Jan. 27, 1931. H. C. HIRSCHY 1,790,584

ATTACHMENT FOR WASHING MACHINES

Filed Jan. 25, 1928

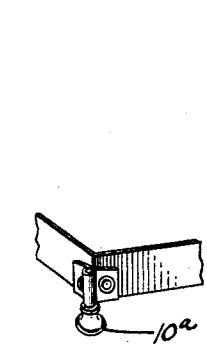


FIG. 4

FIG. 1

FIG. 5

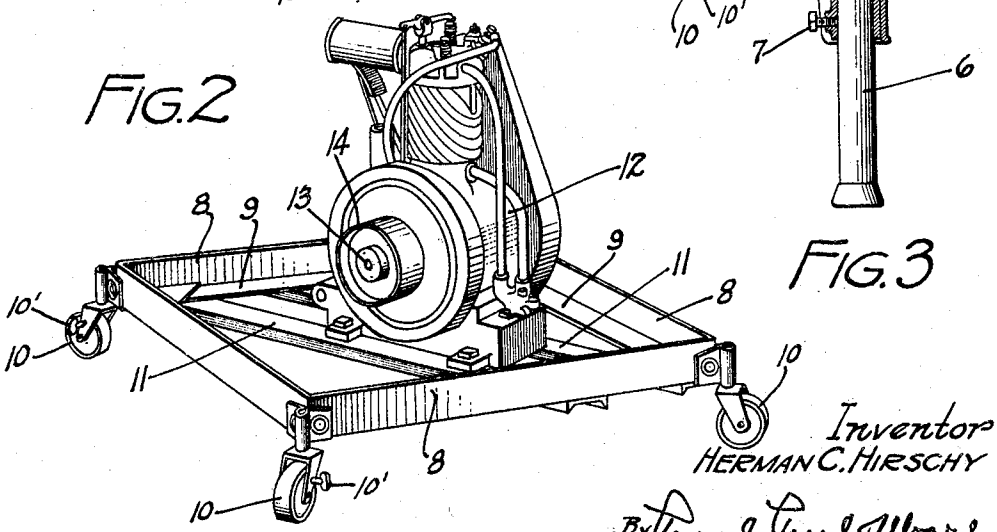


FIG. 2

FIG. 3

Inventor
HERMAN C. HIRSCHY

By Parker, Parker & Moore

ATTORNEYS

Patented Jan. 27, 1931 1,790,584

UNITED STATES PATENT OFFICE

HERMAN C. HIRSCHY, OF DULUTH, MINNESOTA, ASSIGNOR TO THE HIRSCHY COMPANY, OF DULUTH, MINNESOTA, A CORPORATION OF MINNESOTA

ATTACHMENT FOR WASHING MACHINES

Application filed January 25, 1928. Serial No. 249,487.

The motor used for operating a washing machine and permanently attached thereto has usually comparatively little power and is of no particular value to the owner except for the operation of the washing machine, and its power is soon lessened or reduced because of carbon (when a gas engine is used) or because of worn parts or other imperfections that tend to decrease the power of the motor.

Furthermore, persons of small means have hesitated to purchase a washing machine with a power attachment, feeling that they could not afford the additional expense of the power plant that was adapted only for operating the washing machine itself, being idle and of no use to the owner except for washing purposes. This one fact alone has tended to quite materially reduce the sales and limit the field of usefulness of a power-operated washing machine.

The object, therefore, of my invention is to provide a power plant that is readily separable from the washing machine to the end that it may be easily and quickly moved to another point and utilized for operating other household or farm machinery, such as dairy apparatus, machines around the farm, such as feed choppers, pumps, power saws, blacksmithing machines and the like, in fact, wherever a light power may be utilized and transmitted through a belt.

A further object and one which becomes possible through the universal application of the power plant is to provide a motor of increased power over that generally used in connection with washing machines, making it fitted for more general use and the surplus power off-setting any reduction in efficiency that may arise through the presence of carbon in the cylinders or wearing of the parts of the machine. Hence, with a motor of this type, the washing machine can always be operated at its highest efficiency, even though the power plant efficiency may be somewhat lowered.

