

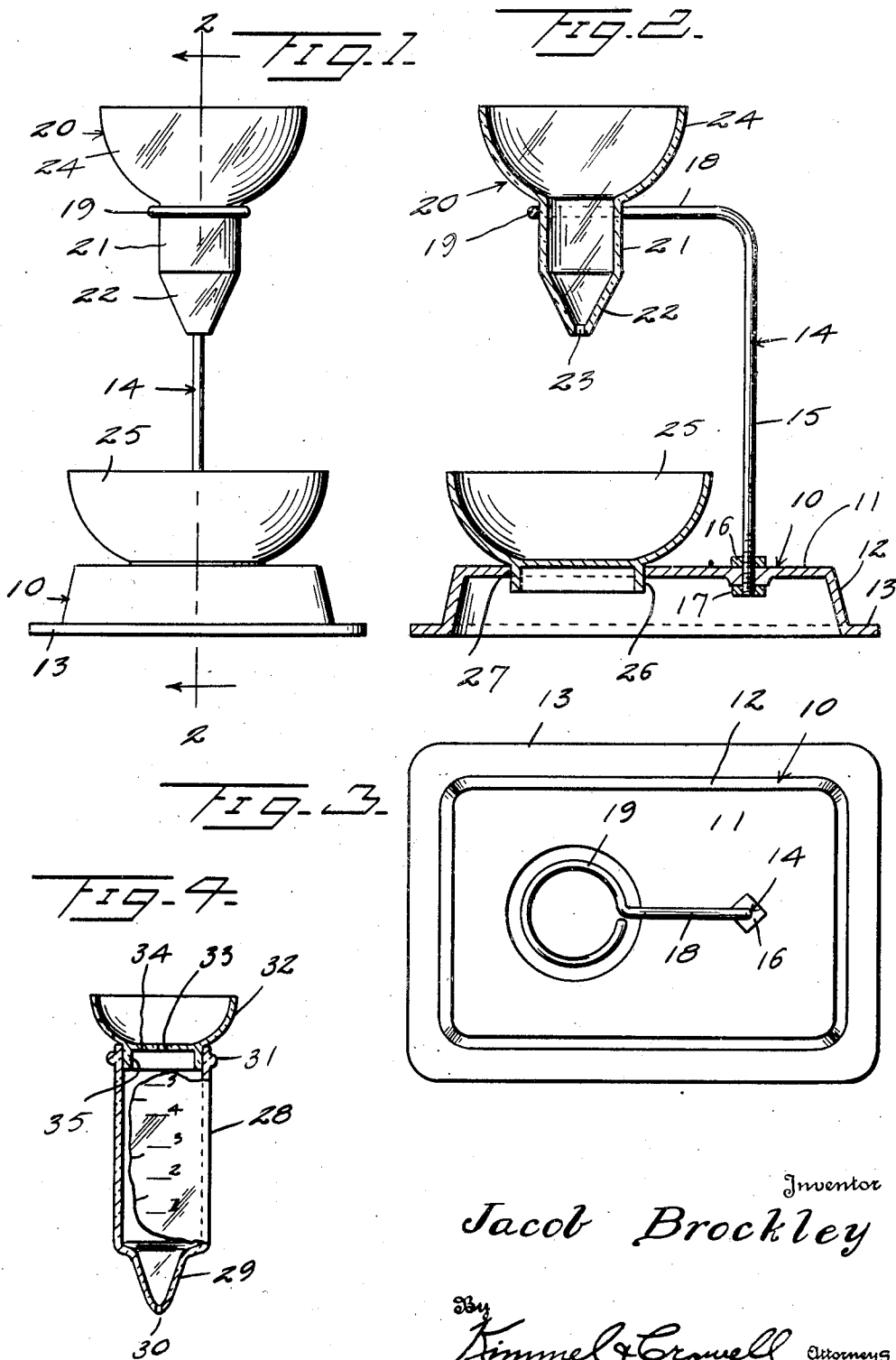
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J. BROCKLEY

2,466,573

GRAVITY FLOW INTERVAL TIMER

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Inventor
Jacob Brockley

By *Kimmel & Crowell* Attorneys

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GRAVITY FLOW INTERVAL TIMER

Jacob Brockley, near Newport News, Va.

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1 Claim. (Cl. 58—1)

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This invention relates to timing devices.

At the present time there are various devices available for timing the cooking of articles which are cooked in a short time, one example being pairs of connected receptacles containing sand or like granular products. These devices are satisfactory for the purposes for which they were designed, but the time factor is fixed and cannot be varied to meet changing conditions of cooking. As an example, in boiling eggs, larger eggs require a longer time for "soft boiling" than smaller eggs. With the conventional sand timer there cannot be any variation in the timing. It is, therefore, an object of this invention to provide a timer which can use either fluid, granular particles or the like, and which is so constructed and arranged that the timing can be varied at will.

