(No Model.) 2 Sheets—Sheet 1.

E. J. SCOPES.

EGG BEATER.

No. 589,795. Patented Sept. 7, 1897.

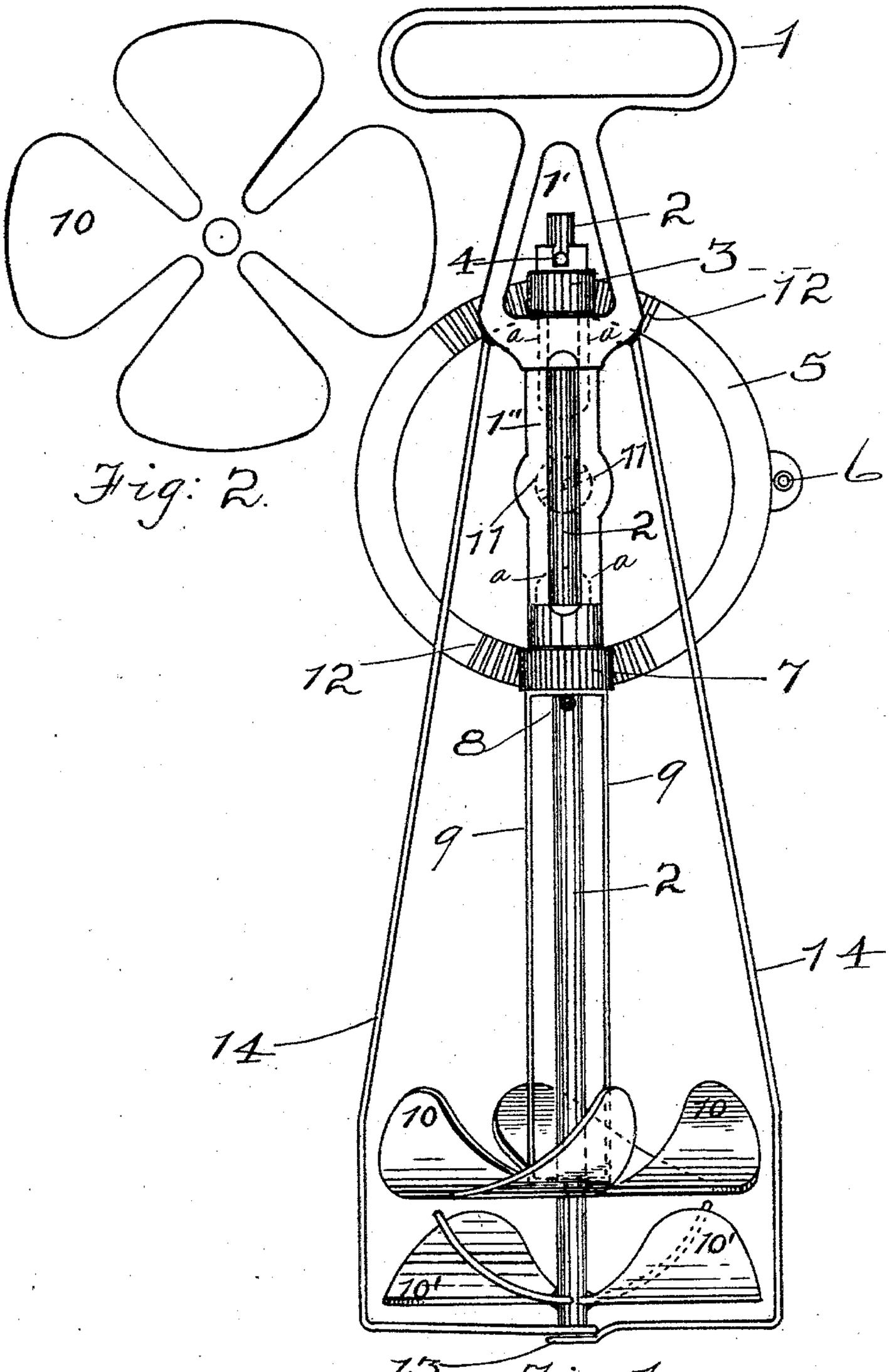

Fig: 1.

Fig: 2.

Witnesses
Hiram Ferguson,
A. M. Turner

Inventor
Edward John Scopes
By his Attorney H. W. Brown.

