

No. 808,305.

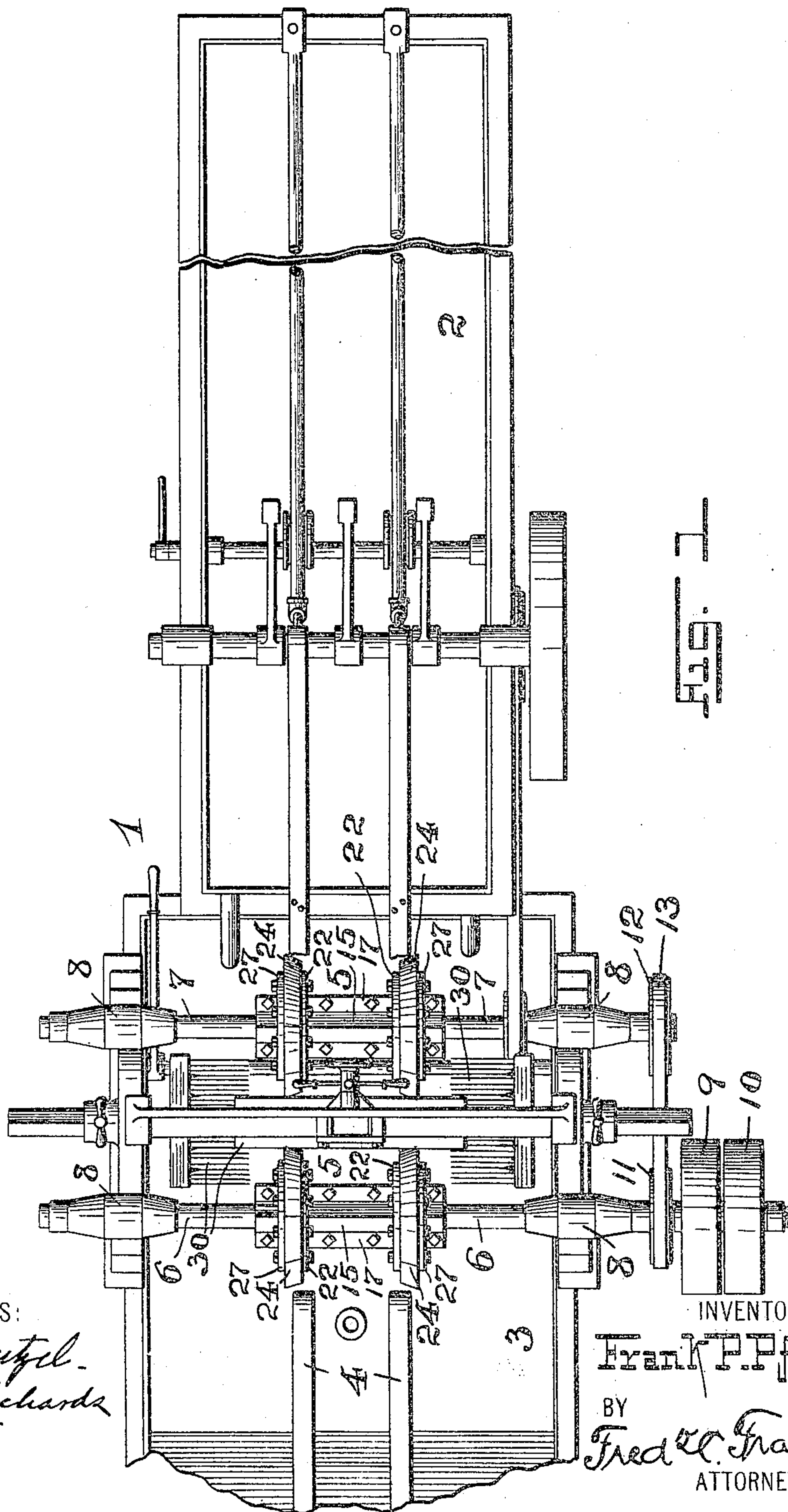
PATENTED DEC. 26, 1905.

