

March 8, 1932.

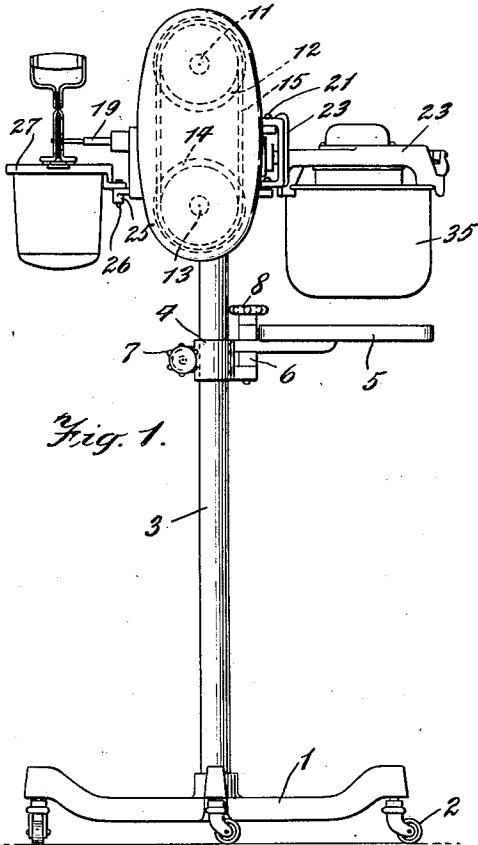
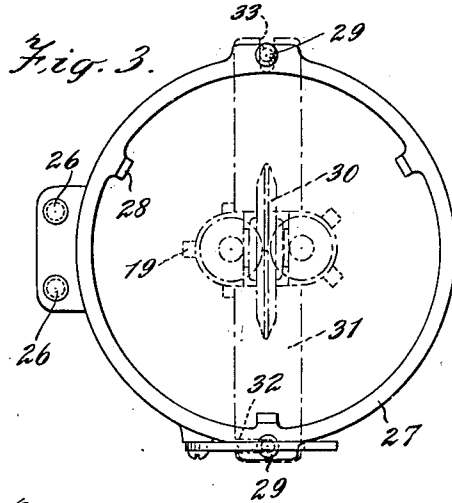
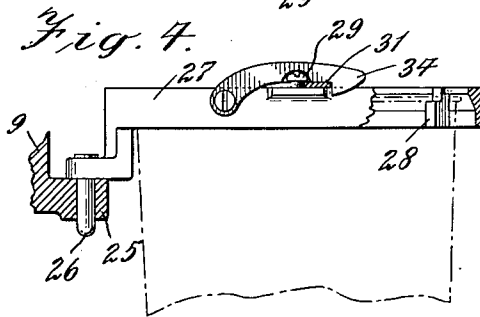
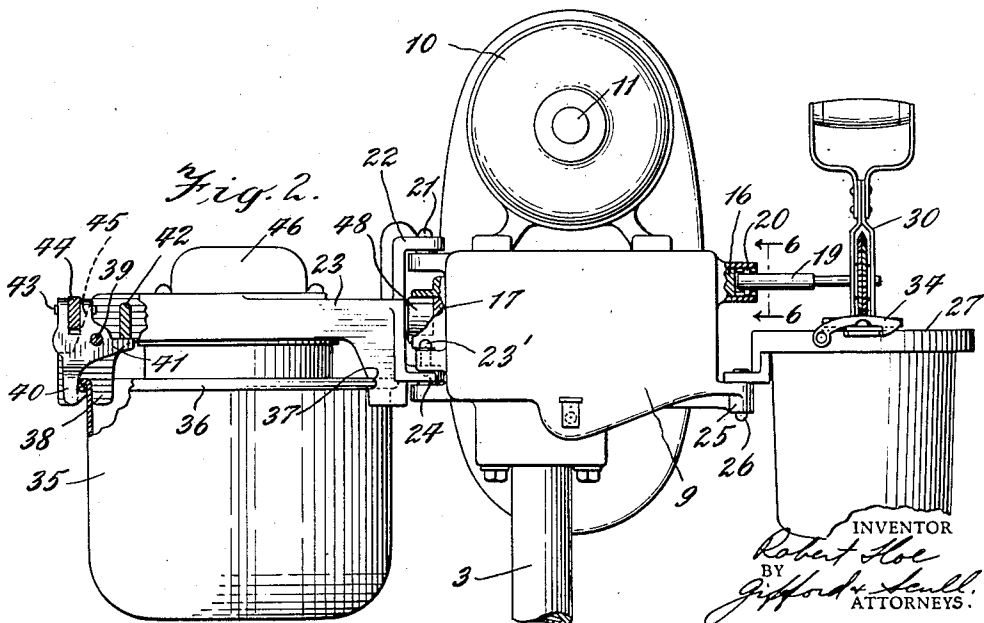
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1,848,529

HOUSEHOLD POWER UNIT

Filed Oct. 6, 1928

2 Sheets-Sheet 1



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2 Sheets-Sheet 2

Fig. 5.