A further object is to provide a power plant of this kind which can be easily and quickly attached to a washing machine and as readily adapted for other purposes around the household or the farm where a power is required.

A further object is to provide a power unit which when put under the washer will be all included by the circumference of the machine having no projecting parts to interfere with the use of the machine.

Other objects of the invention will appear from the following detailed description and accompanying drawings.

In the accompanying drawings forming part of this specification:

Figure 1 is a side elevation of a washing machine showing the application of my improved power plant thereto;

Figure 2 is a view of the power plant and its frame detached from the washing machine;

Figure 3 is a detailed view showing the preferred manner of adjusting the washing machine legs vertically to tension the power belt and adapt the attachment for applying its power to the driving gears of the washing machine;

Figures 4 and 5 are detail views showing modifications of the means for supporting the portable frame.

In the drawing, 2 represents the body portion of a washing machine of standard type having the usual wringer attachment 3 and a driven shaft 4 that is operatively connected with the mechanism of the washing machine by a suitable gearing not shown. The driven shaft, as indicated, extends horizontally under the washing machine frame and is provided with a pulley 5 and the frame of the machine is supported by suitable legs 6 that are vertically adjustable in the frame of the machine, as indicated at 7 and provided

with suitable means for securing the legs in their adjusted position, such as clamping or set screws 7. The frame of the power attachment comprises plates 8 having inwardly extending horizontal flanges 9, the frame being substantially rectangular in form and provided at the corners with suitable supporting means such as castor wheels 10 or suitable shoes which allow the convenient movement of the frame from place to place on the floor. The bracket of each castor wheel is provided with a thumb screw 10′ by means of which the user of the machine can lock the castor wheel and prevent it from turning. In moving the frame from place to place, the wheels of course will be unlocked to permit them to roll freely on the floor. In place of the castor wheels I have shown a button or shoe 10^a in Figure 4, the shank of which is intended to be inserted in the socket at the corner of the frame in place of the shank of the castor wheel, and I prefer to use two of these shoes or buttons in place of a corresponding number of castors. These shoes bearing on the floor, will hold the machine and frame in place and prevent it from rolling around as it might do if supported entirely by the castor wheels, and I may prefer to use the shoe instead of locking the castor wheels, as the wheels when locked may still rotate in their sockets on the frame and would not form as secure supports as the shoes.

In Figure 5 I have shown a spike 10^b. These spikes preferably have tapered lower ends which tend to dig into the floor and when used in place of the castor wheels on one side of the machine, will hold it firmly against accidental movement. The frame is supported near the floor line and has sufficient stability so that when the four legs of the washing machine are placed in the angles of the frame and rest upon the flanges 9, the machine will be securely held and will be sufficiently stable so that the washing operation can be readily and satisfactorily performed. A cross bar 11 is mounted in the frame and on this bar, at a point preferably near the center of the frame, I arrange a suitable motor 12.

I have shown in the drawing of this case, the frame equipped with a standard internal combustion engine which will form a compact, easily operated source of power for the washing machine, and for other power purposes. I may, however, substitute an electric motor for this gas engine, with provision for making suitable electrical connections to a source of electrical energy. I have not thought it necessary, however, to illustrate the mounting of an electric motor on this frame, as such a substitution for the gas engine would seem to be obvious and clearly understood. The engine 12 has a drive shaft 13 and a driving pulley 14 and is so positioned that the power belt 15 may be easily and quickly applied to the driven pulley of the washing machine and when this has been done, the legs of the machine may be loosened if desired and the machine frame raised sufficiently to put the power belt under tension so that the power of the motor will be transmitted to the gears of the washing machine and the washing operation performed without any labor on the part of the user of the machine.