F. P. PFEIL.

BARREL OR KEG ROLLING DEVICE FOR BARREL OR KEG WASHERS.

APPLICATION FILED NOV. 26, 1904.

3 SHEETS—SHEET 1.



WITNESSES:

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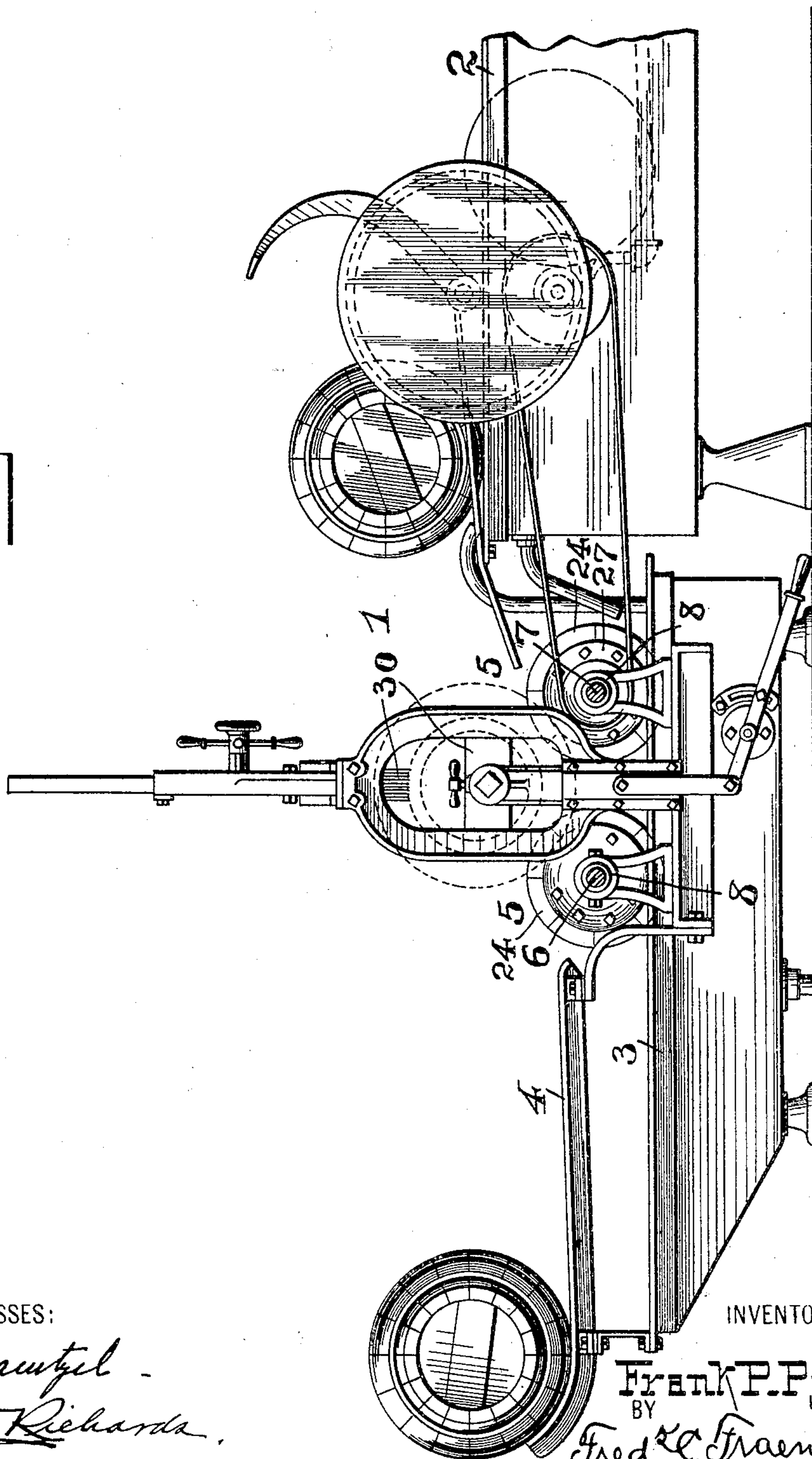
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3 SHEETS—SHEET 2.

