

Dec. 6, 1927.

1,651,816

B. GOLDMAN

BAFFLE TO BE SET AUTOMATICALLY

Filed Jan. 8, 1927

Fig. 1.

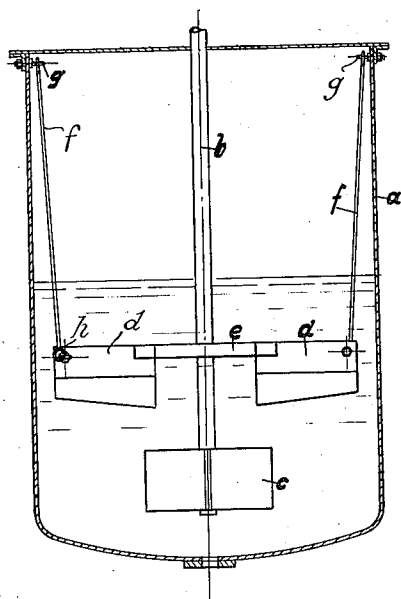


Fig. 3.

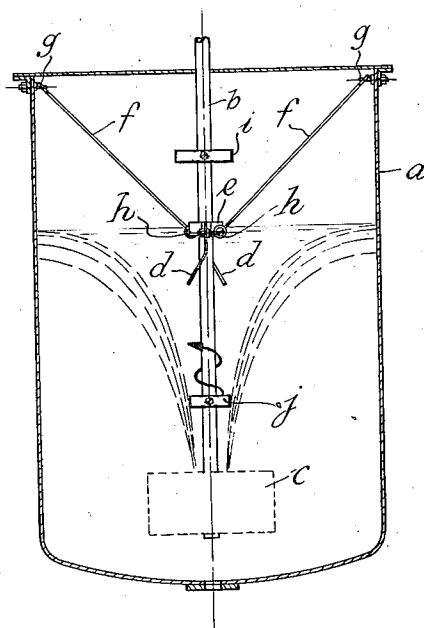


Fig. 2.

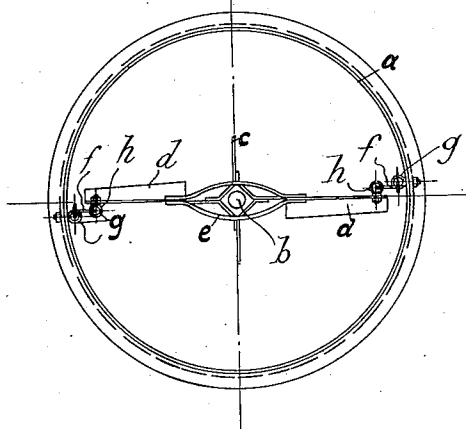
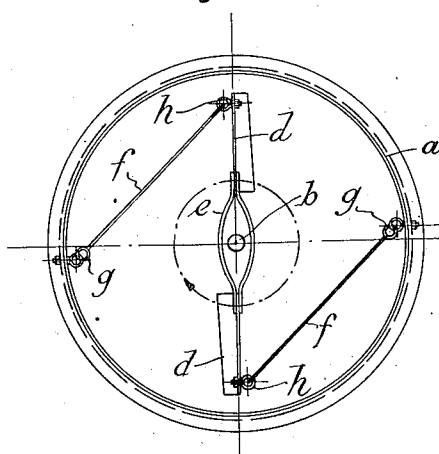


Fig. 4.



INVENTOR:

Attest: Monday, February 11, 1902
by C. P. Goebel
attorney.

UNITED STATES PATENT OFFICE.

BRONISLAW GOLDMAN, OF BERLIN-GRUNEWALD, GERMANY.

BAFFLE TO BE SET AUTOMATICALLY.

Application filed January 8, 1927, Serial No. 159,926, and in Germany January 29, 1926.

The present invention relates to automatic baffle means for agitators or the like, particularly of the type in which a mass of material, of different structure and consistency under various conditions, is treated with a liquid, or, conversely, in which a liquid has a mass of material mixed or agitated into it.

An object of the invention is to provide baffle means which will exert a maximum breaking or baffling action with the least resistance to the mass being stirred or agitated, and which will automatically position itself with respect to the current flow of the moving mass, so as to exert a breaking or baffling action proportioned to the force of the agitated mass.

