L. WHITE.

BELT TIGHTENER.

APPLICATION FILED JUNE 10, 1909.

959,667. Patented May 31, 1910.

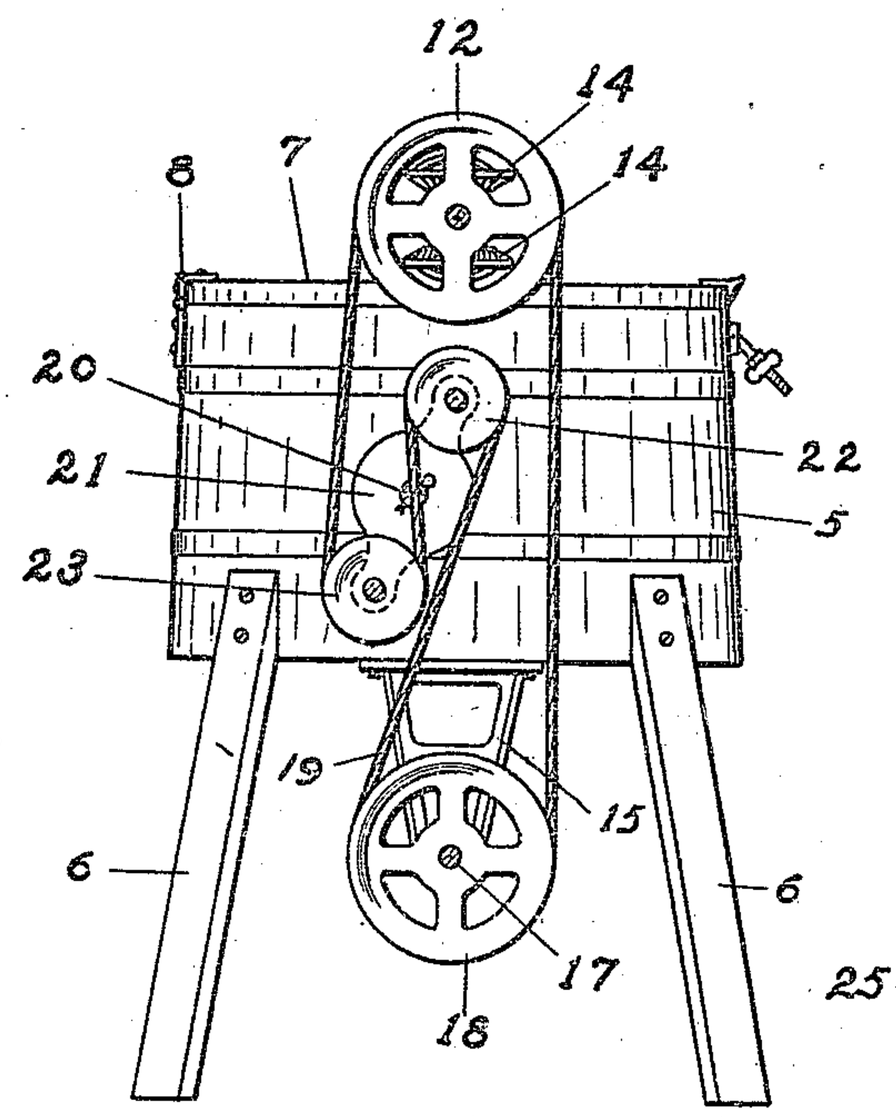

Fig. 1

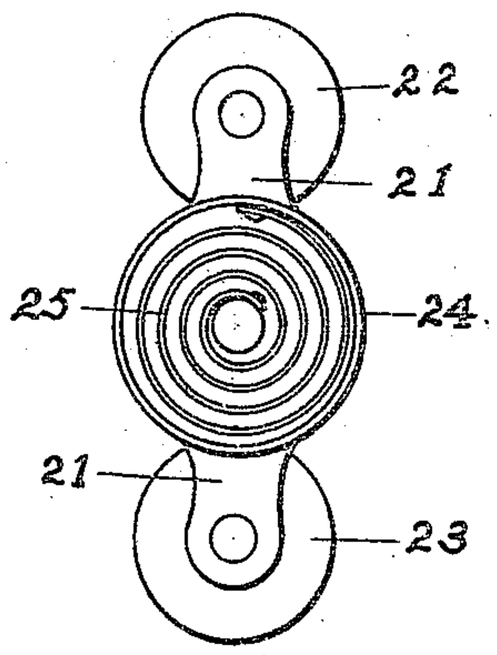