Fig. 2



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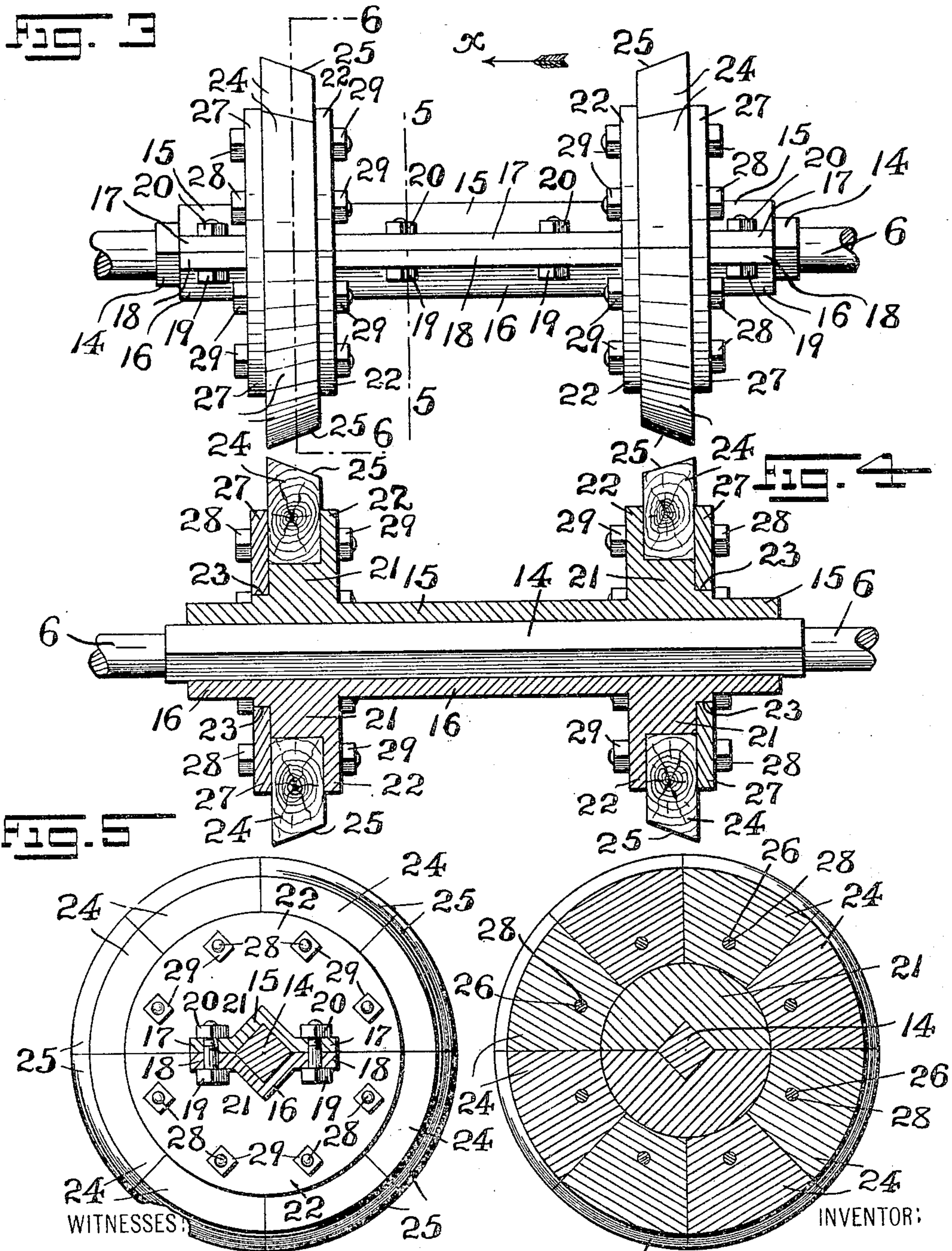


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## BARREL OR KEG ROLLING DEVICE FOR BARREL OR KEG WASHERS.