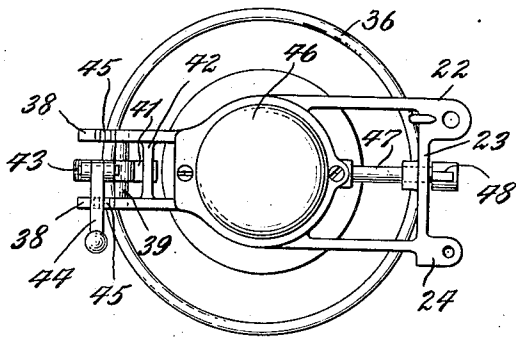


Fig. 6.

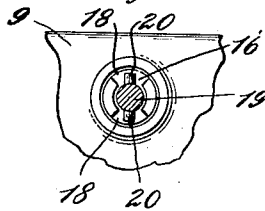
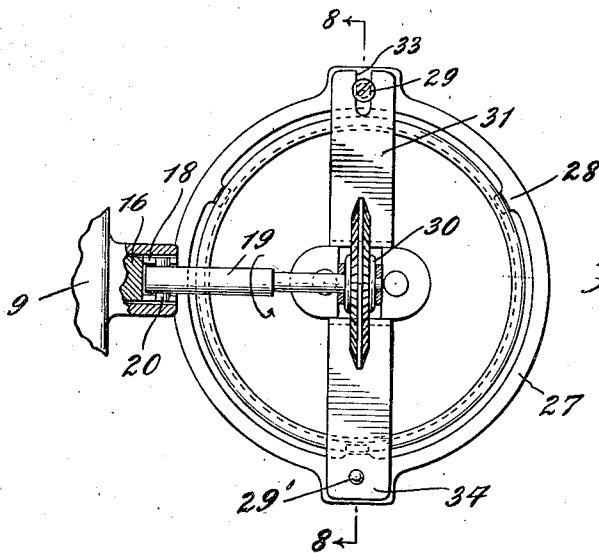


Fig. 7.

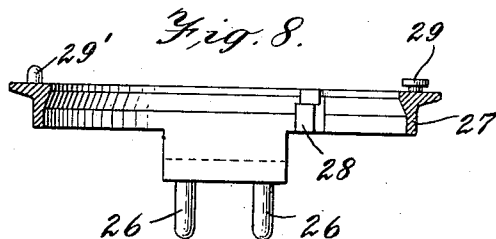


Fig. 8.

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HOUSEHOLD POWER UNIT

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This invention relates to an improved household power unit, the novel features of which will be best understood from the following description and the annexed drawings. In the drawings, I have shown selected embodiments of the various features forming the invention, and referring thereto;

Fig. 1 is a vertical view of a household unit having the novel features embodied therein.
Fig. 2 is an enlarged view of the upper part of the structure shown in Fig. 1, as viewed from the opposite side of Fig. 1, parts being broken away.

Fig. 3 is a horizontal view of the supporting ring shown at the right of Fig. 2, and at the left of Fig. 1.

Fig. 4 is a vertical elevation of the structure shown in Fig. 3, parts being broken away.

Fig. 5 is a horizontal view of the structure appearing at the left of Fig. 2, and at the right of Fig. 1.

Fig. 6 is a section on the line 6—6 of Fig. 2.

Fig. 7 is a view corresponding to Fig. 3, but showing a modified way of securing the device to the power unit.

Fig. 8 is a section of the ring only, taken on the line 8—8 of Fig. 7.

I have shown the invention as comprising a movable base 1 which may be provided with a plurality of rollers 2 whereby the base and the parts supported thereon may be readily moved to any desired position when in use, and may be easily stored away in an out of the way place when not in use. Extending upwardly from the base is a standard 3 upon which I have shown a vertically slidable sleeve 4 supporting a shelf 5 which may be rotated about its pivot 6 and secured in any desired position. Suitable handles 7 and 8 are provided for clamping the shelf in such a desired position, in which it may support a container which is to be used with the unit.

Disposed on top of the standard is a gear casing 9 supporting a motor 10. The details of the gearing in the casing are not shown, because they may vary quite widely. It is deemed sufficient to say that the motor has a shaft 11 upon which is mounted a pulley 12, and the gearing includes a shaft 13 carrying

a pulley 14 which is driven by means of a belt 15 running over the two pulleys. By this arrangement the various gears and shafts in the casing are given their movement. The casing is preferably provided with a plurality of power outlets, each in the form of a rotatable shaft. In this form, I have shown two shafts 16 and 17 extending from opposite sides of the casing, and each surrounded with a shroud so as to protect the shaft and to prevent accidental engagement thereof by the fingers of the person employing the unit. Each of the shafts 16 and 17 is provided with a clutch element, a suitable type of which is shown in Fig. 6. In this figure I have shown the shaft 16 as provided with oppositely disposed recesses 18 which form extensions of a central recess in the shaft. Within the central recess may be placed a shaft 19 of a device which is to be operated by the shaft 16, and this shaft 19 is provided with oppositely extending pins 20 which may be received in the recesses 18.

