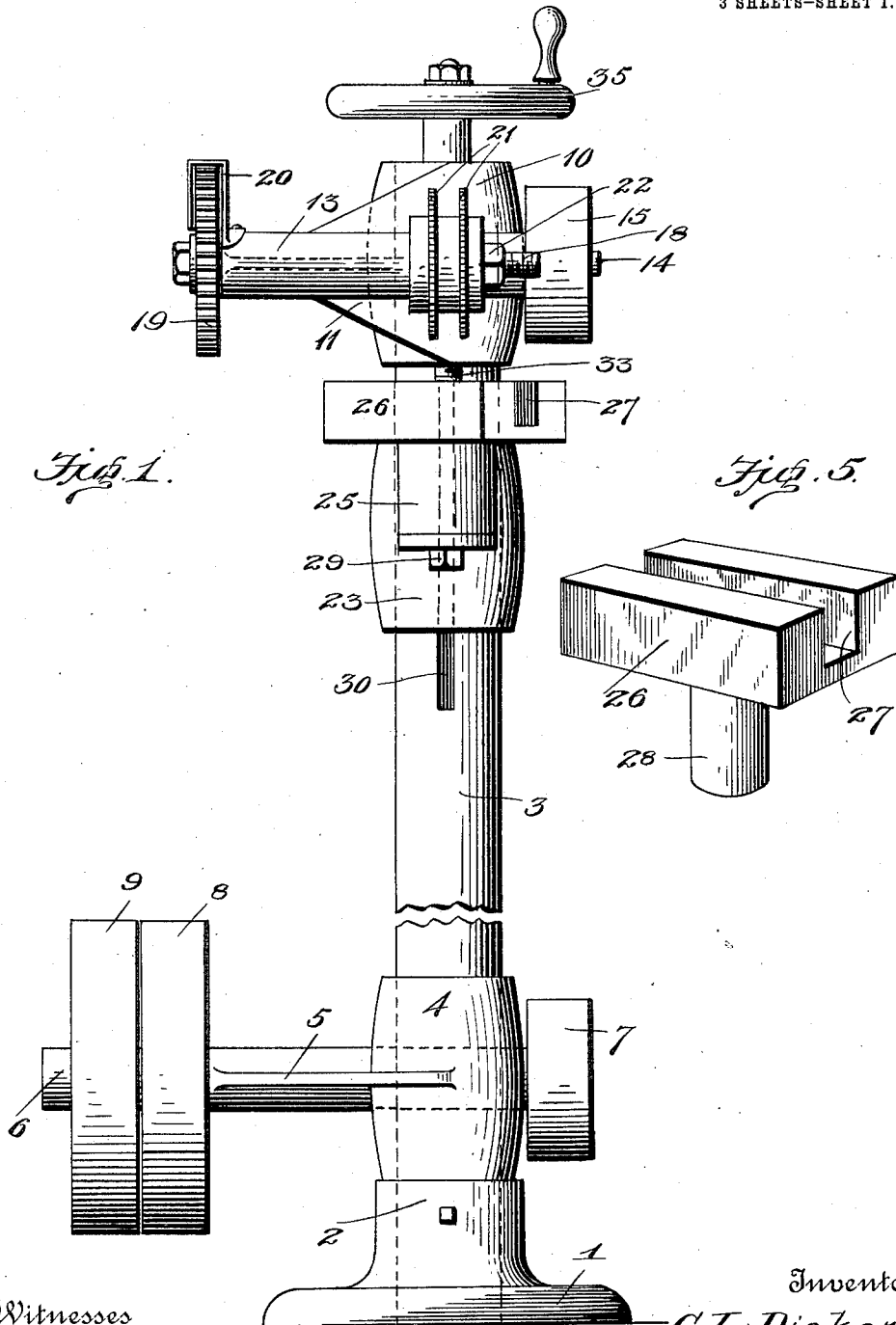


C. L. DICKERT.
SAWING MACHINE FOR CYLINDER PACKING RINGS.
APPLICATION FILED SEPT. 15, 1911.

1,032,277.

Patented July 9, 1912.