APPLICATION FILED NOV. 26, 1904.

3 SHEETS—SHEET 3.



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# UNITED STATES PATENT OFFICE.

FRANK P. PFEIL, OF NEWARK, NEW JERSEY, ASSIGNOR TO CHRISTIAN FEIGENSPAN, A CORPORATION OF NEW JERSEY.

## BARREL OR KEG ROLLING DEVICE FOR BARREL OR KEG WASHERS.

No. 808,305.

Specification of Letters Patent.

Patented Dec. 26, 1905.

Application filed November 26, 1904. Serial No. 234,332.

*To all whom it may concern:*

Be it known that I, FRANK P. PFEIL, a citizen of the United States, residing at Newark, in the county of Essex and State of New Jersey, have invented certain new and useful Improvements in Barrel or Keg Rolling Devices for Barrel or Keg Washers; and I do hereby 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, reference being had to the accompanying drawings, and to numerals of reference marked thereon, which form a part of this specification.

This invention has reference generally to improvements in that class of machines known in the art as "barrel or keg washers or scrubbers;" and the invention relates more particularly to a novel arrangement and construction of barrel or keg rolling device adapted to take the place of the wheels or disks ordinarily employed with machines of the class above specified. In practice there usually are four of these revolving disks or wheels upon which the barrel or keg rests and is rolled by said disks or wheels while being scrubbed upon its outer surfaces by contact with a scrubbing brush or brushes of the machine, and these disks or wheels consist of cast-metal hubs or spiders having annular flanges between which are secured segmental blocks of wood, forming the rolling-supports for the kegs or barrels during the washing or scrubbing operations. It will be evident that with the constant use of these machines the said segmental blocks will wear down to such a degree that they become useless and have to be replaced with new blocks. Ordinarily with the constructions and arrangements of the barrel or keg rolling members in this class of machines the members, usually termed "wheels," are in the form of two integrally-connected spiders, between which sectional blocks of wood are arranged and secured in a peculiar manner. Some of these blocks are provided with semi-circular depressions or grooves fitted over pins integral with the two spiders of each wheel and held in place by means of other blocks of wood of a longer shape which are used as wedges and in turn are finally held in place by bolts. It will be noted that great care has to be exercised in the construction

of these peculiarly-shaped blocks, as well as in the fitting or assembling of the blocks between the integrally-connected spiders, in order that a smooth rolling-surface may be provided, so as not to damage the barrel or keg while in the act of being rolled by coming in contact with projections at the joints between the assembled blocks. To remove the blocks from between these spiders when worn down, it is necessary to remove the spider supporting or carrying shaft entirely from the bearings of the shaft or to drive the wedge-shaped blocks first from between the spiders while still in position in the machine proper, thus throwing the machine out of commission for a long time.

With a view of overcoming the serious objections existing in the machines of to-day I have provided a novel barrel or keg rolling device for barrel or keg washers or scrubbers in which the segmental blocks are all of the same shape, and each block when worn down can be separately and laterally removed and then replaced with new blocks without having to remove the block-holding devices from the operating-shaft of the machine, and, furthermore, the barrel or keg rolling device of my invention is of such construction that it comprises a pair of separable sectional members adapted to be arranged and secured upon opposite sides of a shaft preferably of a polygonal cross-section, from which the members of the rolling device can be quickly separated and removed when required for making necessary repairs.

My invention, therefore, has for its principal object to provide a simple and effectively-operating barrel or keg rolling device of the character hereinafter more fully described and one in which the worn-down rolling or supporting segmental blocks can be easily and quickly removed and then replaced with new blocks with the least expenditure of time and labor.

Other objects of this invention not at this time more particularly specified will be clearly understood from the following detailed description of my present invention.