Disposed adjacent each power outlet is means for detachably supporting a device which is adapted to be operated from the power outlet. In this form, I have shown hinge members in the form of pins 21 adjacent one outlet, these hinge members being adapted to cooperate with hinge members 22 on a bracket 23 which can be readily lifted from the hinge pins 21 and can likewise be placed on the pins by vertical movement. The bracket may be releasably held in position by means of a spring latch indicated by a pin 23' coacting with an ear 24 on the bracket. By this arrangement the bracket and any device carried thereby may be easily swung out of operative engagement with the power unit, in case of any accident such as catching the operator's fingers in any of the moving parts. Adjacent the other power outlet I have shown ears 25 having apertures therein to receive pins 26 on a ring 27. This ring forms another kind of bracket adapted to support other types of devices to be operated from the power unit. It may here be said that the two outlets 16 and 17 will ordinarily be operated at different speeds by suit-

able arrangement of the gearing in the casing 9.

I will first describe the form of bracket best shown in Figs. 3 and 4. This bracket is preferably in the form of the ring 27, and has the pins 26 secured thereto. It may thus be easily placed in position and removed by a simple vertical movement. If desired, the ring may be provided with inwardly extending lugs 28 to engage a container which may be supported thereon. Extending upwardly from the ring on opposite sides, are headed pins 29, and the line between these pins is preferably at right angles to axis of the shaft 19 on the device supported on the ring. In the form shown, this device is exemplified as a beater 30, this device being supported upon a transverse bar 31 which has slots 32 and 33 at its opposite ends; to receive the pins 29.

It will be noticed that the slot 32 opens towards the casing, while the slot 33 opens towards the end of the bar, or at right angles to the slot 32. The slot 33 is deep enough so that when the parts are in operative position the pin 29 disposed therein does not touch the bottom of the slot. I have found that by this arrangement the bar 31 may be placed in position by sliding it lengthwise with one pin 29 in the slot 33, and then by rotating it about that pin until the other pin enters the slot 32 and the clutch elements on the shafts 16 and 19 come into engagement. A latch 34 may be provided to aid in holding the bar in position.

The shaft 19 will always be rotated in one direction, which in this case is counterclockwise, as indicated by the arrow in Fig. 7. The head on the pin 29 in the slot 33 engages the bar 31 and prevents lifting of that end of the bar, an action which the rotation of the shaft tends to cause. There is also a tendency to rotation of the bar about the center of the ring, and this rotation is prevented by the pin 29 in the slot 33 and also by the latch 34.

In Figs. 7 and 8 I have shown a different embodiment of the structure just described, in which the bar 31 is provided with a slot 33 adjacent one end extending in a direction at right angles to the shaft 19 and receiving a headed pin 29. In this form the bar is provided at its other end with a hole to snugly receive a headless pin 29'. By this arrangement the head on the pin 29 will prevent the lifting action referred to above, while rotation about the center of the ring is prevented by both the pin 29 and the pin 29'.

I will now describe the bracket shown at the left of Fig. 2, this bracket also being shown in plan in Fig. 5. This bracket is designed to support a container such as a pan 35 having a rim 36 of the usual beaded form. On the side of the bracket adjacent the casing this beaded rim is received within grooves 37 in the bracket, and on the opposite side the

rim is received in forked ears 38. These ears are spaced relatively close together and are mounted between them on a pivot 39 is a latch 40 having a lip adapted to catch under the beaded rim, as plainly shown in Fig. 2. The latch is also provided with a projection 41 adapted to engage a stop 42, this stop being shown as a bar connecting the two ears 38. Mounted on the latch is a second pivot 43 disposed substantially at right angles to the pivot 39, and on this pivot is mounted a handle 44 which is thus pivotally mounted to move at right angles to the latch 40. Each of the ears 38 is provided with a cam surface 45 adapted to cooperate with the handle 44 when the handle is depressed to the position shown in Figs. 2 and 5.

In operating the device just described above, a container is placed with its beaded rim in the grooves 37 and then the outer portion of the rim is swung upwardly between the forks of the ears 38. The latch 40 may be swung away to permit this movement of the rim. The handle 44 of course is raised to a substantially vertical position and then it may be used to swing the latch on its pivot 39 into and out of engagement with the rim. The bottom of the lip on the latch is adapted to permit the rim to force the lip and latch outwardly in a well-known manner.

