A. W. ALTORFER.

DRIVING MECHANISM.

APPLICATION FILED OCT. 6, 1913.

1,152,377. Patented Aug. 31, 1915.

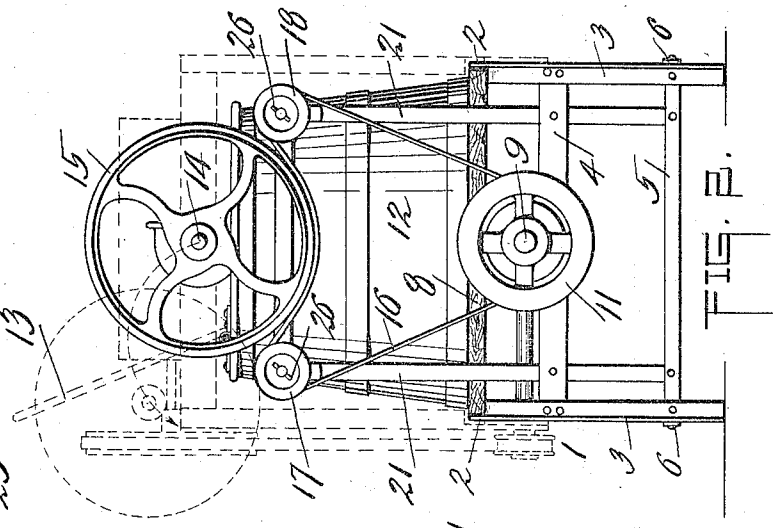

FIG. 2.

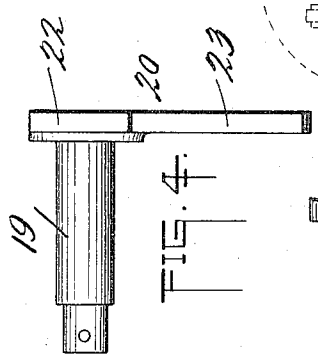

FIG. 4.

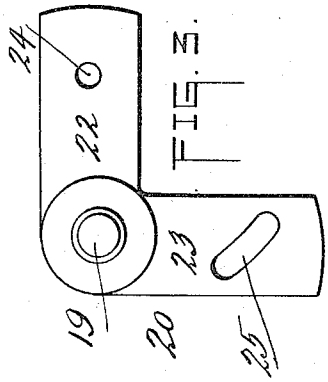

FIG. 3.

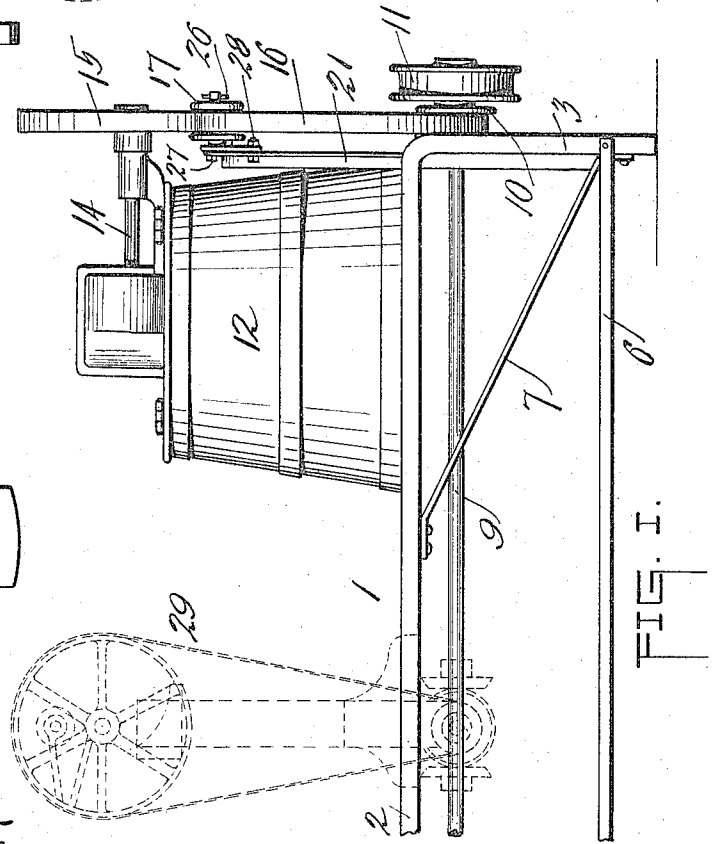

FIG. 1.

WITNESSES:

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UNITED STATES PATENT OFFICE.

ALPHEUS W. ALTORFER, OF ROANOKE, ILLINOIS, ASSIGNOR TO POWER WASHING MACHINE COMPANY, OF PEORIA, ILLINOIS, A CORPORATION OF ILLINOIS.

DRIVING MECHANISM.

1,152,377. Specification of Letters Patent. Patented Aug. 31, 1915.

Application filed October 6, 1913. Serial No. 793,527.