Another object of this invention is to provide a timer which includes a hopper for holding a predetermined quantity of material which is dropped into a receiver or collector.

A further object of this invention is to provide a timer of this kind which includes a timing material holder or hopper which may be of transparent construction and is disposed in spaced relation above a receiver, and a stand for supporting both the holder and receiver.

With the above and other objects in view, my invention consists in the arrangement, combination and details of construction disclosed in the drawings and specification, and then more particularly pointed out in the appended claim.

In the drawings, wherein similar reference characters designate similar parts throughout the respective views,

Figure 1 is a detail front elevation of a timer constructed according to an embodiment of this invention,

Figure 2 is a vertical sectional view taken on the line 2—2 of Figure 1,

Figure 3 is a plan view of the device with the holder and the receiver removed therefrom,

Figure 4 is a vertical sectional view of a modified form of hopper.

Referring to the drawing, the numeral 10 designates generally a base which includes an upwardly offset top wall 11, downwardly and outwardly inclined flanges 12 extending from the wall 11, and base flanges 13 extending horizontally from the flanges 12. An upright support or standard generally designated as 14 is fixed to and extends upwardly from base 10. The standard 14 includes a vertically disposed rod 15 which is fixed in vertically adjusted position relative to

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the base 10 by means of an upper nut 16 and a lower nut 17, threaded on rod 15. A right angular arm 18 extends from the upper end of rod 15 and terminates in an eye 19.

A hopper generally designated as 20 is removably engaged with the eye 19 and is supported in upwardly spaced relation with respect to the base 10. The hopper 20 includes a cylindrical member 21 having extending downwardly therefrom a conical lower portion 22, terminating in a relatively small delivery opening 23. A cup-shaped upwardly opening hopper member 24 is formed integral with, and extends from the upper end of cylindrical member 21.

The material, which may be liquid or granular material, is placed in the hopper 24 and flows downwardly into the cylindrical member 21, and then enters conical member 22 and is discharged downwardly by gravity through the opening 23. A cup-shaped receiver or collector 25 is disposed below the holder or hopper member 20 and includes an annular flange 26 which engages in an opening 27 formed in the base plate 11. The flange 26 provides a means for centrally holding the receiver or collector 25 beneath the hopper member 20.

Referring now to Figure 4, there is disclosed a modified form of hopper or holder which includes a tubular or cylindrical member 28 having extending from the lower end thereof a substantially conical member 29. A delivery opening 30 is formed at the lower or apex end of the conical member 29. The tubular member 28, adjacent the upper end thereof, is formed with an annular rib 31 which is adapted to engage on the upper side of supporting ring 19. A hopper 32 in the form of a cup-shaped member is removably disposed in the open upper end of tubular member 28 and is formed with a central opening 33 in the bottom wall 34 thereof. An annular flange 35 is formed integral with and extends downwardly with the hopper 32 and loosely engages within the open end of tubular member 28.

It will be understood that a receiver similar to the receiver 25, and a standard similar to the standard 14 and base 10 will be associated with the structure shown in Figure 4.

In the use and operation of this timer, the material which may either be liquid or granular, is placed in the hopper 24 and will move downwardly into the tubular member 21, and will be discharged through the discharge opening 23. The size of the opening 23 will determine the time within which the material will be completely discharged from the holder. Where liquid is placed

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in the holder, the discharge opening 23 may be very small so that only drops of liquid will be discharged into the receiver.

In regulating the timing to predetermine the amount of liquid to place in the hopper, this amount is predetermined by a predetermined timing operation. In other words, for certain articles one or more teaspoonsful of liquid may be placed in the holder and for other articles the quantity of liquid may be more or less.

The holder or hopper 20 may be made of transparent material so that the user of the device may readily see when the timing material has been completely exhausted from the holder. When granular material is used, fine grained sand or the like, which will not cake and which will readily flow by gravity may be placed in the holder. In such cases, the size of the delivery opening 23 will be sufficient to provide for the retarded flow of the sand or granular material.

With a device as hereinbefore described, the timer can be used for timing various articles which are being cooked, and as a predetermined quantity of material, either liquid or granular, will be discharged from the holder in a predetermined time, the user can readily determine the exact timing operation by placing the correct quantity of material in the holder.

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I do not mean to confine myself to the exact details of construction herein disclosed but claim all variations falling within the purview of the appended claim.

5 What I desire to claim is:

A timer of the kind described comprising a base, a standard rising from said base and including a vertical rod and an eye offset from said rod, a cup-shaped holder, a tubular member depending from said holder, a conical member on the lower member and formed with a restricted opening in the apex thereof, said tubular member engageable through said eye for positioning said holder above said eye, a receiver for positioning below said conical member, and a flange depending from said receiver engageable in a correlated opening in said base.

JACOB BROCKLEY.

REFERENCES CITED

20 The following references are of record in the file of this patent:

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