Fig. 3

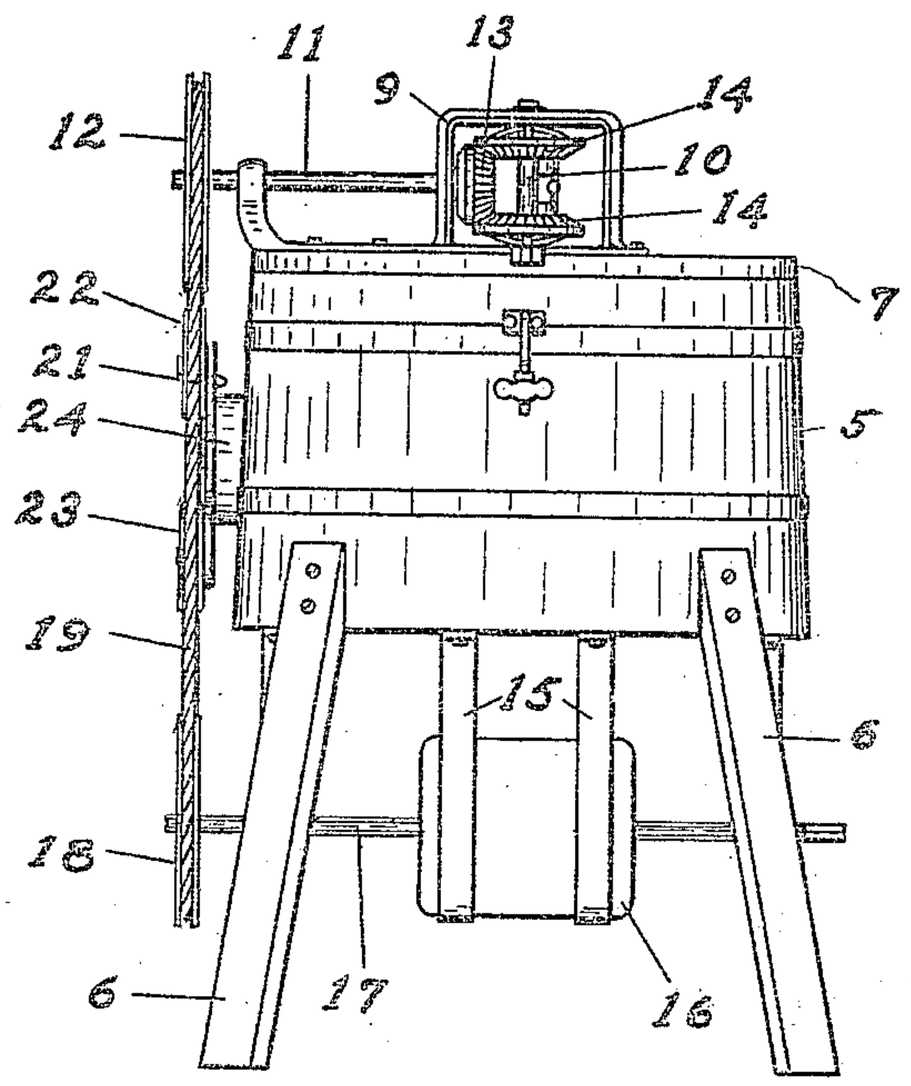

Fig. 2

WITNESSES

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UNITED STATES PATENT OFFICE.