3 SHEETS-SHEET 1.



Witnesses

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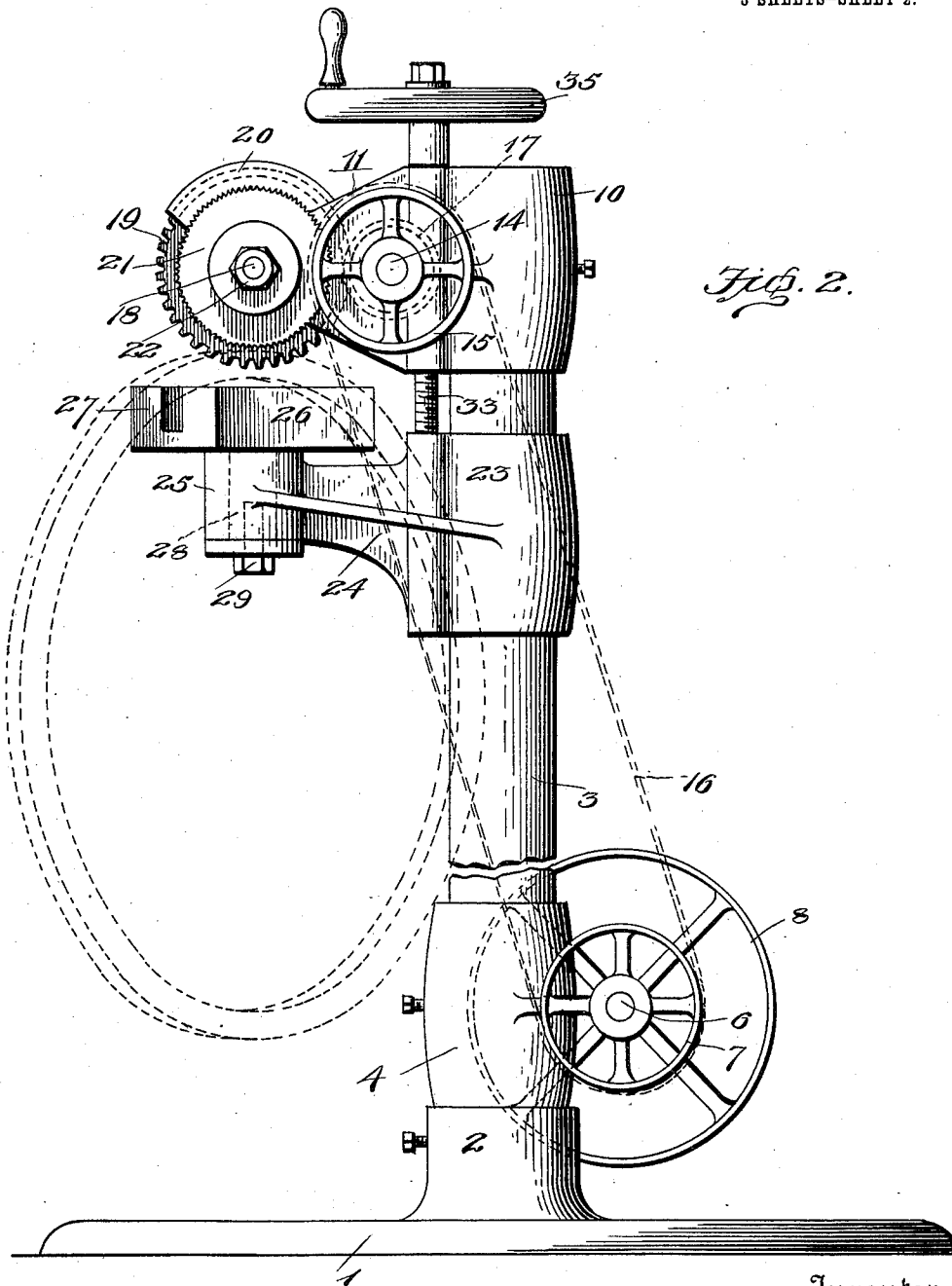


Fig. 2.

Witnesses
C. E. Hunt.
E. E. Hunt.

