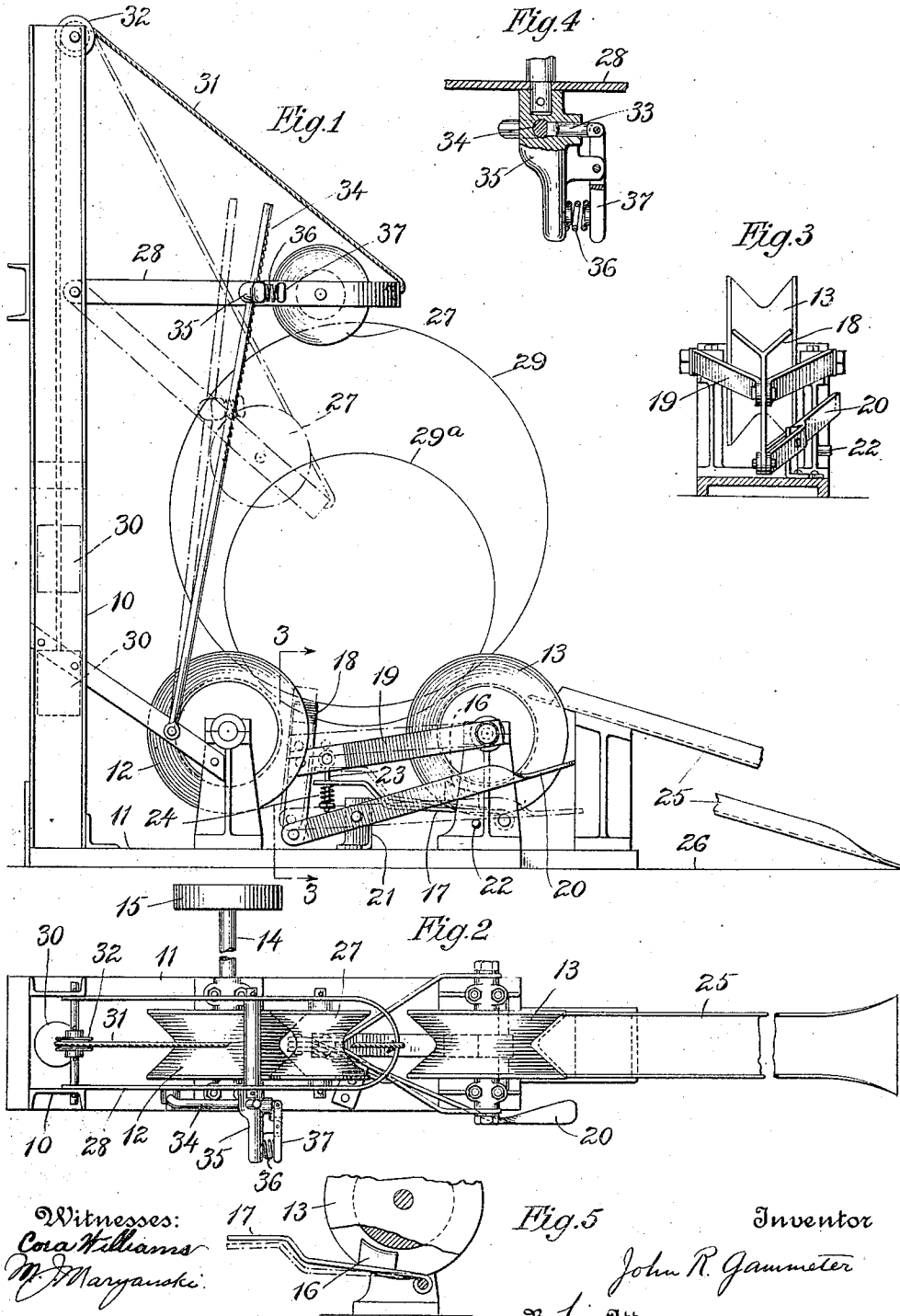


J. R. GAMMETER.
RING CORE REVOLVING MACHINE.
APPLICATION FILED SEPT. 8, 1914.

1,172,883.

Patented Feb. 22, 1916.



Witnesses:
Cora Williams
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UNITED STATES PATENT OFFICE.

JOHN R. GAMMETER, OF AKRON, OHIO, ASSIGNOR TO THE B. F. GOODRICH COMPANY,
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RING-CORE-REVOLVING MACHINE.

1,172,883.

Specification of Letters Patent.

Patented Feb. 22, 1916.

Application filed September 8, 1914. Serial No. 860,644.

To all whom it may concern:

Be it known that I, JOHN R. GAMMETER, a citizen of the United States, residing at Akron, in the county of Summit and State of Ohio, have invented certain new and useful Improvements in Ring-Core-Revolver Machines, of which the following is a specification.

This invention relates to an apparatus for rotating a heavy circular object while the workman performs an operation thereon such as scraping, brushing, etc., and its object is to avoid the time and labor involved in mounting such article on and demounting it from a chuck or similar gripping device.

The invention especially applies to the handling of the heavy cast-iron cores used in molding pneumatic tire casings, which cores require to be scraped and brushed after each molding operation to remove the accumulations of rubber adhering thereto, and are thereafter usually treated with a thin coating of rubber cement over portions of their surfaces to promote the adhesion of the innermost canvas ply of the tire carcass.

Of the accompanying drawings, Figure 1 represents a side elevation of a core-revolving machine constructed according to my invention, this view indicating cores of two different sizes in outline. Fig. 2 represents a top plan view. Fig. 3 represents an end view from the plane 3—3 of Fig. 1. Fig. 4 represents a horizontal section of the retaining latch and adjacent parts for the upper guide-roller. Fig. 5 represents an elevation of the brake and its related roller, partly in section.