LUCY WHITE, OF DEER PARK, WASHINGTON.

BELT-TIGHTENER.

959,667. Specification of Letters Patent. **Patented May 31, 1910.**

Application filed June 10, 1909. Serial No. 501,311.

To all whom it may concern:

Be it known that I, LUCY WHITE, a citizen of the United States, residing at Deer Park, in the county of Spokane and State of Washington, have invented certain new and useful Improvements in Belt-Tighteners, of which the following is a specification.

This invention has for its object to provide a belt tightening device for maintaining the tension on a belt between the driving mechanism of a washing machine, and the motor thereof; and also to hold the belt on the pulleys when the lid of the machine is swung open; and with these objects in view, the invention consists in a novel construction and arrangement of parts to be hereinafter described and claimed, reference being had to the drawing hereto annexed forming a part of this specification, in which drawing—

Figure 1 is a front elevation showing the application of the invention. Fig. 2 is a side elevation thereof. Fig. 3 is a detail showing the actuating spring of the tightener.

In the drawing, 5 denotes the tub of the machine, said tub being mounted on legs 6, and provided with a lid 7 which is hinged at 8 to the tub, at the top thereof. On the lid 7 is mounted a bracket 9 having bearings in which is journaled a vertically disposed shaft 10 extending through an opening in the lid into the tub, within which tub said shaft is fitted with an agitator or other washing device, which has not been shown, as it forms no part of the present invention. The bracket 9 also has bearings for a horizontally disposed shaft 11, projecting at one end from the side of the tub, and fitted at said end with a pulley 12. The other end of the shaft 11 is fitted with a bevel gear 13 which meshes with similar gears 14 on the shaft 10, whereby motion from the shaft 11 is transmitted to the shaft 10.

To the bottom of the tub are secured depending brackets 15 which support an electric, water, or other form of motor 16. On the shaft 17 of this motor is a pulley 18 which is connected to the pulley 12 by a belt 19.

To the side of the tub is pivoted, intermediate its ends, as indicated at 20, an arm 21, carrying at its extremities idler pulleys 22 and 23, respectively, over which the belt 19 also passes. These idler pulleys are spaced from each other vertically, and the belt 19 passes from the pulley 18 up to and over the idler pulley 22, and then downwardly to and under the idler pulley 23, and thence to the pulley 12. By this arrangement, it will be seen that when the arm swings toward the right, the belt will become slack, and when the arm is swung in the opposite direction, the belt will be tightened. The arm is formed with a housing 24, into which the pivot 20 extends, in which housing is mounted a spring 25, which is coiled around, and made fast at one end to the pivot. The other end of the spring is made fast to the wall of the housing, so that the arm is normally swung in a direction to tighten the belt. When the lid is swung open, the idler pulleys yield and let out enough of the belt to permit the lid to be opened, and at the same time the belt is held sufficiently tight to prevent it from slipping off the pulleys 12 and 18. The belt is therefore automatically maintained at the proper tension at all times, and the belt remains in place when the lid is swung open.

The mechanism herein described is devoid of complicated parts, and effectually serves the purpose for which it is designed. It can be readily mounted on any ordinary washing machine having a rotary agitator, and by its use, an electric, water, or other motor may be employed to operate the machine, and it is also possible to mount such motor directly on the machine.

I claim:—

A belt tightener comprising a support, an arm pivotally connected intermediate its ends to the support, and formed with a housing into which the pivot extends, an idler pulley carried by the respective ends of the arm, a belt passing over said pulleys, and a spring in the housing coiled around the pivot, and connected at one end thereto, the other end of the spring being connected to the housing, said spring tending to normally swing the arm in a direction to throw the idler pulleys into position to tighten the belt.

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

LUCY WHITE.

Witnesses:
EVEN BERG,
D. L. COX.