The invention consists, primarily, in the novel construction of barrel or keg rolling device for barrel or keg washers or scrubbers of the character hereinafter set forth; and, furthermore, this invention consists in the various arrangements and combinations of the



devices and parts, as well as in the details of the construction of the same, all of which will be hereinafter more particularly described and then finally embodied in the clauses of the claim which are appended to and form an essential part of this specification.

The invention is clearly illustrated in the accompanying drawings, in which—

Figure 1 is a plan or top view of one form of barrel washer or scrubber provided with a set of barrel or keg rolling devices embodying the principles of my present invention, and Fig. 2 is a side elevation of the same. Fig. 3 is a front elevation of one of the barrel or keg rolling devices in position upon a shaft or spindle of the barrel or keg washer or scrubber; and Fig. 4 is a longitudinal vertical section of the same, the shaft being represented in elevation. Fig. 5 is a transverse vertical section of the rolling device, the said section being taken on line 5 5 in said Fig. 3 looking in the direction of the arrow *x*; and Fig. 6 is a similar section taken on line 6 6 in said Fig. 6, also looking in the direction of the arrow *x*.

Similar characters of reference are employed in all of the above-described views to indicate corresponding parts.

Referring now to the several figures of the drawings, the reference character 1 indicates a complete barrel or keg washing or scrubbing apparatus or machine of any suitable construction, and 2 is the barrel or keg feed tank, which is filled with water. The reference character 3 indicates the usual waste-tank, above which is arranged a run or table 4, upon which the washed or scrubbed barrel or keg is rolled after it has been rolled upon the rolling sections or blocks of the rolling devices embodying the principles of my present invention. These rolling devices, which are indicated by the reference characters 5, are usually arranged in pairs, as illustrated in Figs. 1 and 2 of the drawings, the said devices 5 being respectively arranged and secured upon the shafts or spindles 6 and 7 of the machine 1. The said shafts or spindles 6 and 7 are mounted and rotate in suitably-constructed bearings 8 on the waste-tank 3 or any other suitable portion of the framework of the machine, the said shaft or spindle 6 being provided with a fast driving-pulley 9 and a loose pulley 10 of the usual arrangements and constructions. The said shaft or spindle 6 is also provided with a pulley or wheel 11 and the said shaft or spindle 7 with a pulley or wheel 12, a belt 13 being arranged over said pulleys or wheels 11 and 12, whereby the rotary motion of the driven shaft or spindle 6 is also conveyed to the shaft 7 and to the rolling devices 5 upon said shafts 6 and 7, with a concurrent rolling motion of the barrel or keg when deposited upon the said rolling devices 5 during the washing or scrubbing operations of the machine. Of course it will be understood that

in lieu of the driving-pulleys and the belt hereinbefore mentioned any other suitably-constructed driving mechanism may be employed, if desired. Coming now to the construction and arrangement of the various parts of the barrel or keg rolling devices 5 upon the said shafts or spindles 6 and 7, each shaft is made with an angular or polygonally-shaped portion 14 in cross-section, that in the present case being made in the manner of a square, substantially as shown. From an inspection of Figs. 3, 4, 5, and 6 of the drawings it will be seen that each barrel or keg rolling device 5 comprises a pair of sectional members 15 and 16, substantially of an angular configuration in cross-section corresponding to the cross-section of the shaft or spindle, so as to be arranged on opposite sides of the shaft against a rotary slip or movement thereon, as will be clearly evident. That the said sectional members 15 and 16 may be secured in such positions upon the opposite sides of the shaft or spindle the said members 15 and 16 are respectively provided on opposite sides with laterally-extending flanges or lugs 17 and 18, which are suitably perforated for the reception of the tightening-bolts 19 and the nuts 20, substantially as illustrated in Figs. 3 and 5 of the drawings. Each sectional member 15 and 16 is also provided with a pair of semicylindrical hubs or retaining portions 21, each semicylindrical hub being made with a retaining-flange 22 and an offset 23, these various parts when the said members 15 and 16 are assembled and secured upon the respective shafts or spindles 5 and 6 producing upon each shaft or spindle a pair of cylindrical hubs and each cylindrical hub being provided with an annular retaining-flange and an annular receiving-offset, as clearly illustrated in the several figures of the drawings. Suitably fitted upon the cylindrical surfaces of the said hubs thus formed are a number of segmental blocks 24, made of wood or of other analogous material, the said blocks being made with the tapering or inclining arc-shaped surfaces 25 and being provided with laterally-extending holes or perforations 26, adapted to be arranged in alinement with correspondingly-located holes or perforations in the said retaining-flanges 21. Suitably disks or plates 27, having centrally-disposed openings, are arranged upon the said offsets 23, as shown in Fig. 4 of the drawings, whereby all the segmental blocks 24 are radially disposed in the space between the annular flanges 22 and the disk or plate 27 of each hub. The said disks or plates 27 are also provided with suitably-disposed holes or perforations in alinement with the holes or perforations of the segmental blocks 24, and the said blocks are centered and perfectly secured in their operative and clamped positions between the various parts by means of suitable bolts 28 and nuts 29, as clearly illus-