Instead of making the legs of the washing machine adjustable for the purpose of applying the desired tension to the power transmitting belt, I may use an ordinary form of belt tightener comprising an idle wheel that is mounted to bear on the belt and take up the slack therein; this being a typical means for putting a belt in tension, I have not thought it necessary to illustrate it herein. When the washing operation is completed, the machine may be lifted off the frame and then the frame with the power plant thereon may be pushed or otherwise moved easily and conveniently to some other point as for instance, to the dairy for the operation of a separator or to one of the farm buildings for driving a feed chopper or some other machine and thus the owner of the machine is not deprived of the use of the power plant when the washing operation is finished, but can with very little expenditure of time and effort, move the plant to another point and utilize it for a variety of purposes. Hence, in buying a washing machine, the owner is not obliged to make a considerable investment in the power plant that can be utilized only for washing purposes, but instead, acquires one that is capable of almost universal use around the household or farm. The purchase of this machine will therefore commend itself to a great many persons who would not feel that they could afford to have a washing machine operated by power and have no use of the power plant except for washing purposes. The frame supporting the power plant is of simple, economical construction and may, of course, be changed in various ways to suit the different forms of washing machines and arrangement of the supporting legs. I have, however, illustrated a simple, inexpensive form of frame that will form a substantial support for the power plant and, at the same time be capable of convenient and rapid movement from place to place in the household or among the farm and dairy buildings. The various details of construction herein shown and described may be modified and still be within the scope of my invention.

It will be noted that when the power plant is put in place under the washing machine, that all the operating parts, that is, the mechanism of the power plant, will be under the tub, and there will be no projecting shafts or pulleys outside the frame of the

machine to interfere with the convenient operation of the washer.

When it is desired to use the power plant or unit for operating a washing machine, the frame will be placed on the floor near the machine and then the machine may be easily and quickly lifted and placed upon the frame with the lower ends of the legs of the washer fitting the angles at the corners of the frame and being supported by the flanges, which, as described, extend inwardly from the side plates of the frame. The upwardly projecting side plates will bear on the legs and serve as a means for bracing them so that during the operation of the washing machine, it will be held in a very substantial, stable manner, and fully as firmly as it would be if resting directly upon the floor. The power transmitting belt can be easily and quickly put in place and when the motor is started, the washing machine mechanism will be operated in the usual way of machines of this type. Whenever desired, the washing machine may be lifted off the frame and then the frame with the motor thereon, constituting the portable power plant, can be easily and quickly moved to some other place in the building for use in operating some other type of machine and thus the light power embodied in this unit or plant can be utilized for a variety of purposes and instead of having the operating motor of the washing machine adapted only for washing machine purposes and idle at all other times, it can be used for driving other machines of the household, dairy or farm.

I claim as my invention:

1. A washing machine structure comprising a base-frame, a motor mounted on said frame, a washing machine unit separably mounted on said base-frame and disposed above said motor, means for transmitting power from the motor to an operative part of the washing machine unit, and means for preventing lateral displacement of the washing machine unit relatively to the base-frame and the motor supported thereon.

2. A washing machine structure comprising a base-frame, a motor mounted on said frame, a washing machine unit separably mounted on said frame and disposed above said motor, means for transmitting power from the motor to an operative part of the washing machine unit, means for preventing lateral displacement of the washing machine unit relatively to the base-frame and the motor mounted thereon, and means for altering the height of the washing machine unit relatively to the frame and its motor whereby the power transmitting means may be adjusted relatively to the motor and said operative part.

3. A washing machine structure comprising a base-frame, a motor mounted on said frame, a washing machine unit separably mounted on said frame and disposed above said motor, a drive-belt connection between the motor and an operative part of the washing machine unit for transmitting power from one to the other, means for preventing lateral displacement of the washing machine unit relatively to the base-frame and the motor mounted thereon, and means for altering the height of the washing machine unit relatively to the frame and its motor.

In witness whereof, I have hereunto set my hand this 7th day of January, 1928.

HERMAN C. HIRSCHY.