

No. 675,053.

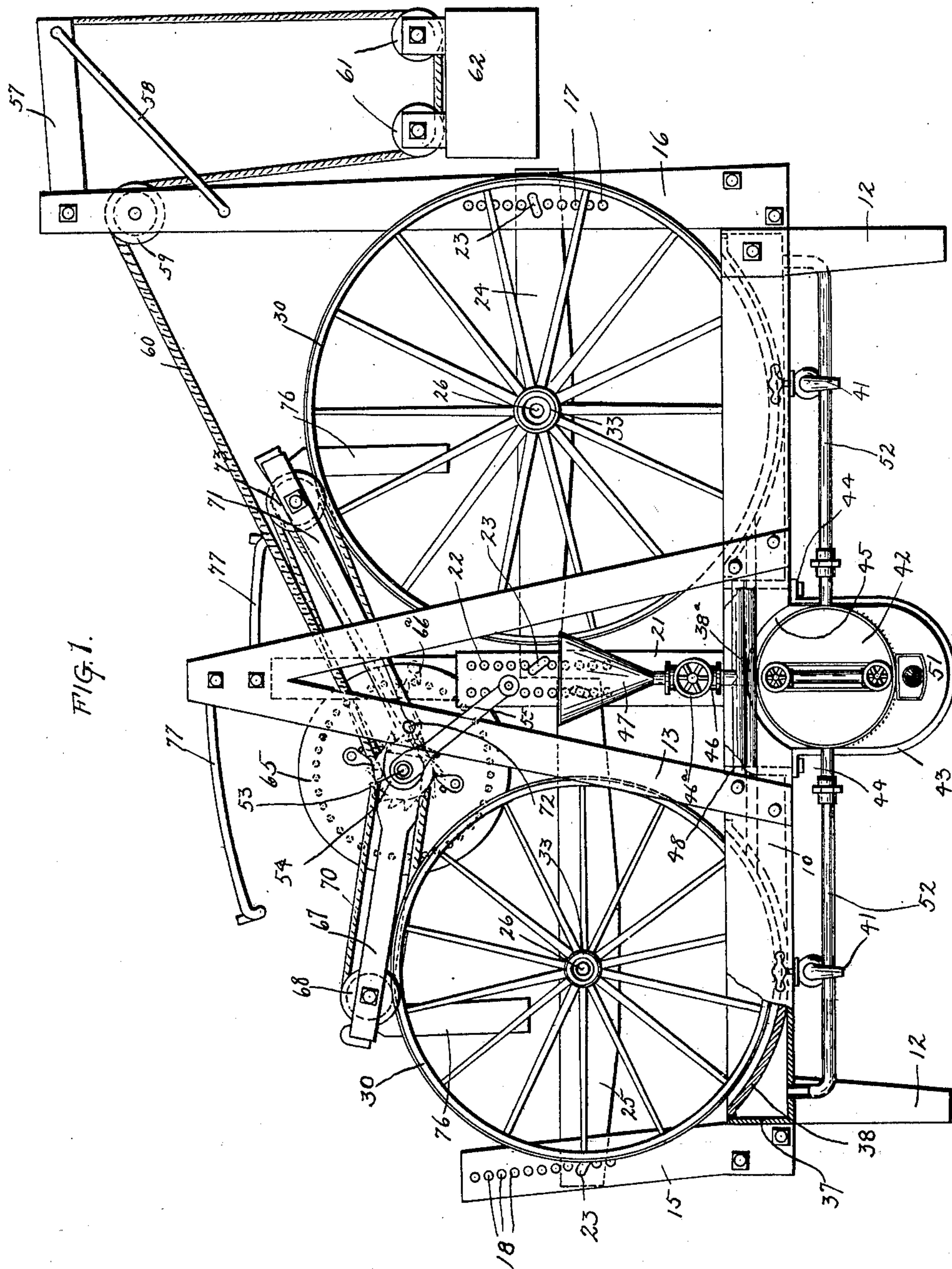
Patented May 28, 1901.