With the above and other objects in view, an embodiment of the invention is shown in the accompanying drawings, and this embodiment will be hereinafter more fully described with reference thereto, and the invention will be finally pointed out in the claims.

In the drawings,

Figure 1 is a vertical sectional view of an agitator provided with baffle means, according to the present embodiment of the invention, and with the agitator and baffle means at rest,

Figure 2 is a plan view thereof,

Figure 3 is a vertical sectional view, showing the agitator in operation and with the baffle means in automatically adjusted position and,

Figure 4 is a plan view thereof.

Referring to the drawings, the agitator receptacle *a* is provided with a vertical shaft *b* having a stirring wing *c*, of any desired type, secured thereon. In the present embodiment, the baffles or breakers *d*, two as shown, are disposed in a vertical plane in diametrically opposed relation to each other and outwardly spaced from the shaft *b* and are connected together by a yoke or bracket member *e*, rotatably embracing the shaft *b* and preferably spaced therefrom, as shown in the plan views.

The baffles may be of any desired form, and as disclosed have their lower edge portions bent angularly in opposed directions of each other and away from the direction of the current flow of the agitated mass. The baffles are suspended freely within the receptacle by means of pendulum rods *f*, loosely connected at their upper ends by

eyes *g* to the upper end of the receptacle and loosely connected at their lower ends by eyes *h* to the outer corners of the baffles at the rearward sides thereof.

In the rest position as shown in Figures 1 and 2, the suspended baffles are immersed in the mass to be agitated, and may be either totally or partially immersed in the solid matter to be mixed with the liquid or may be above the upper level of the solid matter. In this position the rods hang in a substantially vertical plane, the baffles being at their lowermost suspended position. As the agitation is started through rotation of the shaft *b*, the action of the moving mass causes the suspended baffle means to rise and assume a position in which it acts as a breaker of the current flow, the angle of deviation of the rods increasing with the angle of rise.

Owing to the sensitiveness of the suspended baffle means in responding to the movement and force of the agitated mass, it is displaced immediately and automatically into such a position where it will, depending on the current flow and force, exert the greatest breaking or baffling action with the least resistance. The absence of guides, slides, screws, and other such structures that will cause wear, jogging, and sticking, insures the immediate and accurate proportioned response of the baffle means in its upward and downward movements.

In certain instances where it is desired to limit the movement of the suspended baffle means so that it remains stationary at a predetermined point, the movement either upwardly or downwardly may be arrested at any desired point. For this purpose, I have shown in Figure 3, an upper adjustable collar *i* and a lower adjustable collar *j*, adapted to be secured at any desired points upon the shaft *b* to arrest the upward and downward movement of the baffle means.

It will be understood that instead of the pair of baffles, as shown, a single baffle, or three, or more baffles may be employed, and that instead of the rods, chains, ropes, or the like may be employed, and also that the points of suspension may be varied to suit the particular requirements. By providing relatively longer suspension rods, it will be understood that the baffle system will function over a greater range, due to the fact that the angle of deviation of the rods increases with the angle of rise. The material

from which the baffle system is constructed and the weights of its several parts may also be varied to suit the particular properties of the mass to be agitated.

- 5 I have illustrated and described a preferred and satisfactory embodiment of the invention, but it will be obvious that changes may be made therein without departing from the spirit and scope thereof, and as defined
10 in the appended claims.

Claims—

1. Baffle means for agitators and the like, comprising a baffle adapted to be submerged in the material in the container, and means
15 for freely suspending said baffle, whereby it is adapted through the action of the agitated material to swing into a current breaking position.

2. The invention according to claim 1,
20 further characterized by said baffle consisting of a plurality of baffle members rigidly connected together.

3. The invention according to claim 1,

further characterized by adjustable means adapted to arrest the movement of the baffle
25 at a predetermined point.

4. Baffle means for rotary agitators, or the like, comprising a baffle to be submerged in the agitator, and suspension means flexibly connected between said baffle and the
30 agitator, whereby the rotary movement of the agitated material is adapted to rotatably displace the baffle, the suspension means having a varying angle of deviation and imparting vertical movement to the baffle
35 proportionately to said rotary displacement.

5. Baffle means for agitators, or the like, comprising a baffle adapted to be submerged in the material, and means freely support-
40 ing said baffle, whereby it is adapted through the action of the agitated material to have a simultaneous and proportionate rotary and vertical displacement.

In testimony whereof I affix my signature.

BRONISLAW GOLDMAN.