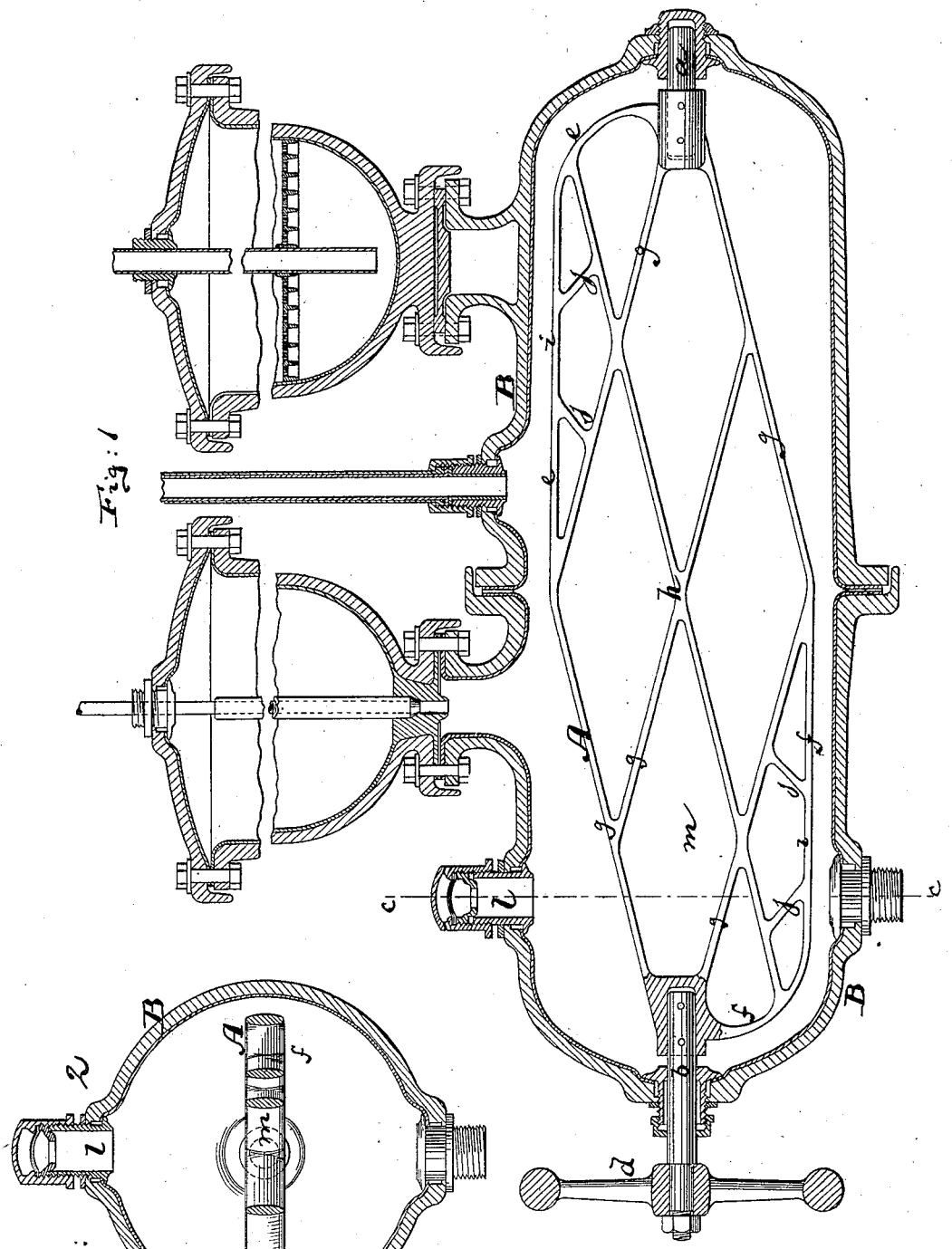
(No Model.)

J. MATTHEWS.

AGITATOR FOR SODA WATER RECEIVERS AND GENERATORS.

No. 266,039. Patented Oct. 17, 1882.



Witnesses:
Henry A. Parker
John C. Tunbridge

Inventor:
John Matthews
by his attorneys
Briesen & Betts

UNITED STATES PATENT OFFICE.

JOHN MATTHEWS, OF NEW YORK, N. Y.

AGITATOR FOR SODA-WATER RECEIVERS AND GENERATORS.

SPECIFICATION forming part of Letters Patent No. 266,039, dated October 17, 1882.

Application filed May 14, 1881. (No model.)