J. A. CROSS.
APPARATUS FOR OILING WHEELS.

(Application filed Nov. 2, 1899.)

(No Model.)

3 Sheets—Sheet 1.



WITNESSES:

Carl B. Larson
J. A. Stewart.

INVENTOR
Jerome T. Cross.
BY
Edgar Saleto.
ATTORNEYS

No. 675,053.

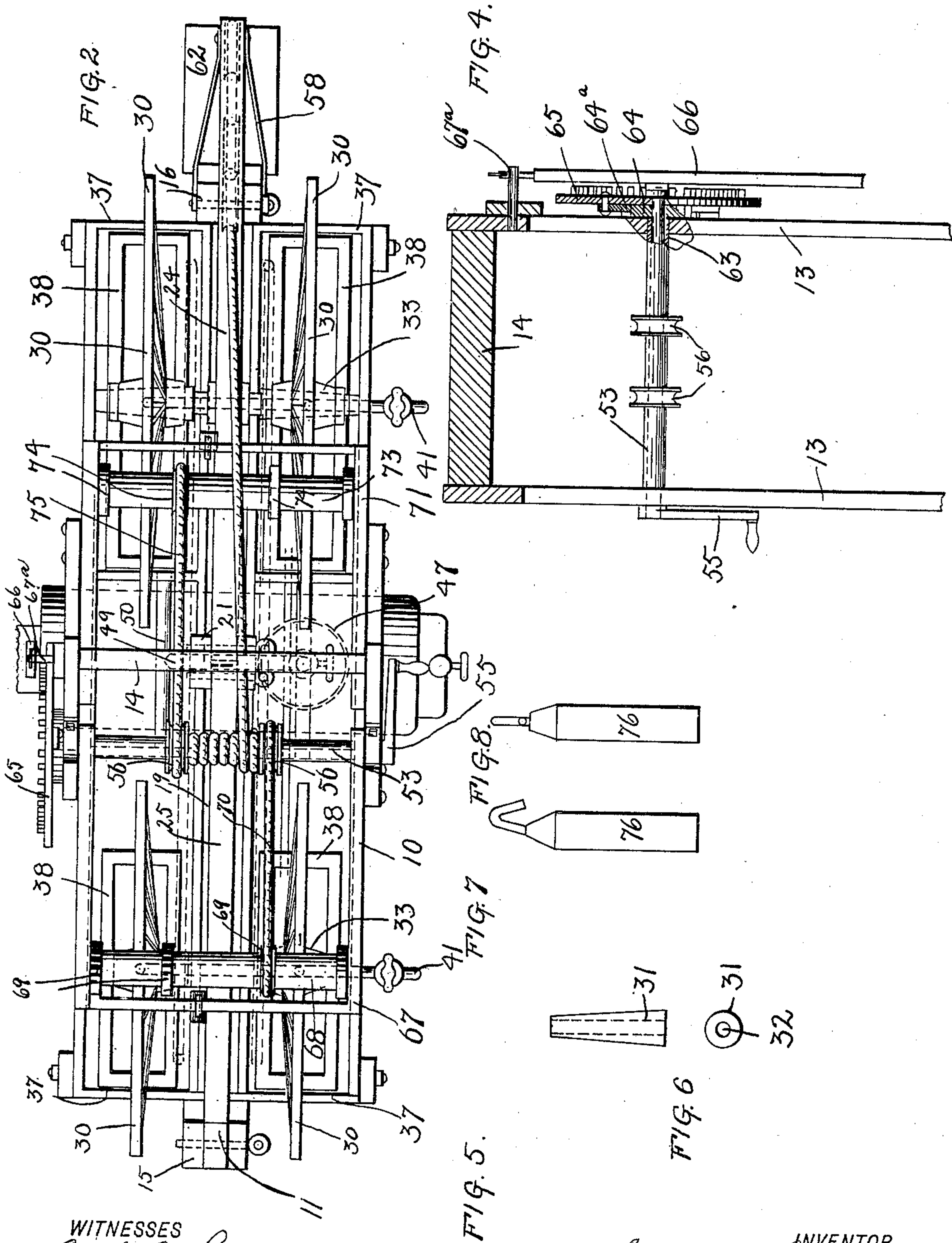
Patented May 28, 1901.