trated in the several figures of the drawings. Other fastening means for thus securing the said blocks 24 in position may be employed, if desired. The tapered surfaces 25 of the assembled blocks 24 when secured in place will extend in downward and inward directions, as shown, so as to provide a suitable rolling support upon which the keg or barrel is perfectly balanced above the four rolling devices, and thereby receives a rolling motion against and between the variously-disposed scrubbing-brushes 30 of the machine, as shown in Figs. 1 and 2 of the drawings. The said rolling devices 5 having been secured in their operative positions upon the said shafts or spindles 6 and 7 relative to the other devices and mechanisms of the barrel or keg washing or scrubbing machine 1, the operations of scrubbing or washing the barrels or kegs are well known and need not be further described.

The segmental blocks 24 of the barrel or keg rolling devices 5 being made of wood or other similar material will in time become worn down to such an extent that the blocks have to be replaced with new ones. The removal of the worn-down blocks is easily and quickly accomplished without the removal of the shafts or spindles from their bearings or brackets of the machine, as heretofore, by simply unscrewing the nuts 29 and removing the bolts 28 and the disk or plate 27 from each hub without disturbing any other parts of barrel or keg rolling device or any of the parts of the machine. A new set of blocks 24 is then quickly arranged in position, the disk or plate 27 put back, and the whole then once more tightened by means of the said bolts 28 and nuts 29.

It will be seen that I have devised a simply-constructed and effectively-operating keg or barrel rolling device for barrel or keg washers or scrubbers the supporting rolling blocks of which can be easily and quickly replaced at a great reduction in time and labor.

By the separable arrangement of the sectional members 15 and 16 of the barrel or keg rolling device it will also be evident that the entire device can be quickly and readily removed from the shaft or spindle in case of the necessary repairs without disturbing the position of the shaft or spindle in its bearings in which it revolves and without having to remove the bearing or bearings from the side of the machine or without having to remove the driving pulley or pulleys from the said shafts or spindles, as is at present the case with the machines now in use.

Of course it will be evident that changes may be made in the various arrangements and combinations of the devices and parts, as well as in the details of the construction of the said parts, without departing from the scope of my present invention. Hence I do

not limit my invention to the exact arrangements and combinations of the devices and parts as described in the foregoing specification and as illustrated in the accompanying drawings, nor do I confine myself to the exact details of the construction of the said parts.

Having thus described my invention, what I claim is—

1. In a barrel or keg rolling device for washing or scrubbing machines, the combination with a shaft, of a pair of sectional members adapted to be arranged and secured on opposite sides of the said shaft, means for securing said sectional members together, means on said shaft to prevent slipping of the said members upon the shaft, a pair of hub members on each sectional member, a flange extending from each hub member, and each of said hub members being also provided with an offset, a disk or plate having a central opening removably arranged on the offsets of the hub members of said connected sectional members, a series of segmental blocks arranged on said hub members and between the flanges thereof and said disks or plates, said hub members and their flanges serving to quickly center the assembled segmental blocks, and means for securing the said parts in their assembled relation, substantially as and for the purposes set forth.

