

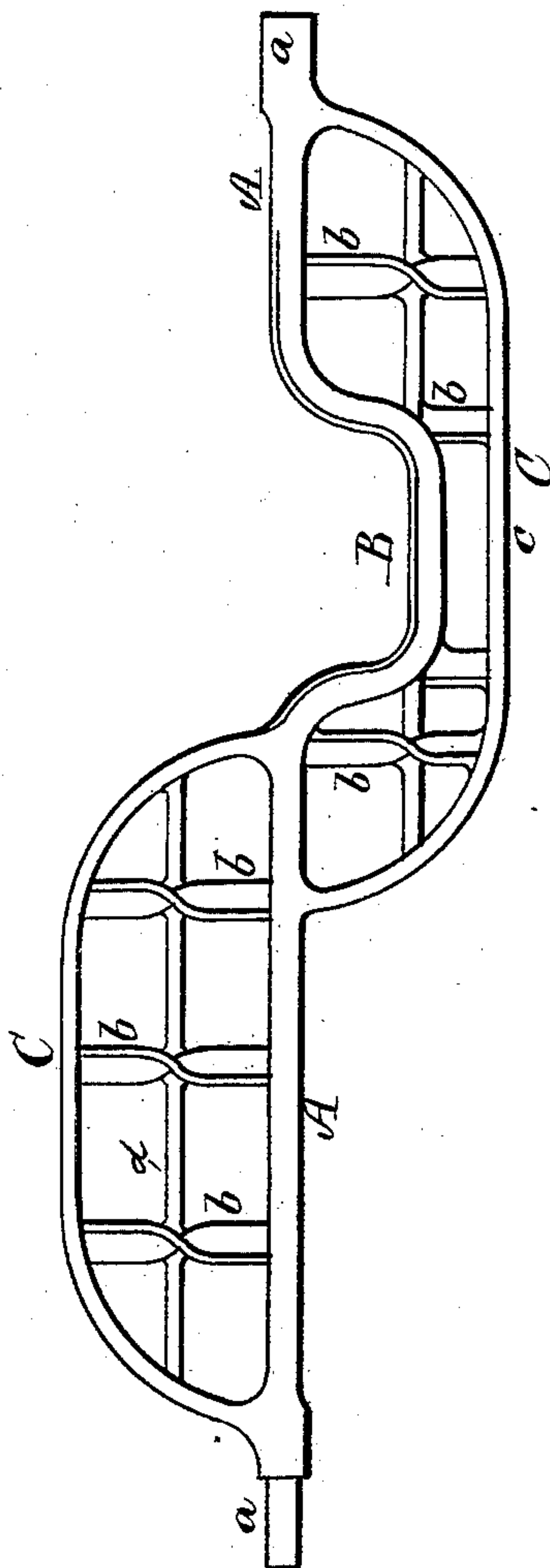
(No Model.)

A. D. PUFFER.

AGITATOR FOR GENERATORS AND RECEIVERS FOR SODA AND OTHER
AERATED WATERS.

No. 300,007.

Patented June 10, 1884.



Witnesses.
S. O. Means.
A. P. Hayden

Inventor.
Alvin D. Puffer.
H. Curtis. Atty.

UNITED STATES PATENT OFFICE.

ALVIN D. PUFFER, OF MEDFORD, MASSACHUSETTS.

AGITATOR FOR GENERATORS AND RECEIVERS FOR SODA OR OTHER AERATED WATERS.

SPECIFICATION forming part of Letters Patent No. 300,007, dated June 10, 1884.

Application filed October 10, 1883. (No model.)

To all whom it may concern:

Be it known that I, ALVIN D. PUFFER, a citizen of the United States, residing at Medford, in the county of Middlesex and State of Massachusetts, have invented certain new and useful Improvements in Agitators for Generators and Receivers for Soda or other Aerated Waters; 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 letters or figures of reference marked thereon, which form a part of this specification.