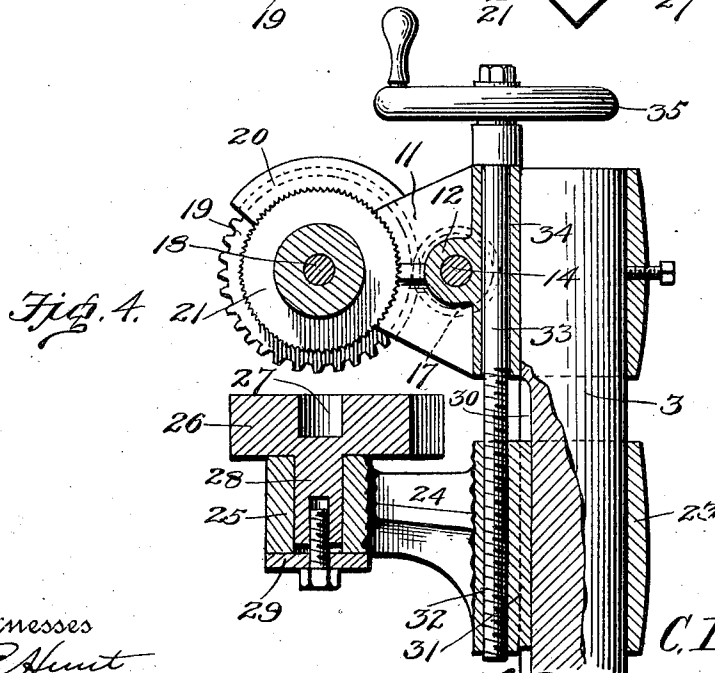
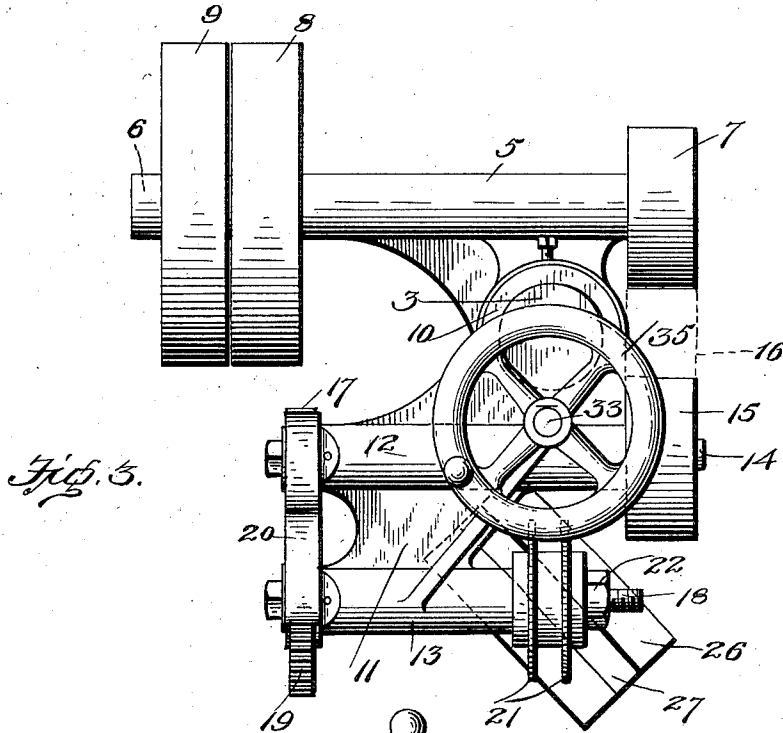
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UNITED STATES PATENT OFFICE.

CURTIS LEE DICKERT, OF MACON, GEORGIA, ASSIGNOR OF ONE-THIRD TO CHARLES W. RICE AND ONE-THIRD TO WALTER A. CHAPMAN, OF MACON, GEORGIA.

SAWING-MACHINE FOR CYLINDER PACKING-RINGS.

1,032,277.

Specification of Letters Patent.

Patented July 9, 1912.

Application filed September 15, 1911. Serial No. 649,584.

To all whom it may concern:

Be it known that I, CURTIS LEE DICKERT, a citizen of the United States, residing at Macon, in the county of Bibb and State of Georgia, have invented certain new and useful Improvements in Sawing-Machines for Cylinder Packing-Rings; and I do declare the following to be 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.

This invention relates to improvements in sawing machines and particularly to machines for sawing cylinder packing rings.

One object of the invention is to provide a machine of this character having an improved construction and arrangement of saw supporting and operating mechanism.

Another object is to provide an improved construction and arrangement of adjustable work supporting table.

With these and other objects in view, the invention consists of certain novel features of construction, and the combination and arrangement of parts as will be more fully described and claimed.

