(No Model.)

# J. GÉRARD.

## EGG BEATER.

No. 380,200. Patented Mar. 27, 1888.

Fig. 1

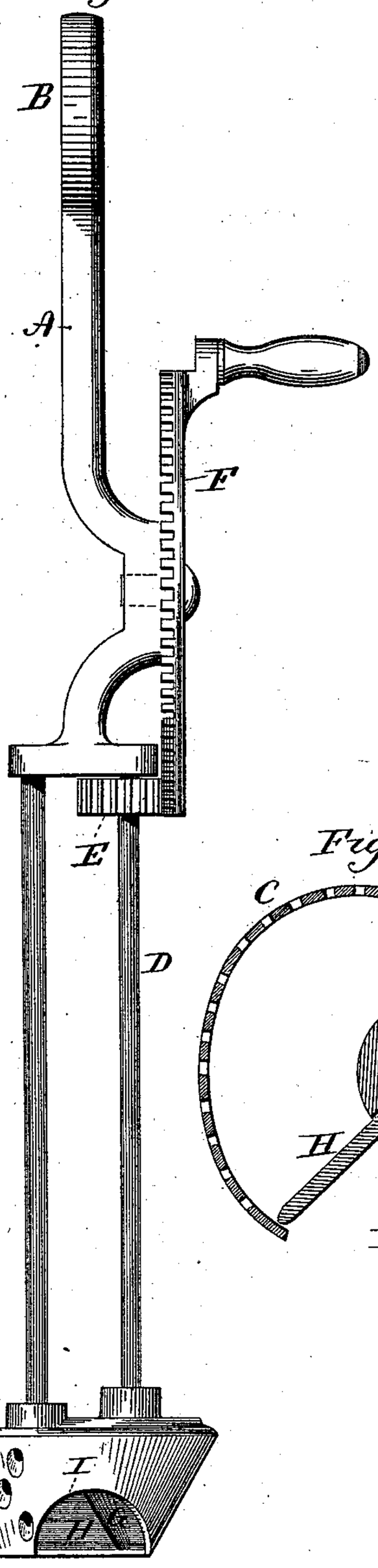



Fig. 2

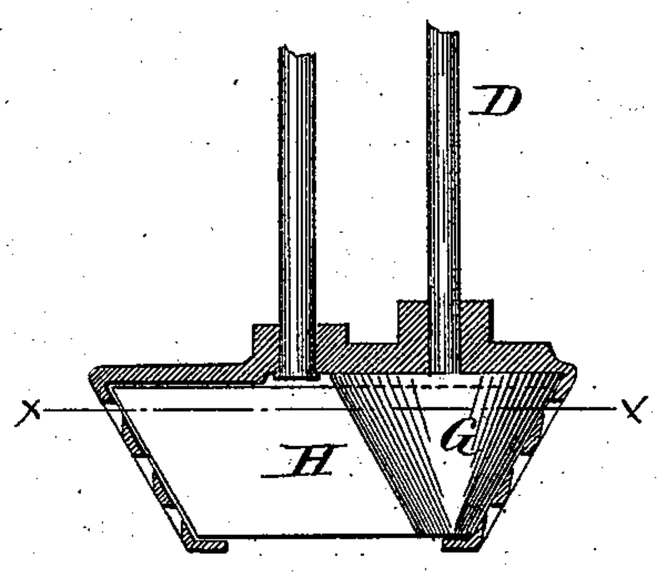



Fig. 3

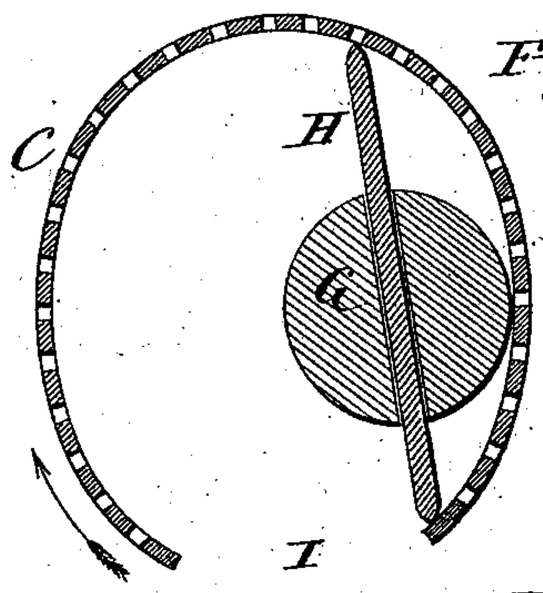



Fig. 4




Fig. 5

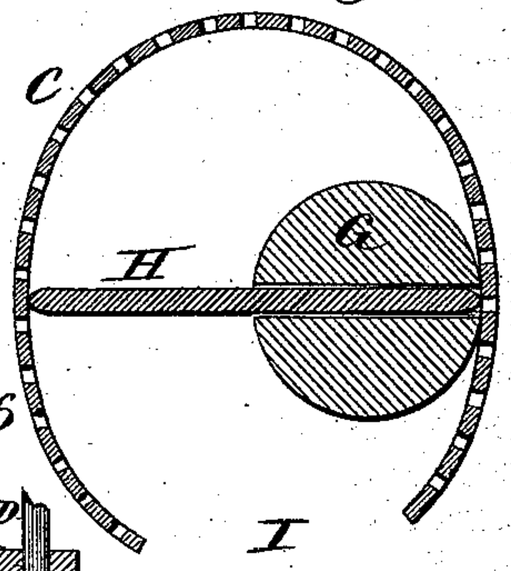
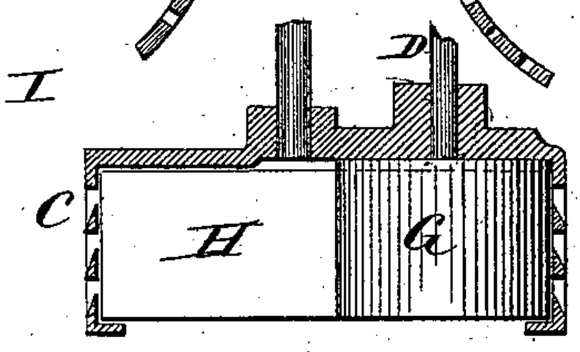



Fig. 6

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# UNITED STATES PATENT OFFICE.

JOHN GÉRARD, OF NEW BRITAIN, CONNECTICUT, ASSIGNOR TO LANDERS, FRARY & CLARK, OF SAME PLACE.

## EGG-BEATER.

SPECIFICATION forming part of Letters Patent No. 380,200, dated March 27, 1888.

Application filed November 7, 1887. Serial No. 254,467. (No model.)

*To all whom it may concern:*

Be it known that I, JOHN GÉRARD, of New Britain, in the county of Hartford and State of Connecticut, have invented a new Improvement in Egg-Beaters; and I do hereby declare the following, when taken in connection with accompanying drawings and the letters of reference marked thereon; to be a full, clear, and exact description of the same, and which said drawings constitute part of this specification, and represent, in—

Figure 1, a side view of the beater complete; Fig. 2, a vertical section through the chamber, showing side view of the head; Fig. 3, a horizontal section through the chamber, cutting on line *x x* of Fig. 2; Figs. 4 and 5, the same as Fig. 3, illustrating different positions of the beating-blade. Fig. 6 is a modification.

This invention relates to an improvement in that class of egg-beaters which consist of a frame provided with a handle at one end and carrying the beating mechanism at the other end, with a crank-gear applied to the frame adapted to impart rotation to the beating mechanism, the object of the invention being to produce a beater which shall be simple in construction and very rapid in its work; and it consists in the construction hereinafter described, and particularly recited in the claims.

In the best construction of this egg-beater I employ a frame similar to that usually employed in this class of beaters. It consists of a body, A, provided at its upper end with a handle, B, by which the beater may be supported in a vertical position. At the lower end the frame is constructed with a chamber, of substantially circular shape, made fast to the frame, the axis of the chamber being vertical. This chamber is made of any suitable material, and it is preferably of inverted-frustum-of-cone shape, as shown. The wall is perforated, as represented, and the top of the chamber is closed.

