July 18, 1961 J. BLIK 2,992,564

CENTRIFUGE

Filed Oct. 24, 1958

Fig. 1

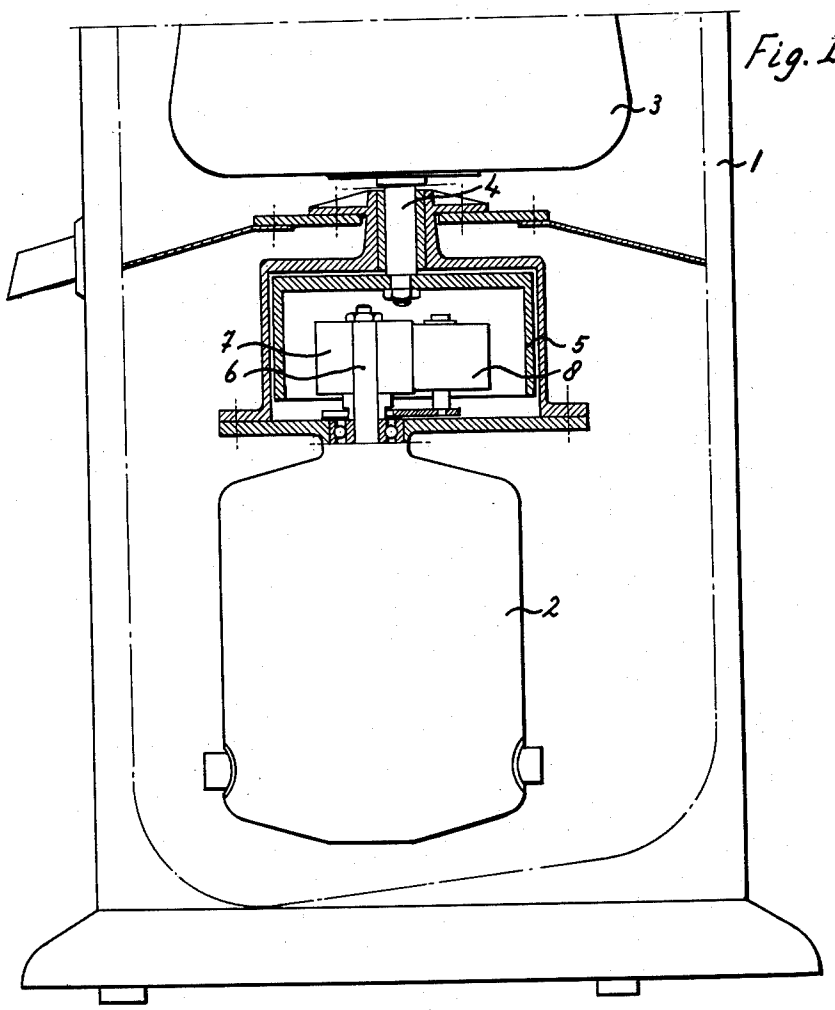
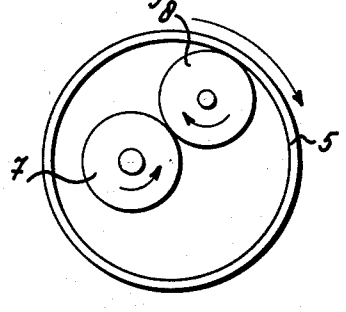


Fig. 2



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CENTRIFUGE

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1 Claim. (Cl. 74—208)

The invention relates to a centrifuge or similar household apparatus in which the drum is driven by an electric motor via a transmission.

In the known construction a roller is used for transmitting the rotation of the motor shaft to the shaft of the centrifuge, said roller co-operating with an edge of the centrifugal drum. Such a transmission is not noiseless and gives rise to a slipping effect.

The object of the invention is to provide a centrifuge or a similar household apparatus driven by an electric motor and in which the aforesaid drawbacks are eliminated.

According to the invention this is achieved by the fact that a roller provided on the motor shaft is mounted excentrically within the basin-like ring of the centrifugal drum, which basin-like ring faces the motor, an intermediate roller adapted to move concentrically about the motor roller being interposed between the first-mentioned roller and the inner wall of said basin-like ring. This construction is of remarkable structural compactness and is virtually slip-free.

The roller which is mounted between the roller on the motor shaft and the inner wall of the basin-like ring is preferably made of a synthetic material. Such a roller is to a very high degree wear-resistant and is capable of acting against metal practically without any slip. The roller on the motor shaft and the basin-like ring may therefore conveniently be made of metal. In this case the transmission is moreover noiseless.

The invention will now be discussed in more detail with reference to the drawing in which:

FIGURE 1 is a cross-sectional view of a part of a centrifuge, and

FIGURE 2 represents a transmission mechanism seen from below.

The reference numeral 1 in the drawing indicates the casing of the centrifuge and 2 represents an electric motor which serves to drive the centrifugal drum 3. The centrifugal drum is housed in an intermediate bottom, shaft 4 extending downwards through said bottom. Secured to said shaft 4 is a basin-like ring 5 within which the shaft 6 of the motor 2 is mounted excentrically. On said shaft 6 is provided a roller 7. Between said roller 7 and the interior wall of the basin-like ring 5 is arranged an intermediate roller 8 mounted on a supporting member 9 which is capable of moving concentrically about

the roller 7. FIGURE 2 represents the case in which the roller 7 is in contact with the intermediate roller 8, said roller 8 being in contact with the interior wall of the basin-like ring 5. Under these circumstances the centrifugal drum 3 is being driven. By using the aforesaid rollers and the basin-like ring respectively it is possible to obtain a rather considerable speed reduction within a very limited space. In this case it is therefore possible to use a simple and inexpensive series motor, which is known to operate with a high number of revolutions. The intermediate roller 8 is preferably made of a synthetic material. This results in a slip-free transmission which has moreover the further advantage of being virtually noiseless. By moving the intermediate roller 8 from the position as represented in FIGURE 2—in which driving is effected in the direction shown by the arrow—clockwise about the shaft 6 the intermediate roller 8 will lose its contact with the interior wall of the basin-like ring 5. This means that the ring 5 and with it the centrifugal drum 3 is no longer being driven. To actuate the centrifugal drum it is then again necessary to bring the intermediate roller 8 into contact with the ring 5. The centrifugal drum can in the known manner be braked at the moment when the cover of the centrifuge is being opened. This may be effected in such a way that the motor circuit too is interrupted. In any case the centrifugal drum 3 cannot be brought into rotational movement as long as the cover of the apparatus is opened.

I claim:

A transmission for a centrifuge having a driving motor and a drum, said transmission consisting essentially of a basin-like ring axially mounted on the bottom of the drum, a roller on the shaft of the motor eccentric to the axis of the drum and within said basin-like ring, an intermediate roller of a resilient synthetic material softer than the material of said ring and said roller, said intermediate roller being within said basin-like ring and between said roller and said ring and being in contact with said roller at all times, and a support member on which said intermediate roller is freely rotatably mounted, said support member being freely rotatable around the axis of rotation of said roller.

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