To all whom it may concern:

Be it known that I, ALPHEUS W. ALTORFER, citizen of the United States, residing at Roanoke, in the county of Woodford and State of Illinois, have invented certain new and useful Improvements in Driving Mechanism, of which the following is a specification.

This invention has reference to improvements in driving mechanisms and has for its object to provide a driving mechanism more especially applicable to the operating means of a washing machine and like structures.

The invention has for a further object a driving mechanism for washing machines and like structures which is power operated and with which the operating means of the washing machine may be moved into and out of operative engagement with said driving mechanism.

The construction shown in this application is disclosed in my prior applications, bearing Serial Nos. 710,625, 719,935 and 734,688.

That the invention may be more fully understood, reference is had to the accompanying drawing, in which:

Figure 1 is a side elevation of a part of a machine support and machine thereon, with my mechanism employed for actuating the operating means of said machine. Fig. 2 is an end elevation looking at the right hand end of Fig. 1, the operative means of the machine shown in dotted lines, as being in inoperative relation with said driving mechanism. Fig. 3 is a face view showing in detail a bracket for supporting an idler pulley, and Fig. 4 is a side view of the bracket shown in Fig. 3.

Like characters of reference indicate corresponding parts throughout the figures.

The driving mechanism which I employ is especially applicable to that improved type of washing machine structure, which comprises a machine support on which may be mounted a washing machine or like structure adapted to be driven by power; one or more tubs or receptacles into which clothes may be wrung from the washing machine and after rinsing, wrung into a receiving receptacle, and a wringing mechanism mounted on said machine support adapted to be driven from the same source of power used for operating the washing machine, said wringing mechanism being movable with respect to the washing machine and rinsing tub or tubs or receptacles supported by said machine support. It is my aim to actuate the operating means of the washing machine from a driving mechanism which is operated by power; the operating means of a washing machine being preferably of that type which is secured to the top of the machine or the lid or cover therefor and movable into and out of operative relation with said driving mechanism, when the lid or cover of the machine is swung back on its hinges or when the machine itself is swung on the support for the purpose of draining.

In the drawings, the numeral 1 designates the machine support or main frame, preferably rectangular in form and having the longitudinal side members 2, the end members 3 which serve as supporting members or legs, the transverse end braces 4 and 5, the longitudinal side braces 6 and the diagonal braces 7. The machine support further includes a flooring 8.

9 designates a driving shaft which is disposed longitudinally of the machine support and preferably centrally thereof, said shaft being journaled in suitable bearings or boxings on the machine support, not shown. On one end of the shaft 9 are carried the pulleys 10 and 11, the latter being the driving pulley for the shaft 9 and said pulley may receive its power in any suitable manner and from any suitable source of supply, and while I have shown the pulley 11 as a single pulley, it is of course understood that it may comprise a loose and fast member on the shaft, with means for shifting the belt or the driving part. The pulley 10 is used for transmitting power from the shaft 9 to the operating means of a washing machine or like structure, in a manner which will be explained.

12 designates a washing machine or like structure, which may be of any approved construction having a movable element, lid or cover 13, best seen in dotted lines in Fig. 2; said lid or cover supports the operating means for actuating the agitator or other mechanism for the interior of the machine, and said operating means includes the shaft 14 and a driving member or wheel 15. In this instance, said driving member or wheel 15 is shown, having a frictional engaging periphery, although said driving member or

wheel may be of any other preferred construction and driven other than by frictional means.

To actuate the driving member or wheel 15 of the washing machine, a belt 16 is employed, driven by the pulley 10, and said belt diverges upwardly from the pulley 10 and passes over the idler pulleys 17 and 18 which are journaled on studs or spindles 19 forming a part of or attached to brackets 20, which are adjustably secured to the upper corners of an inverted U frame 21, the lower portions of said frame 21, being secured to and supported by the transverse brace members 4 and 5. The brackets 20 are preferably formed with the right angle portions 22 and 23 the former having the opening 24 through which passes a bolt 27 for securing that portion of the bracket to the horizontal portion of the frame 21 and the portion 23 of said brackets is provided with the slot 25 through which a bolt 28 is passed for securing that portion of the bracket to the vertical portions of said frame 21. By loosening the bolt 28 which passes through the slot 25 of the bracket, said bracket may be swung on a pivot formed by the bolt 27 which passes through the opening 24 in the portion 22 of the bracket and in this manner more or less slack may be produced in the belt 16. The brackets are duplicates of each other, whereby they may be both adjusted or only one, as the occasion may require. As is obvious there is always sufficient slack in the belt 16 to adapt the driving member or wheel 15 to frictionally engage said belt between the idler pulleys 17 and 18, in the manner shown in Fig. 2, and such frictional contact may be increased or decreased as the occasion may require by the adjustment of one or both of the brackets 20, as explained above. The idler pulleys 17 and 18 are suitably held on the studs or spindles 19 of the brackets by means of cotter-pins 26.