To all whom it may concern:

Be it known that I, JOHN MATTHEWS, a citizen of the United States, residing at New York, in the county and State of New York, have invented certain new and useful Improvements in Agitators for Soda-Water Receivers and Generators; 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.

This invention relates to revolving dashers or agitators for generators and receivers of soda or other aerated waters—that is to say, the generator in which the gas is generated and the receiver which is designated to charge the liquid with gas and store it until it is wanted for use—the object in agitating the liquid in the generator being to thoroughly incorporate the ingredients from which the gas is evolved, and in the receiver to carbonate or aerate the liquid that is constantly carrying into it the gas contained with it in the receiver, in order that it may be in a bright and sparkling condition when drawn.

The object of my invention is to protect the shaft or body of the agitator or dasher from the corrosive effects of the acids or chemicals employed in the generation of the gas and the charging of the water with such gas by preventing the undiluted acid or material from coming in direct contact with the agitator as such material is poured into the generator, and by thoroughly mixing the water and acid, so that the latter shall be diluted uniformly and lessen the severity of its attack upon the metal of the blades or vanes of the dasher than if the acid remained comparatively undisturbed at the point at which it is poured into the water.

The invention consists, first, in the employment of an aperture in the body of the dasher, through which the acid or corrosive material may be poured without contact with and injury to the metal, and also in the employment of barred or slatted vanes extending in opposite directions from the shaft or gudgeons, and with their bars arranged diagonally to the axis of the shaft or gudgeons, in order to induce a circulation of the liquid from end to end of the receiver, and thereby thoroughly incorporate the ingredients, the whole being as hereinafter explained.

In the drawings, Figure 1 is a side view of my improved agitator or dasher, showing it within a generator. Fig. 2 is a cross-section of the same on line *c c*, Fig. 1.

A is the agitator, made with a gudgeon, *a*, at one end and with a gudgeon, *b*, at the other end. The gudgeon *b* protrudes through the side of the generator or receiver B, and is provided with a hand-wheel, *d*, or other device. The agitator A is composed of two wings or vanes, *e* and *f*, placed diagonally opposite each other. These vanes or wings are formed on an open, preferably diamond-shaped, lattice-frame *g*, which is composed of diagonally-projecting bars, that extend from the sockets of the gudgeons *a* and *b*, or directly from said gudgeons, or from the shaft which may be substituted for them, and of which virtually the gudgeons form a part.

Instead of the gudgeon *a* extending merely from one end of the agitator to the corresponding portion of the shaft, it may be carried to the junction *h* of the bars in the lattice-work *g*. On this diamond-formed lattice-work are erected the diagonally-opposite wings *e* and *f*. Each of these wings is made with an outer narrow rim, *i*, and with inner braces, *j*, as shown, so that thus the agitator is throughout of open-work. The opening *m*, which is formed in the lattice-work *g* of the agitator between the gudgeon *b* and the point *h*, is beneath the opening *l* of the generator B, through which opening the acid is introduced; and it is one feature of my improvement to form this orifice *m* in the agitator of sufficient size and at such location with reference to the inlet-opening *l* as to allow the acid or corrosive material to be poured into the generator without bringing it in contact with the body of the agitator. Therefore the opening *m* is located directly beneath the opening *l* of the generator, through which said acid is introduced. At the time acid is poured into the generator the hand-wheel *d* or other device must be so turned as to place the opening *m* under the inlet *l* to prevent contact of acid with its sides.

The object in arranging the vanes on diagonally-opposite sides of the shaft, as represented, is to permit the dasher to pass readily

through the marble-dust or heavier ingredients of the charge in the generator, at the same time providing sufficient agitating-surface. The placing of the vanes upon the lattice-work adds to the strength of the vanes, each being braced diagonally at the ends and at the middle.

I claim—

1. The agitator or dasher A, of generators and receivers for aerated liquids, having an orifice, *m*, at some point between its extremities for passage of acid or other agent, substantially as and for the purposes stated.

2. The agitator or dasher A, having the gudgeons *a b*, and made with the orifice *m* for passage of acid, and with the barred or perforated vanes *e f*, arranged diagonally with respect to each other upon opposite sides of the agitator, substantially as explained.

3. The agitator constructed with the lattice-work *g*, gudgeons *a* and *b*, and diagonally-placed vanes *e* and *f*, substantially as described.

4. The combination of the generator B, having acid-inlet opening *l*, with the agitator A, having aperture *m*, all arranged so that said aperture can be brought beneath said opening, substantially as specified.

JOHN MATTHEWS.

Witnesses:
ELBERT N. REEVE,
JOHN D. WILSON.