After the rim is brought into position, the handle 44 may be used to bring the latch into engagement with the rim by movement about the pivot 39, and then the handle is depressed into engagement with one of the cam surfaces 45. This will lock the container in position wherein it may be used to hold any substance which is being acted upon by the device 46. This device in turn is actuated by a shaft 47 having a clutch 48 adapted to cooperate with corresponding clutch elements on the shaft 17. The above arrangement is one which will simply and easily support the container without deforming the container or its rim.

I claim:—

1. A power unit comprising a gear casing with a power outlet in the form of a rotatable shaft, a bracket detachably supported on the casing adjacent the outlet, a device adapted to be operated by said shaft, means to detachably connect said device to said shaft, and means to detachably support said device on said bracket in position to be connected to said shaft.

2. In combination, a gear casing having a power outlet in the form of a rotatable shaft, a ring having means to detachably support it on said casing, a device adapted to be operated by said shaft, means to detachably connect said device to said shaft, and means to detachably secure said device within said rings in position to be connected to said shaft.

3. In combination, a gear casing having a power outlet in the form of a rotatable shaft,

a clutch element on the end of said shaft, a bracket having means for detachably supporting it on said casing adjacent the outlet, a device having a shaft with a clutch element adapted to cooperate with the clutch element on the first-named shaft, coaxing members on said device and on said bracket, to support the device on the bracket, and means to hold said members in proper position relative to each other when said clutch elements are engaged.

4. In combination, a gear casing having a power outlet in the form of a rotatable shaft, a clutch element on the end of said shaft, a ring having means for detachably securing it to said casing adjacent the outlet, a device having a shaft with a clutch element adapted to cooperate with the clutch element on the first-named shaft, a bar supporting said device with said clutch elements in cooperative relation, said bar extending across said ring substantially at right angles to said shaft, and pins projecting from said ring and received in apertures in said bar.

5. In combination, a gear casing having a power outlet in the form of a rotatable shaft, a clutch element on the end of said shaft, a ring having means for detachably securing it to said casing adjacent the outlet, a device having a shaft with a clutch element adapted to cooperate with the clutch element on the first-named shaft, a bar supporting said device with said clutch elements in cooperative relation, said bar extending across said ring substantially at right angles to said shaft, and pins projecting from said ring and received in slots in said bar, said slots being disposed at right angles to each other.

6. In combination, a gear casing having a power outlet in the form of a rotatable shaft, a clutch element on the end of said shaft, a ring having means for detachably securing it to said casing adjacent the outlet, a device having a shaft with a clutch element adapted to cooperate with the clutch element on the first-named shaft, a bar supporting said device with said clutch elements in cooperative relation, said bar extending across said ring substantially at right angles to said shaft, and pins projecting from said ring and received in slots in said bar, said slots being disposed at right angles to each other, and one of said slots extending substantially parallel to said shafts and the other at right angles thereto, the pin in said last-named slot being out of engagement with the bottom of the slot when the bar is in operative position.

7. In combination, a gear casing having a power outlet in the form of a rotatable shaft, a clutch element on the end of said shaft, a ring having means for detachably securing it to said casing adjacent the outlet, a device having a shaft with a clutch element adapted to cooperate with the clutch element on the

first-named shaft, a bar supporting said device with said clutch elements in cooperative relation, said bar extending across said ring substantially at right angles to said shaft, pins projecting from said ring and received in slots in said bar, said slots being disposed at right angles to each other, one of said slots extending substantially parallel to said shafts and the other at right angles thereto, the pin in said last-named slot being out of engagement with the bottom of the slot when the bar is in operative position, and a latch engaging said bar adjacent the first-named slot.

8. In combination, a gear casing having a power outlet in the form of a rotatable shaft, a clutch element on the end of said shaft, a ring having means for detachably securing it to said casing adjacent the outlet, a device having a shaft with a clutch element adapted to cooperate with the clutch element on the first-named shaft, a bar supporting said device with said clutch elements in cooperative relation, said bar extending across said ring substantially at right angles to said shaft, said bar having a hole at one end and a slot opening towards the other end, a headless pin projecting upwardly from said ring and received in said hole, and a headed pin projecting upwardly from the ring and received in said slot.

9. In combination, a gear casing having a power outlet in the form of a rotatable shaft, a clutch element on the end of said shaft, a ring having means for detachably securing it to said casing adjacent the outlet, a device having a shaft with a clutch element adapted to cooperate with the clutch element on the first-named shaft, a bar supporting said device with said clutch element in cooperative relation, said bar extending across said ring substantially at right angles to said shaft, said bar having a hole at one end and a slot opening towards the other end, a headless pin projecting upwardly from said ring and received in said hole, and a headed pin projecting upwardly from the ring and received in said slot and out of contact with the bottom of the slot when said clutch elements are in cooperative relation to each other.

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