J. A. CROSS.
APPARATUS FOR OILING WHEELS.

(Application filed Nov. 2, 1899.)

(No Model.)

3 Sheets—Sheet 2.



WITNESSES
Carl B. Larson
L. A. Stewart.

INVENTOR
Jerome A. Cross
BY
Edgar Saleto
ATTORNEYS

No. 675,053.

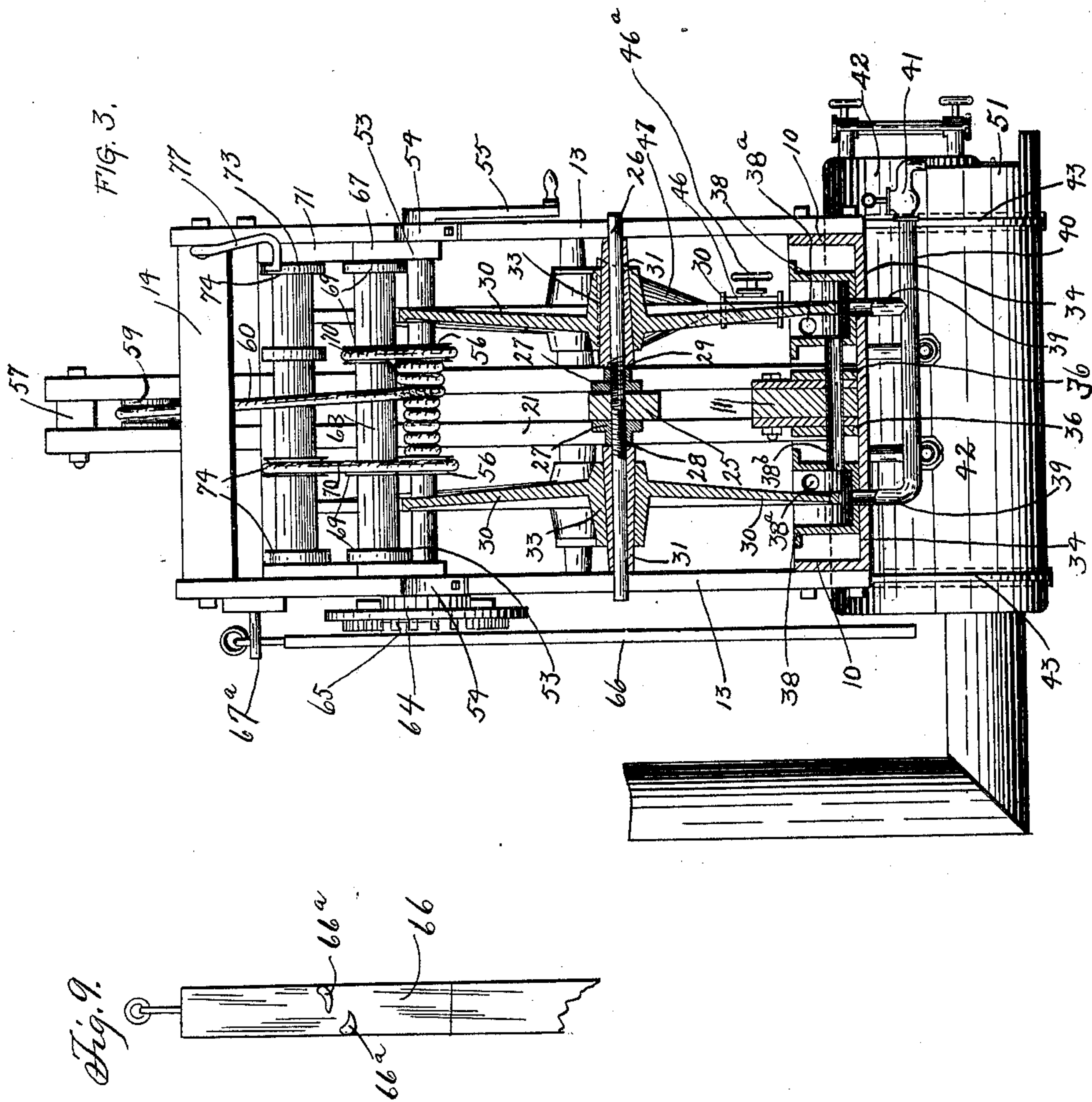
Patented May 28, 1901.