(No Model.) 2 Sheets—Sheet 2.

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No. 589,795. Patented Sept. 7, 1897.

Fig. 3.

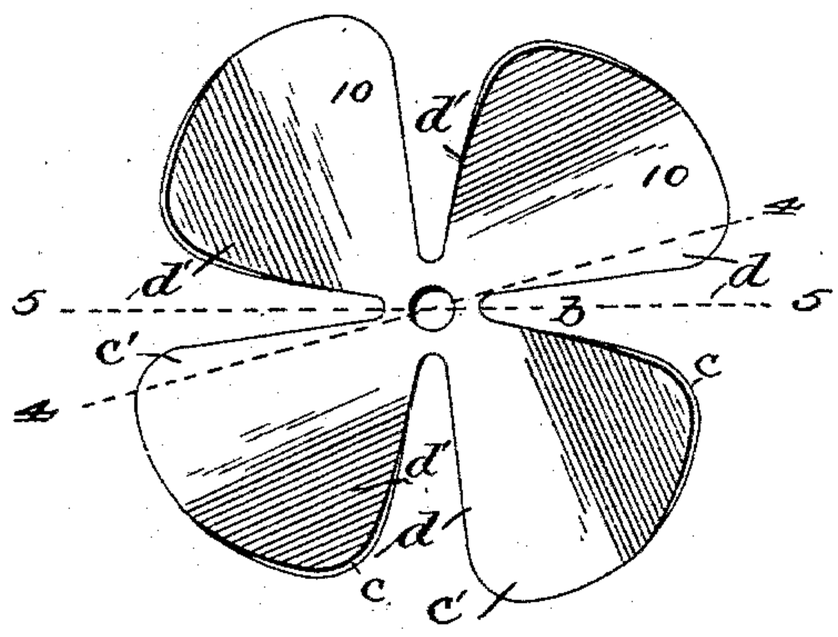


Fig. 4

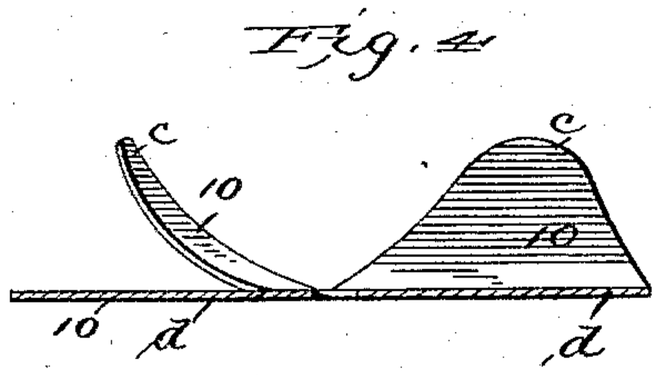
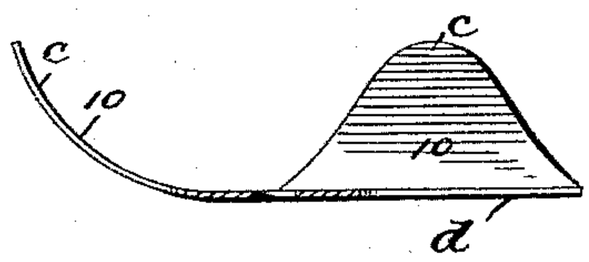


Fig. 5.



Attest
F. L. Middleton
A. D. Spear.

Inventor
E. J. Scopes
by Ellis Spear
Atty

UNITED STATES PATENT OFFICE.

EDWARD JOHN SCOPES, OF ALBANY, NEW YORK, ASSIGNOR TO NELSON LYON, OF SAME PLACE.

EGG-BEATER.

SPECIFICATION forming part of Letters Patent No. 589,795, dated September 7, 1897.

Application filed August 13, 1894. Serial No. 520,109. (No model.)

To all whom it may concern:

Be it known that I, EDWARD JOHN SCOPES, a citizen of the United States, residing at Albany, Albany county, New York, have invented certain new and useful Improvements in Egg-Beaters; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the letters and figures of reference marked thereon, which form a part of this specification.

My invention relates to that class of devices for beating eggs and other materials, in which devices beater-heads, generally in duplicate and turning in opposite directions, are made to revolve immersed in the said materials.