2. In a barrel or keg rolling device for washing or scrubbing machines, the combination with a shaft, of a pair of sectional members adapted to be arranged and secured on opposite sides of the said shaft, means for securing said sectional members together, means on said shaft to prevent slipping of the said members upon the shaft, a pair of hub members on each sectional member, a flange extending from each hub member, each flange being provided with bolt-holes, and each of said hub members being also provided with an offset, a disk or plate having a central opening removably arranged on the offsets of the hub members of said connected sectional members, the said disks or plates being provided with bolt-holes corresponding to the bolt-holes in said flanges, a series of segmental blocks arranged on said hub members and between the flanges thereof and said disks or plates, said hub members and their flanges serving to quickly center the assembled segmental blocks, and each block being provided with a bolt-hole, tightening-bolts extending through the various holes in said flanges, blocks and said disks or plates, and a nut on each bolt, substantially as and for the purposes set forth.

3. In a barrel or keg rolling device for washing or scrubbing machines, the combination with a shaft, of a pair of sectional members adapted to be arranged and secured on opposite sides of the said shaft, perforated flanges extending from said sectional mem-



bers, and bolts in the perforations of said flanges for securing said sectional members together, means on said shaft to prevent slipping of the said members upon the shaft, a pair of hub members on each sectional member, a flange extending from each hub member, and each of said hub members being also provided with an offset, a disk or plate having a central opening removably arranged on the offsets of said hub members of said connected sectional members, a series of segmental blocks arranged on said hub members and between the flanges thereof and said disks or plates, said hub members and their flanges serving to quickly center the assembled segmental blocks, and means for securing the said parts in their assembled relation, substantially as and for the purposes set forth.

4. In a barrel or keg rolling device for washing or scrubbing machines, the combination with a shaft, of a pair of sectional members adapted to be arranged and secured on opposite sides of a shaft, perforated flanges extending from said sectional members, and bolts in the perforations of said flanges for securing said sectional members together, means on said shaft to prevent slipping of the said members upon the shaft, a pair of hub members on each sectional member, a flange extending from each hub member, each flange being provided with bolt-holes, and each of said hub members being also provided with an offset, a disk or plate having a central opening removably arranged on the offsets of the hub members of said connected sectional members, the said disks or plates being provided with bolt-holes corresponding to the bolt-holes in said flanges, a series of segmental blocks arranged on said hub members and between the flanges thereof and said disks or plates, said hub members and their flanges serving to quickly center the assembled segmental blocks, and each block being provided with a bolt-hole, tightening-bolts extending through the various holes in said flanges, blocks and said disks or plates, and a nut on each bolt, substantially as and for the purposes set forth.

5. In a barrel washing or scrubbing machine, the combination, with a shaft having a portion of a squared cross-section, of a barrel or keg rolling device, comprising a pair of sectional members of an angular cross-section adapted to be arranged and secured upon the squared portion of the said shaft, and barrel or keg supporting and rolling means connected with said sectional members, substantially as and for the purposes set forth.

6. In a barrel washing or scrubbing machine, the combination, with a shaft having a portion of a squared cross-section, of a barrel or keg rolling device, comprising a pair of sectional members of an angular cross-section adapted to be arranged and secured upon the squared portion of the said shaft, and

barrel or keg supporting and rolling means connected with said sectional members, comprising a pair of hub members on each sectional member, a flange extending from each hub member, and each of said hub members being also provided with an offset, a disk or plate having a central opening removably arranged on the offsets of the hub members of said connected sectional members, a series of segmental blocks arranged on said hub members and between the flanges thereof and said disks or plates, and means for securing the said parts in their assembled relation, substantially as and for the purposes set forth.