D represents a vertical shaft, which extends into the chamber, and also takes a bearing in the frame above, as shown, and it is provided with a pinion, E, through which rotation is communicated to it by means of a crank-gear, F, in the usual manner of communicating rotation to beaters of this character.

Within the chamber C the shaft D is provided with a head, G, made fast to the shaft and so as to revolve with it. The axis of the shaft and head is eccentric to the axis of the chamber, as represented in Fig. 3. This head is preferably of inverted-frustum-of-cone shape, the incline of its sides corresponding to the incline of the inner surface of the chamber, and it is arranged in the chamber so that the head at one side works in substantially close contact with the inner surface of the chamber. Diametrically through this head a slot is formed in a vertical plane, and into this slot a blade, H, is set, the blade being free for radial movement, but will be held by the head so as to rotate within it.

The length of the blade is such as to extend across the chamber, and so that its two ends will substantially take a bearing against the inner walls of the chamber. The result of this is that as the head G revolves the blade works against the inner surface of the chamber as a cam, and owing to the eccentricity of the head with relation to the walls of the chamber the blade is caused to move diametrically through the head, and so that first one end of the blade projects from the head and then the other, as indicated in Figs. 3, 4, and 5, which show the different positions of the head in the chamber under the rotation of the head. Through the wall of the chamber near the head, and upon the advancing side of the head, an opening, I, is formed of considerable extent, across which the end of the blade passes as it begins its projection from the head, as indicated in Figs. 3 and 4. The result of this is that the blade, passing the said opening, acts as a pump to draw the egg or material to be operated upon into the chamber in advance of it, and then, as the blade continues its revolution, it carries the material so drawn in with it, the head forming a stop or abutment against which the material so drawn in will be pressed, and because, therefore, it cannot continue its revolution around the chamber, the material is forced from the chamber through the perforations, which produces a thorough disintegration of the material. The revolution of the blade is very rapid, and continues this drawing in and discharging operation so rapidly as to produce the beating operation in the most expeditious manner.

In using the beater it is held by the handle in one hand, the beating mechanism introduced into the material to be beaten, and the crank-wheel rotated by the other hand in the usual manner for this class of beaters.

As represented, the beating-chamber is conical, and this shape I prefer for obvious reasons; but other shapes may be used, say cylindrical, as represented in Fig. 6. I therefore do not wish to be understood as confining my invention to a specific arrangement of the revolving head within the case, it only being essential that the head shall be provided with a blade which shall revolve with it, but at the same time receive a movement in a radial direction from the head within the case, whereby the drawing-in and forcing-out operation is produced.

It will be understood that for power-beaters the construction of the frame with relation to the chamber will be made in the usual manner for power-beaters.

I claim—

1. An egg-beater consisting of a frame, a chamber, C, made fast to said frame, the chamber constructed with an inlet-opening at one side and its side wall perforated to form numerous outlets, a revolving shaft extending into said chamber, a head within said chamber fixed upon said shaft and so as to revolve therewith, the said head located at one side of the chamber and near the inlet-opening, the head constructed with a diametrical slot, and the blade arranged in said slot free to work diametrically therein, the said blade extending substantially to the inner side walls of said chamber, substantially as described.

2. An egg-beater consisting of a frame, A, provided with a handle at its upper end and constructed with a chamber, C, at its lower end, the said chamber constructed with an inlet-opening, I, at one side, the walls of the chamber perforated to form numerous outlets, a vertical shaft, D, substantially parallel with the axis of said chamber, extending into said chamber, the said shaft provided with a head, G, within said chamber and which revolves therewith, the said head constructed with a diametrical slot, a blade within said slot on the head free for radial movement, the said blade extending substantially into contact with the walls of the chamber upon opposite sides, a crank-gear, F, on said frame, and a corresponding pinion, E, on said shaft, all substantially as described.

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