It is obvious from the foregoing that when the shaft 9 is operated, it will rotate the pulley 10 and said pulley in turn will actuate the belt 16, which said belt traveling around the pulley 10 and over the idlers 17 and 18 is in a position, when the lid or cover of the washing machine 12 is closed, to frictionally engage and impart movement to the driving member or wheel 15, which in turn will operate the mechanism within said washing machine. To cut out the washing machine and mechanism therein, or to disconnect the operating mechanism of said washing machine, its lid or cover 13 may be raised, as shown in dotted lines in Fig. 2, which will move the driving member or wheel 15 out of operative engagement with the belt 16, and said belt may continue to be operated. The operative mechanism may be instantly thrown into use by closing the lid or cover 13, placing the driving member or wheel 15 into operative relation with said belt 16.

In Fig. 1 I have shown a wringing mechanism indicated generally as 29, which is movably supported on the machine support or frame and adapted to be driven when desired from the driving shaft 9, but as the wringing mechanism forms no part of the invention herein claimed, it is not thought necessary to specifically describe the structure and operation of such wringing mechanism.

What I claim is:

1. In an apparatus of the character described, a machine support, a driving shaft disposed centrally of said support and extending longitudinally thereof, a driving wheel on said shaft, a pair of idler wheels spaced from each other and located upon opposite sides of said machine support, a suitable distance above the driving shaft, supporting means for said idler wheels, a belt passing around said driving wheel on the driving shaft and said idler wheels and adapted to be driven by said driving wheel, a machine suitably mounted on said machine support and having a movable part for supporting the operating means therefor, an operating means for said machine mounted on said movable part and including a wheel having a frictional engaging surface, said wheel arranged to have frictional contact with said belt between said idler wheels, and adapted to be moved into and out of frictional engagement therewith.

2. In a device of the character described, a machine support, a driving shaft, a machine mounted on said support and having a movable part, an operating means mounted on the movable part of said machine, said operating means including a driving member, a belt operated by said driving shaft, said driving member arranged to be moved with the movable part of said machine, for causing said driving member to be moved into frictional engagement with said belt or removed therefrom, an idler wheel for the belt, and an adjustable support for said idler wheel.

3. In a device of the character described, a machine and a suitable support therefor, an operating means mounted on said machine, said operating means including a driving member, a driving shaft, a belt operated by said driving shaft, said driving member arranged to be moved into and out of frictional engagement with said belt, a pair of idler wheels for said belt, brackets on which said idler wheels are journaled, supporting means for said brackets, said brackets being adjustably mounted on said supporting means.

4. In an apparatus of the character described, a machine and a suitable support

therefor, a driving shaft, a driving wheel on said shaft, a pair of idler wheels spaced from each other a suitable distance above the driving shaft, a frame, brackets for supporting said idler wheels, said brackets being adjustably mounted on said frame, a belt passing around said driving wheel on the driving shaft and said idler wheels and adapted to be driven by said driving wheel, an operating means for said machine, including a wheel having a frictional engaging surface, said wheel arranged to have frictional contact with said belt between said idler wheels, and adapted to be moved into and out of frictional engagement with said belt.

5. In a device of the character described, a driving mechanism comprising a driving shaft, a driving wheel thereon, a belt arranged to be operated by said driving wheel, a machine driving part adapted to be moved into and out of engagement with said belt, a pair of spaced pulleys over which said belt is carried, a bracket for each pulley, and supporting means for said brackets, each bracket being adjustably secured to said supporting means for taking up and producing slack in said belt.

6. In a device of the character described, a driving mechanism comprising a driving shaft, a driving wheel thereon, a belt arranged to be operated by said driving wheel, a machine driving part adapted to be moved into and out of engagement with said belt, a pair of spaced pulleys over which said belt is carried, a bracket for each pulley, and supporting means for said brackets, each bracket including a spindle for receiving a pulley and right angular portions adapting the same to be attached to said supporting means, one of said right angular portions of each bracket provided with a slot, whereby said brackets may be adjusted for taking up and producing slack in said belt.

7. In a device of the character described, a supporting frame, a machine mounted thereon, an operating means mounted on said machine, said operating means including a driving member, a driving shaft journaled on said supporting frame, a driving wheel on said shaft, a belt adapted to be operated by said driving wheel, a pair of spaced idler wheels for guiding said belt so as to adapt said driving member to have frictional contact therewith, an inverted U frame, and brackets for supporting said idler wheels, said brackets being adjustably secured to the upper opposite corners of said frame.

8. In a device of the character described, a supporting frame, a machine mounted thereon, an operating means mounted on said machine, said operating means including a driving member, a driving shaft journaled on said supporting frame, a driving wheel on said shaft, a belt adapted to be operated by said driving wheel, a pair of spaced idler wheels for guiding said belt so as to adapt said driving member to have frictional contact therewith, a frame having a horizontal portion and spaced vertical portions, and a bracket for each idler, said brackets being suitably secured to said frame and capable of being swung on said horizontal portion thereof for producing or taking up slack in said belt.

In testimony whereof I affix my signature, in presence of two witnesses.

ALPHEUS W. ALTORFER.

Witnesses:

S. H. ALTORFER,

L. L. RISSER.

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