7. In a barrel washing or scrubbing machine, the combination, with a shaft having a portion of a squared cross-section, of a barrel or keg rolling device comprising a pair of sectional members of an angular cross-section adapted to be arranged and secured upon the squared portion of the said shaft, and barrel supporting and rolling means connected with said sectional members, comprising a pair of hub members on each sectional member, a flange extending from each hub member, each flange being provided with an offset, a disk or plate having a central opening removably arranged on the offsets of the hub members of said connected sectional members, the said disks or plates being provided with bolt-holes corresponding to the bolt-holes in said flanges, a series of segmental blocks arranged on said hub members and between the flanges thereof and said disks or plates, each block being provided with a bolt-hole, tightening-bolts extending through the various holes in said flanges, blocks and said disks or plates, and a nut on each bolt, substantially as and for the purposes set forth.

8. In a barrel washing or scrubbing machine, the combination, with a shaft having a portion of a squared cross-section, of a barrel or keg rolling device comprising a pair of sectional members of an angular cross-section adapted to be arranged and secured upon the squared portion of the said shaft, perforated flanges extending from said sectional members, bolts in the perforations of said flanges for securing said sectional members together, and barrel supporting and rolling means connected with said sectional members, substantially as and for the purposes set forth.

9. In a barrel washing or scrubbing machine, the combination, with a shaft having a portion of a squared cross-section, of a barrel or keg rolling device comprising a pair of sectional members of an angular cross-section adapted to be arranged and secured upon the squared portion of the said shaft, perforated flanges extending from said sectional members, bolts in the perforations of said flanges for securing said sectional members together, and barrel supporting and rolling



means connected with said sectional members, comprising a pair of hub members on each sectional member, a flange extending from each hub member, and each of said hub members being also provided with an offset, a disk or plate having a central opening removably arranged on the offsets of the hub members of said connected sectional members, a series of segmental blocks arranged on said hub members and between the flanges thereof and said disks or plates, and means for securing the parts in their assembled relation, substantially as and for the purposes set forth.

10. In a barrel washing or scrubbing machine, the combination, with a shaft having a portion of a squared cross-section, of a barrel or keg rolling device, comprising a pair of sectional members of an angular cross-section adapted to be arranged and secured upon the squared portion of the said shaft, perforated flanges extending from said sectional members, bolts in the perforations of said flanges for securing said sectional members together, and barrel supporting and rolling means connected with said section members, comprising a pair of hub members on each sectional member, a flange extending from each hub member, each flange being provided with bolt-holes, and each of said hub members being also provided with an offset, a disk or plate having a central opening removably arranged on the offsets of the hub members of said connected sectional members, the said disks or plates being provided with bolt-holes corresponding to the bolt-holes in said flanges, a series of segmental blocks arranged on said hub members and between the flanges thereof and said disks or plates, each block being provided with a bolt-hole, tightening-bolts extending through the various holes in said flanges, blocks and said disks or plates, and

a nut on each bolt, substantially as and for the purposes set forth.

11. In a barrel or keg rolling device for washing or scrubbing machines, the combination, with a shaft, of a hub adapted to be arranged upon said shaft, the said hub being provided with an annular flange formed with an annular seat, pins or bolts extending laterally from said flange, a series of sectional blocks all of the same size and shape, each block having a perforation for the placing of each block upon a pin and to be movable laterally thereon, and said blocks also resting upon said seat, and means on said pins or bolts for retaining said blocks in place, substantially as and for the purposes set forth.

12. In a barrel or keg rolling device for washing or scrubbing machines, the combination, with a shaft, of a hub adapted to be arranged upon said shaft, the said hub being provided with an annular flange formed with an annular seat, pins or bolts extending laterally from said flange, a series of sectional blocks all of the same size and shape, each block having a perforation for the placing of each block upon a pin or bolt and to be movable laterally thereon, and said blocks resting upon said seat, a disk or plate provided with perforations corresponding to the number of said pins or bolts, said disk or plate being arranged upon said pins or bolts, and means for forcing said disk or plate laterally against the sides of said blocks for retaining said blocks in place, substantially as and for the purposes set forth.

In testimony that I claim the invention set forth above I have hereunto set my hand this 25th day of November, 1904.

FRANK P. PFEIL.

Witnesses:

FREDK. C. FRAENTZEL,  
GEO. T. RICHARDS.