My object is to improve the beating or aerating operation, and at the same time I have sought to simplify and cheapen and improve the construction.

My invention relates principally to the construction of the beater disks or blades, but it includes also some details of construction hereinafter particularly pointed out.

I have shown my improvements in connection with old parts and embodied them in a complete instrument adapted to beat eggs, whip cream, or aerate any liquid or semiliquid material with which, generally in culinary matters, such utensils are used.

In the accompanying drawings, Figure 1 shows an elevation of my improved beater. Fig. 2 shows in plan the blank from which the beater-head, with its blades, is formed. Fig. 3 shows also in plan the completed beater-head. Fig. 4 shows a cross-section of the same on line 4 4. Fig. 5 shows a like section on line 5 5.

These beater-heads are cut out of a sheet of metal and are made as thin as is consistent with the proper strength. The blades 10 are formed by the cut of approximately triangular shape and connected to the hub by narrow necks integral with hub and blades, the blades being separated by narrow cut-away spaces *b*. The outer corners are shown as rounded. In Fig. 4, which may represent, for example, the upper beater-head of Fig. 1, the bent-up rear corners *c* are shown. These are so bent on a gradual curve that they are approximately in rear of the middle of the edge *d* of the blade as the head revolves, and the curve begins on a line parallel with and a little in rear of the said edge, as indicated by the shading in Fig. 3. In the hub is a hole for connection with the central shaft 2, with or on which the head revolves.

When two beater-heads are used, they are made to turn in opposite directions, as usual, and for this purpose the outer corners of one are turned in a direction opposite to those of the other head—that is to say, in the other or lower head the corners *c'* are turned up instead of the corners *c*, and the edges *d'* on the other side of the blade become the cutting edges.

These beater-heads are mounted in a frame and rotated by devices, as shown in Fig. 1. The handle 1 is the upper end of a casting which has a recess 1' to receive the pinion 3 and a shank below the recess made tubular and partly cut away, in which is journaled the shaft 2. It has also a boss 11, in which is fixed a stud on which turns the crown driving-wheel 5, the teeth thereof being only in part shown. The pinion 3 is fixed on the shaft 2 by means of a pin 4 and turns it by engagement with wheel 5. A pinion 7 engages also with wheel 5, being held up by pin 8 in shaft 2, which thus forms the support for the pinion and upper beater-head. The shaft 2 passes through the center of this upper head, which turns thereon. It is connected to its pinion 7 by means of a frame 9, formed of a narrow strip of sheet metal bent to form a continuous frame and connected at its upper end to the under side of the pinion and at its lower to the upper side of the hub of the upper beater-head.

The shaft 2 is stepped in the lower bar of the frame 14, the upper ends of which are attached to the casting, as shown in Fig. 1.

The lower beater-head is fixed to shaft 2, so that the two revolve in opposite directions. When the implement is used, the wheel 5 is turned by handle 6 to the right and the heads are revolved with the edges in advance and the upturned corners following. The peculiar construction of the blades and special curves of the rear corners leave ample space

about the center of the heads for aeration, and at the same time cause violent agitation without spattering the material operated upon or throwing it out, so that the beating and aeration may be carried on in a shallow or open dish.

I do not limit myself to nor claim the casting or driving mechanism nor the outer frame 14, but

What I claim is—

1. In an egg-beater, a head of sheet metal having blades of substantially the shape described, each having horizontal forward edges and upturned rear corners, there being open spaces between the blades, substantially as described.

2. In an egg-beater, heads of sheet metal having blades of substantially the shape described, each having horizontal forward edges and upturned rear corners, there being open spaces between the blades, the heads being reversely formed, and means for turning them in opposite directions, substantially as described.

3. In an egg-beater, a head of sheet metal having blades of substantially the shape described, each having horizontal forward edges and upturned rear corners, there being open spaces between the blades, a pinion 7 with moving mechanism, a shaft 2 connecting the lower head and its driving mechanism and passing through pinion 7, and a frame 9 of metal strip connecting the pinion 7, and the upper head, substantially as described.

In testimony whereof I affix my signature in presence of two witnesses.

EDWARD JOHN SCOPES.

Witnesses:

W. M. BROWN,

A. M. TURNER.