The frame of the machine comprises an upright 10 and a horizontal base 11 provided with bearing standards for a pair of core-supporting rolls 12, 13, having V-shaped grooved peripheries. The roll 12 is mounted on a shaft 14 having a belt pulley 15 whereby power is applied to rotate the core, the roll 13 being loosely journaled and having a brake-shoe 16 mounted on a lever 17 and applied in a manner which I shall presently describe.

Between the two rolls 12, 13 is mounted a Y-shaped core-rest 18 guided by a pivoted link 19 and adapted to be raised and lowered by means of a pivoted treadle 20, said treadle being rather loosely hung upon its bracket 21 and adapted to be swung lat-

erally under a fixed pin 22 in order to hold the core-rest in its raised position. From the link 19 depends a pivoted bolt 23 between whose head and the under side of the brake-lever 17 is interposed a spring 24, so that when the treadle 20 is depressed in order to raise the core-rest 18, the brake-shoe 16 will be yieldingly applied to the roller 13. 25 is an inclined run-way or ramp leading from the floor 26 to a point adjacent to the top side of the roller 13, whereby the cores may readily be elevated into operative position in the machine.

27 is an upper guide-roller having a V-shaped grooved periphery for giving a third point of support to the cores, said roller being loosely journaled on a pivoted arm 28 so as to be raised and lowered for cores of different diameters. The circles 29 and 29^A in Fig. 1 indicate the outlines of two cores of different sizes, and the positions of the upper roller 27 for these two sizes are shown in full and dotted lines respectively. Said roll and its arm are counter-balanced by a weight 30 attached to the outer end of arm 28 by a cord 31 running over a pulley 32. The arm may be fixed at any desired height by means of a latch 33 engaging the teeth of a ratchet bar 34 pivoted at its lower end and passing through a guide aperture in a latch carrier 35 which is swiveled to the arm 28, the latch being manually retracted against the pressure of a spring 36 by means of a finger-lever 37.

The operation is as follows. The core-rest 18 being held in its raised position by catching the treadle 20 under pin 22, and the top roll 27 being somewhat retracted from its operative position, the workman rolls a core up the inclined run-way 25 and over the front roller 12 until it is supported by the core-rest 18. Treadle 20 is then released from its retaining pin and the rest 18 lowered until the core is supported on the driving roller 12. This operation also releases the brake-shoe 16, and at the same time the top roll 27 is lowered into operative position in order to maintain the core upright while being revolved. The workman then performs the desired core-cleaning operations with the use of scraping and brushing tools while the core is being turned rapidly, and after it is cleaned he generally applies thin coats of rubber cement to the side faces of the core at the places where the

tire beads are to be applied, after which the top roller 27 is raised and the core is stopped by elevating it with the treadle 20 and the core-rest 18, at the same time applying the
5 brake-shoe 16 to the front roller, whereupon the core is rolled down the run-way 25 and the operation thereby completed.

It is possible to apply the principle of my invention in various ways and I therefore do not wish to be confined to the details of construction herein set forth.

I claim:

1. In a machine of the character described, the combination of a set of rollers, including a driving roller, for supporting the ring core or similar article by its periphery in a vertical position, and means for raising and lowering the core with respect to the lower rollers of said set.

2. In a machine of the character described, the combination of a set of rollers, including a driving roller, for supporting the ring core or similar article by its periphery in a vertical position, a core-rest for engaging the lower periphery of said core to raise and lower the same with respect to the lower rollers of said set, and a treadle for operating said rest.

3. In a machine of the character described, the combination of a set of rollers, including a driving roller, for supporting the ring core or similar article by its periphery in a vertical position, and an inclined run-way for guiding the core to and from the level of the lower rollers of said set.

4. In a machine of the character described, the combination of a pair of lower grooved rollers for supporting the lower periphery of the core or similar article, a top support for maintaining said core in an upright position, and a vertically-movable core-rest mounted between said lower rollers.

5. In a machine of the character described, the combination of a pair of lower grooved rollers for supporting the lower periphery of the core or similar article, a top support for maintaining said core in an upright position, and an inclined run-way terminating at its upper end adjacent to the top side of one of the lower rollers.

6. In a machine of the character de-

scribed, the combination of a pair of lower grooved rollers for supporting the core or similar article, one of said rollers being a driver and the other loosely journaled, a core-rest for raising and lowering the core, and a brake operating conjointly with said core-rest for stopping the loosely journaled roller when the rest is elevated and releasing it when said rest is depressed.

7. In a machine of the character described, the combination of a pair of lower rollers for supporting the core or similar article in an upright position, one of said rollers being a driver and the other loosely journaled, a core-rest mounted for vertical movement between said rollers, a treadle for operating said rest, a brake for the loose roller operated by said treadle, and an inclined run-way terminating at its upper end adjacent to the top side of the loose roller.

8. In a machine of the character described, the combination of a pair of lower grooved rollers, including a driving roller, an upper grooved roller, a pivoted arm carrying said upper roller, a pivoted ratchet bar, and a latch on said arm engaging the teeth of said ratchet bar for holding the upper roller at different heights.

9. In a machine of the character described, the combination of a pair of lower grooved rollers, including a driving roller, an upper grooved roller, a pivoted arm supporting said upper roller, a counter-weight for said arm and upper roller, and means for fixing said arm in different angular positions.

10. In a machine of the character described, the combination of a pair of lower grooved rollers, including a driving roller, means located between said rollers for raising and lowering the core or similar article, an upper grooved roller adapted to be raised and lowered, and means for fixing said upper roller at different heights.

In testimony whereof I have hereunto set my hand in the presence of two subscribing witnesses, this 3 day of September, 1914.

JOHN R. GAMMETER.

Witnesses:

WALTER K. MEANS,

ILLA N. KIRN.