J. A. CROSS.
APPARATUS FOR OILING WHEELS.

(Application filed Nov. 2, 1899.)

3 Sheets—Sheet 3.

(No Model.)



WITNESSES
Carl B. Larson.
J. A. Stewart.

INVENTOR
Jerome A. Cross.
BY
Edgar Tate & Co.
ATTORNEYS.

UNITED STATES PATENT OFFICE.

JEROME A. CROSS, OF FULTONVILLE, NEW YORK, ASSIGNOR OF ONE-HALF
TO EUGENE W. PECK, OF GLOVERSVILLE, NEW YORK.

APPARATUS FOR OILING WHEELS.

SPECIFICATION forming part of Letters Patent No. 675,053, dated May 28, 1901.

Application filed November 2, 1899. Serial No. 735,570. (No model.)

To all whom it may concern:

Be it known that I, JEROME A. CROSS, a citizen of the United States, residing at Fultonville, in the county of Montgomery and State of New York, have invented certain new and useful Improvements in Apparatus for Automatically Oiling Fellies, of which the following is a full and complete specification, such as will enable those skilled in the art to which it appertains to make and use the same.

This invention relates to apparatus for oiling the fellies and other parts of wheels; and the object thereof is to provide an apparatus of this class whereby the wheels may be mechanically operated during the oiling process and whereby the oil may be suitably supplied and maintained at the proper temperature.

With the above and other objects in view my invention consists in the construction and arrangement of parts set forth in the following specification, of which the accompanying drawings form a part, in which like reference characters denote like parts in the several views, and in which—

Figure 1 is a front elevation of an apparatus constructed according to my invention and showing two wheels in position to be treated thereby; Fig. 2, a plan view thereof; Fig. 3, a vertical side elevation thereof, partly in section and showing the boiler and connected parts in full lines. Fig. 4 is a side elevation, partly in section, of a portion thereof; and Figs. 5, 6, 7, and 8, views of several details of construction. Fig. 9 is a detail view showing the pendulum.

In the practice of my invention I provide a frame comprising side members 10, a longitudinal central member 11, and supports 12 therefor. Connected with each of the side members 10 are upwardly-directed standards 13, connected at their tops by a transverse brace 14. Connected with each end of the longitudinal member 11, above described, is an upright, respectively 15 and 16, the upright 16 being of considerably greater height than the upright 15 and provided approximately centrally with a plurality of perforations 17. The upright 15 is provided at its upper end with a plurality of perforations 18. A central slotted standard 21 springs from

said frame member 11, centrally thereof, and is also plurally perforated transversely, as at 22, and supported adjustably at their respective ends by pintles 23, which pass through perforations formed therein, and through the respective perforations 17, 18, and 22 are a pair of longitudinally-arranged supports 24 and 25, through each of which is passed a fixed transverse shaft 26, and each of said shafts is secured in place by lock-nuts 27, as clearly shown in Fig. 3, which lock-nuts engage oppositely-formed screw-threads 28 and 29, formed at either side of the center of each of the shafts 26. By means of the construction above described the supports 24 and 25 may be vertically adjusted, and the wheels 30 to be oiled are passed upon the shafts 26 at either side of the supports 24 and 25 and are revolvably mounted thereon by means of cone-shaped bearings 31, which are longitudinally bored, as at 32, as clearly shown in Figs. 5 and 6, to fit the shafts 26 and revolve thereon. The bearings 31 are wedged tightly in the wheel-hubs 33.