In the accompanying drawings: Figure 1 is a front elevation of my improved sawing machine; Fig. 2 is a side view thereof, parts being broken away; Fig. 3 is a top plan view; Fig. 4 is a vertical sectional view of the upper portion of the machine on a plane cutting centrally through the standard, the standard thus being shown in side elevation and partly broken away. Fig. 5 is a detail perspective view of the work supporting table.

My improved sawing machine comprises a base 1 having formed therein a centrally disposed socket 2 in which is secured the lower end of an upwardly projecting standard 3. The lower end of the standard 3 is preferably secured in the socket 2 of the base by a set screw and secured to the lower portion of the standard in the same manner and engaging the upper end of the socket is a vertical sleeve 4 on which is formed a horizontally disposed bearing bracket 5. In the bearing bracket 5 is revolubly mounted a main drive shaft 6 having fixedly mounted on one end a power transmitting pulley 7. On the opposite end of the shaft are mounted tight and loose drive pulleys 8 and 9 with which is adapted to be engaged the drive belt from any suitable form of motor.

On the upper end of the post or standard 3 is fixedly secured a bearing supporting sleeve 10 held in place on the standard by a set screw as shown. Formed on the sleeve 10 and extending therefrom in an opposite direction from the bracket 5 is a bearing bracket 11 in which are formed inner and outer bearings 12 and 13. In the bearing 12 is revolubly mounted a counter shaft 14 on one end of which is fixedly mounted a drive pulley 15 connected by a belt 16 to a drive pulley 7 on the drive shaft 5 of the machine. On the opposite end of the shaft 14 is fixedly mounted a pinion 17.

Revolubly mounted in the bearing 13 of the bracket 11 is a saw supporting and operating shaft or arbor 18 on one end of which is fixedly mounted a spur gear 19 which is operatively engaged with the pinion 17 on the shaft 12 whereby the movement of said shaft is communicated to the shaft or arbor 18 of the saws. The ratio of the pinion 17 and gear 19 is sufficient to provide the necessary power and speed for the saw operating shaft or arbor 18. The gears 17 and 19 may, if desired, be covered on their upper surfaces by a suitable casing 20 which is secured to the bearings 12 and 13 on the bearing shaft 11 as shown. On the opposite end of the shaft 18 are arranged two circular saws 21 adjustably secured to the shaft in any suitable manner spaced a suitable distance apart by a collet as shown, and rigidly secured to the shaft by a clamping nut 22 on the threaded outer end of the shaft 18 as shown.

Slidably mounted on the standard 3 is a work supporting mechanism comprising a sleeve 23 which slidably engages the standard 3 and has formed on one side a laterally projecting table supporting bracket 24 having in its outer end a socket 25. On the bracket 24 is arranged a work supporting table, said table comprising a plate or block 26 which is preferably of rectangular oblong form and may be of any suitable size. In the center of the block and extending throughout the length of the same is formed a central longitudinally disposed groove or recess 27 the purpose of which will be hereinafter described. On the lower side of the block is formed a cylindrical stem or shank 28 which is loosely engaged with the socket 25 in the bracket 24 thereby revolubly supporting the work table in place. In the

lower end of the stem or shank 28 is formed a threaded recess into which is adapted to be screwed a clamping screw 29 which, when screwed up into tight engagement with the lower side of the socket 25 will securely hold the work supporting table in the position to which the same has been turned in the socket.

In one side of the standard 3 and extending a suitable distance below the sleeve 10 is formed a longitudinally disposed key-way 30 with which is engaged a key 31 formed on the inner side of the table supporting sleeve 23, said key and key-way thus firmly holding the sleeve and table supporting mechanism against turning on the standard. In one side of the sleeve 23 is formed a threaded passage 32 with which is operatively engaged the lower end of a feed screw 33 which is revolubly mounted in a passage 34 formed in the inner adjacent side of the sleeve 10 on the upper end of the standard. On the upper end of the feed screw 33 may be secured a hand wheel 35 whereby said feed screw is manually operated.