This invention relates to revolving dashers or agitators for generators and receivers for soda or other aerated waters—that is to say, the generator in which the gas is generated and the receiver which is designed 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. A prominent example of this class of dasher is shown and described in Letters Patent of the United States issued to myself on the 31st of August, 1880.

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.

In the above-named patent the aperture for passage of acid is formed in the body of the dasher and is inclosed on all sides. Although it is intended the dasher shall remain at rest

while the acid is being introduced, the attendant frequently neglects this precaution and admits the acid while the dasher is in motion. For this reason considerable surface is exposed to the action of the acid, and, moreover, as the pattern is somewhat complicated, some difficulty is experienced in casting it.

My present invention consists, first, in diverting the shaft of the agitator from an axial line at some point between its extremities, by means of which the necessary space for the acid is permitted and much less surface is exposed.

My invention consists, secondly, in a longitudinal bar arranged to intersect each series of vanes at their points of reverse slope, this bar tending to prevent confusion of the two currents and eddying of the liquid, and aiding greatly such currents in their respective courses.

The drawing accompanying this specification represents a plan of a dasher embodying my improvements.

In said drawing the shaft of the agitator is shown at A as a straight bar, (with the exception of the offset to be explained,) having at each end a journal, *a*, such journal constituting its support, in combination with suitable bearings in the receiver or generator.

In carrying out one feature of my improvements, I form in the shaft A, and approximately near its center, a lateral offset or bend, B, which deviates from the axis of the shaft sufficiently to permit the acid to fall into the generator without contact with the shaft, (when the latter is not in rotation,) this offset being situated directly beneath the spout through which such acid is supplied. One of the journals of the shaft protrudes through the side of the generator or receiver, and is provided with a hand-wheel or other device, and the relative positions of the wheel and the offset should be noted and remembered, in order that such offset may be allowed to stand in a horizontal position when the acid is introduced, to prevent contact of acid with it. The body of the dasher is composed of two barred or latticed wings, C C, arranged preferably in the same plane, laterally of but upon opposite sides of the shaft, these wings extending but a portion of the length of the shaft from opposite ends, and each being composed

of a series of vanes, *b b*, &c., departing at any desired angle from the shaft, and with their outer ends bound together by a curved rib, *c*, the ends of each rib merging in the shaft A, as shown. As the shaft and wings rotate, the vanes of the latter thoroughly agitate the liquid contents of the generator or receiver which contains the dasher.

As before stated, it is intended that the shaft A shall remain at rest while the acid is being poured into the generator; but it frequently happens that the attendant, through haste or carelessness, supplies the acid while the shaft is in rotation. By employing the offset B upon one side only of the shaft, less surface is exposed to the action of the acid than if a completely-surrounded inclosure were employed. Again, the form of the dasher is simplified, less material is required, the dasher is lighter, and the operations of molding and casting are rendered less difficult. I arrange opposite ends of the vanes *b b* at different angles obliquely to the longest plane of the dasher, as shown in the drawings, by means of which the liquid in the receiver is compelled to take reverse directions longitudinally of such receiver.

Through the center of each wing C and longitudinally of the dasher I extend a bar, *d*, which intersects the vanes at the point of change in their slope. By means of this bar the reverse currents are aided in their respective courses and eddying of the liquid at the center of each vane prevented.

I claim—

1. An agitator or dasher for aerated liquids, consisting of a shaft, wings C, attached to said shaft on opposite sides, vanes *b*, which extend laterally from the shaft to the wings, as shown, and longitudinal bars *d*, which are connected to the middle parts of said vanes, and also to said wings, substantially as set forth.

2. A dasher containing, in combination with the shaft and wings, the offset in the shaft, the vanes with reverse slopes, and the bar longitudinally intersecting the vanes, all as explained.

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

ALVIN D. PUFFER.

Witnesses:

F. CURTIS,

A. F. HAYDEN.