By means of the bearings 31, of which in practice I provide a plurality of different sizes, wheel-hubs of various bores may be mounted upon the shafts 26, and by means of the adjustable supports 24 and 25 wheels of various diameters may be suitably mounted for treating by my improved apparatus.

Between the side members 10 of the frame of my apparatus, as above described, I form a plurality of hot-water receptacles, which are provided with bottoms 34, which form a continuous strip passing beneath the central frame member 11, sides 10 and 36, respectively connected with the standards 13, and the frame member 11 and ends 37, which connect the sides 10 and 36. The sides 10 consist of the side members 10 of the frame of the apparatus. Two of these hot-water receptacles are arranged side by side at each end of the frame of the apparatus, and arranged within each thereof and mounted upon the respective bottom portion is an oil-receptacle 38, which is oblong in form and open at the top, as clearly shown in Figs. 1, 2, and 3, said oil-receptacles being preferably provided with longitudinally segmentally curved bottom portions, as shown, and the oil-recep-

tacles at opposite ends of the apparatus communicate by means of pipes 38^a, Fig. 1, and at the same end by pipes 38^b.

The wheels 30 when mounted upon the shafts 26 and properly vertically adjusted by the supports 24 and 25 extend into the oil-receptacles 38. A pipe 39 communicates with each of the oil-receptacles 38, at the bottom thereof, passing through the respective hot-water-receptacle bottoms 34, and the two pipes 39 at each end of the apparatus communicate with a draw-off pipe 40, provided at the front of the apparatus with a cock 41, by means of which the oil in the receptacle may be drawn off.

A boiler 42 is arranged transversely beneath the frame of the apparatus, being supported by means of looped straps or hangers 43, connected with the side members 10 of the frame, as at 44, said side members 10 being cut out segmentally, as at 45, to receive the upper portion of said boiler.

In front of the standard 21 and between the standards 13 is arranged a stand-pipe 46, provided at its upper end with a receiving-funnel 47, and the stand-pipe communicates by a longitudinal pipe 48 with the end of one of the hot-water receptacles at each end of the casing, and the pipe 48 communicates with a transverse pipe 49, (shown in dotted lines in Fig. 2,) which in turn communicates with a pipe 50, which connects the two hot-water receptacles not connected by the pipe 48. The pipe 46 also communicates with the boiler 42 and is provided with a cock 46^a, by which communication with the funnel 47 may be cut off.

The boiler 42 is provided with a furnace 51, and water heated therein will be continuously passed through the hot-water receptacle, said boiler being in communication therewith by means of a pipe 52.

A shaft 53 is journaled in brackets 54, connected with the uprights 13 transversely of the apparatus and provided at one end with an operating-crank 55 and with a pair of fixed pulleys 56 intermediate of said uprights 13. The upper end of the standard 16 is provided with a laterally-directed fixed arm 57, maintained in position by a brace 58, and said standard is slotted to receive the end of the support 24, above described, and also a revolvable pulley 59, over which passes a rope or cable 60, one end of which is secured to the outer end of the arm 57 and the other end of which is fixed to the shaft 53 between the pulleys 56, and suspended loosely from said rope between the former end thereof and the pulley 59, by means of pulleys 61, is a weight 62. One end of the shaft 53 passes through a bearing 63, as shown in Fig. 4, which bearing is fixed to one of the uprights 13, and fixed to the shaft 53 is a ratchet-wheel 64, in engagement with which operate pawls 64^a, mounted on an escapement-wheel 65, which is loosely mounted on the outer end of the shaft 53. This escapement-wheel is engaged by the es-

capement-teeth 66^a of a pendulum 66, which is swung from a pin 67^a upon the upright 13.