In the operation of the machine the packing ring to be cut is engaged with the groove or recess 27 in the work supporting table 26 and the latter turned on the bracket 25 to the desired position or angle after which the table is securely fastened by the clamping screw 29. The table supporting sleeve 23 is then adjusted by operating the feed screw to bring the work into engagement with the saws and as the work is cut by the latter the sleeve and work supporting table are fed upwardly by the feed screw, which may be operated manually by the hand wheel 35 as herein shown and described or which may be automatically operated in any suitable manner to feed the work supporting table.

While the machine has been herein shown and described as being for the purpose of sawing cylinder packing rings, it is obvious that the same may be employed in connection with any sawing operations for which it may be suited.

From the foregoing description taken in connection with the accompanying drawings, the construction and operation of the invention will be readily understood without requiring a more extended explanation.

Various changes in the form, proportion and the minor details of construction may be resorted to without departing from the principle or sacrificing any of the advantages of the invention as claimed.

Having thus described my invention, what I claim is:

1. In a sawing machine of the character described, a supporting standard, a drive shaft operatively mounted on the standard,

bearings formed on said bracket, a counter shaft revolubly mounted in one of said bearings, means to operatively connect said shaft with said drive shaft, a saw arbor revolubly mounted in the other bearing on said bracket, means to gear said saw shaft with said counter shaft, saws adjustably secured to said saw shaft, a work supporting sleeve having a vertically adjustable engagement with said standard, a socket arranged on said sleeve, a work supporting table having a revoluble engagement with said socket, means to fasten said table in its adjusted positions, and means whereby said sleeve and table is adjusted on said standard to feed the work into engagement with the saw.

2. In a sawing machine of the character described, a supporting standard, saws revolubly mounted on said standard, means whereby said saws are driven, a table supporting sleeve slidably keyed to said standard, said sleeve having formed therein a threaded passage, a bracket arranged on one side of said sleeve, a socket formed on the outer end of said bracket, a work supporting table, a shank formed on said table and adapted to revolubly engage said socket, said shank having formed therein a threaded recess, a clamping screw arranged in the socket and adapted to engage the threaded recess in said shank whereby the latter and said work supporting table are fastened in adjusted positions, a revolubly mounted feed screw having an operative engagement with the threaded passage in said table supporting sleeve, and means whereby said screw is operated to adjust said sleeve and work supporting table.

3. In a sawing machine of the character described, a supporting standard, a drive shaft operatively mounted on the standard, a bearing bracket secured to the upper portion of the standard, bearings formed on said bracket, a counter shaft revolubly mounted in one of said bearings, means to operatively connect said shaft with said drive shaft, a saw arbor revolubly mounted in the other bearing on said bracket, means to gear said saw shaft to said counter shaft, saws adjustably secured to said saw shaft, a work supporting sleeve slidably keyed on said standard, said sleeve having formed therein a threaded passage, a laterally projecting bracket formed on one side of said sleeve, a socket arranged in the outer end of said bracket, a work supporting table, said table comprising a block having formed therein a longitudinally disposed groove, a shank formed on said table and adapted to revolubly engage said socket, a clamping screw arranged in the bottom of said socket and having a threaded engagement with the shank of said table whereby the latter is secured in its adjusted position, a feed screw

revolvably mounted in the bearing bracket on the upper end of said standard and having an operative engagement with the threaded passage in said work supporting table, and means whereby said feed screw is revolved to shift said sleeve and work table and thereby feed the work to the saws.

4. A sawing machine of the character described, comprising a single vertical standard, three vertical sleeves adjustably secured thereon, a drive shaft carried by the lower sleeve, a counter shaft carried by the upper sleeve and driven from the drive shaft, a saw shaft also carried by the upper sleeve and driven from the counter shaft and a work table carried by the intermediate sleeve and adjustable on a vertical axis thereon.

5. A sawing machine of the character described comprising a single vertical stand-

ard and provided with a vertical keyway, an upper sleeve adjustably secured on the post and provided with an unthreaded vertical bore, a counter shaft and a saw shaft journaled in said sleeve and geared together, a sleeve on the standard below the firstnamed sleeve and carrying a vertical rib fitting and slidable on the keyway and provided with a threaded vertical bore adapted to be alined with the unthreaded bore of the upper sleeve, a work table on the bracket of the lower sleeve, and means for operating the various parts.

In testimony whereof I have hereunto set my hand in presence of two subscribing witnesses.

CURTIS LEE DICKERT.

Witnesses:

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J. B. Row.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."