Pivotally supported upon the shaft 53 is a three-sided frame 67, in which is journaled a transverse roller 68, arranged to bear upon the wheels 30 at the left side of the apparatus, as shown in Figs. 1 and 2, and provided with flanges 69, one of which is grooved to receive a continuous cord or cable 70, which also passes about one of the pulleys 56 upon the shaft 53. A similar three-sided frame 71 is pivoted to the uprights 13, as at 72 in Fig. 1, and bears a roller 73, provided with flanges 74, one of which is grooved to receive a continuous cord or cable 75, which also passes about one of the pulleys 56 upon the shaft 53.

Detachable weights 76 are connected with the frames 67 and 71 and normally cause the rollers 68 and 73 to bear operatively upon the peripheries of the wheels 30, the roller 68 bearing upon the wheels 30 at the left hand of Figs. 1 and 2 and the roller 73 bearing upon the wheels 30 at the right hand thereof, where by a roller is provided for the wheels upon each of the shafts 26. These rollers engage with the wheels 30 in such manner that the flanges 74 and 69 respectively operate at the sides of the peripheries of said wheels.

Connected with each of the uprights 13 is a laterally-directed hooked arm 77, said arms extending in opposite directions, and the frames 67 and 71 may be suspended inoperatively thereby.

The operation of my improved apparatus above described will be readily understood from the foregoing description, taken in connection with the accompanying drawings and the following statement thereof.

Oil to the desired amount is placed in the receptacles 38 and may be drawn off therefrom by the cocks 41, and water is admitted to the boiler, where it will form partially into steam, through the pipe 46, and thence when the cock 46^a is turned off it passes into the receptacles surrounding the oil-receptacles and again returns to the boiler through the pipe 52. Thus a continuous circuit of hot water and steam is maintained. The boiler being arranged transversely of the apparatus and between the two hot-water receptacles at each end of the apparatus, a constant supply of hot water and steam will be maintained. The wheels 30 to be oiled are mounted upon the shafts 26 by means of the bearings 31, as described, and the supports 24 and 25 are adjusted to cause the lower portions of the wheels to dip into the oil-receptacles 38. The frames 67 and 71 are then depressed to bring the rollers 68 and 73 upon the peripheries of the wheels 30, the shaft 53 having been first revolved by the crank 55 to wind the cable 60 thereon, elevating the weight 62. The pendulum-bob 66 allows the wheel 65 to revolve, similarly revolving the shaft 53 and the rollers 68 and 73, turning the wheels 30 and presenting all portions of the fellys and spoke ends to the oil.

I do not limit myself to the exact construction and arrangement of parts specified in the foregoing description, but reserve the right to vary the same within the scope of my invention.

Having fully described my invention, I claim as new and desire to secure by Letters Patent—

1. In an apparatus of the class described, a wheel-support, a pivoted frame arranged adjacent thereto, and provided with a roller which operates in connection with a wheel mounted upon said wheel-support, and means for operating said roller comprising a power-shaft operatively connected therewith and provided with an escapement, substantially as shown and described.

2. In an apparatus of the class described, a plurality of oil-receptacles, an adjustable wheel-support arranged adjacent each thereof, and an adjustable frame arranged adjacent each of said wheel-supports, and provided with a roller arranged to operate in connection with a wheel mounted upon said wheel-support, a power-shaft in operative

connection with each of said rollers, a gravity device for operating said power-shaft and an escapement whereby the movement of said power-shaft is regulated, substantially as shown and described.

3. In an apparatus of the class described, an oil-receptacle, a wheel-support arranged adjacent thereto, and means for operating a wheel mounted upon said wheel-support, whereby the several portions thereof may be moved into said oil-receptacle, comprising a power-transmission device arranged to operatively engage said wheel, and a power-shaft provided with an escapement whereby the speed of said shaft may be regulated, substantially as shown and described.

In testimony that I claim the foregoing as my invention I have signed my name, in presence of the subscribing witnesses, this 31st day of October, 1899.

JEROME A. CROSS.

Witnesses:

THEOPHILUS A. SIMPSON,
WELLINGTON CROSS.