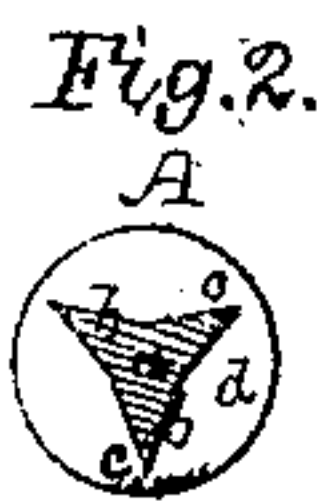
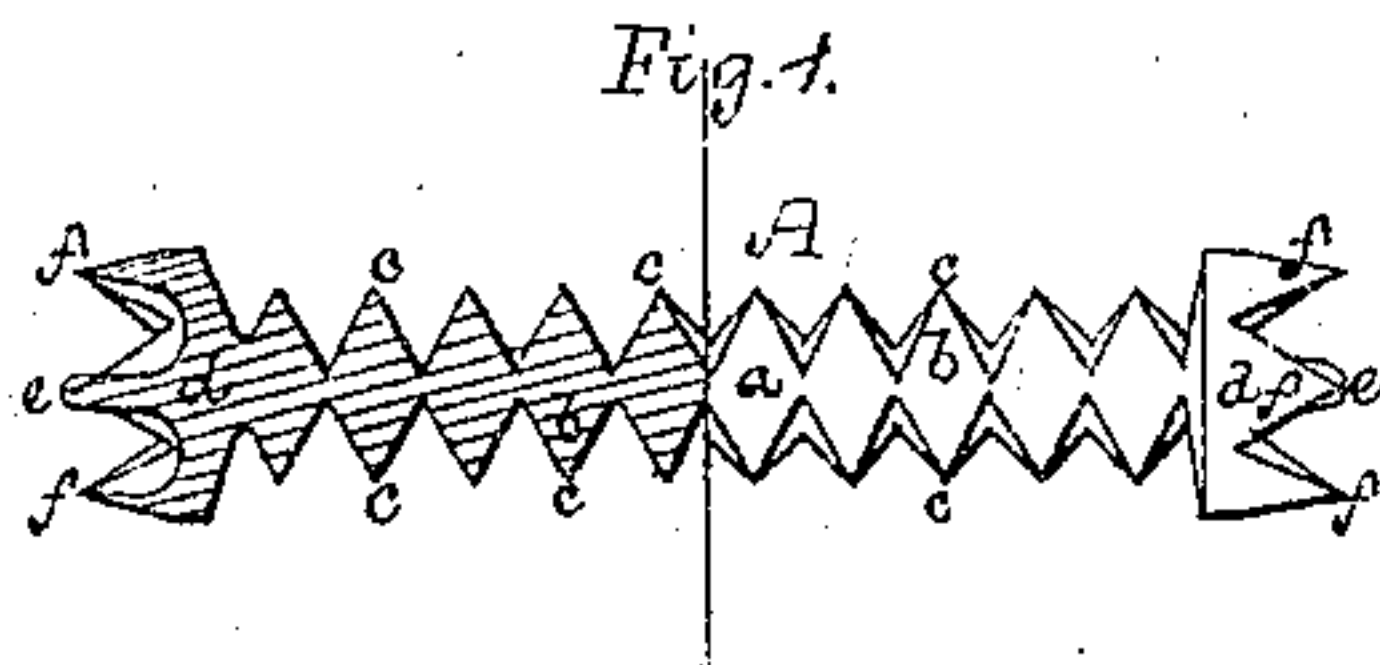


F. B. RICHARDSON.

Devices for Agitating Salt in Cruets.

No. 136,386.

Patented March 4, 1873.



Witnesses.
H. E. Boardman.
F. Stanton Hubbard.

F. B. Richardson.
F. Curtis, Atty.

UNITED STATES PATENT OFFICE.

FRANCIS B. RICHARDSON, OF BOSTON, MASSACHUSETTS.

IMPROVEMENT IN DEVICES FOR AGITATING SALT IN CRUETS.

Specification forming part of Letters Patent No. 136,386, dated March 4, 1873.

To all whom it may concern:

Be it known that I, FRANCIS B. RICHARDSON, of Boston, Suffolk county, Massachusetts, have invented a Device for Agitating Salt within Bottles or Cruets, of which the following is a specification:

This invention relates to means for disturbing or agitating a quantity of salt in a bottle or cruet, in order that it may be at all times in a pulverized or loose condition; and consists in a tumbling-bar of suitable form to be placed in a bottle or cruet, and which, upon shaking of the bottle, tumbles or plays within the salt, and disturbs and pulverizes it to such an extent as to allow it to pass easily and freely through the interstices of the perforated cap of the bottle.

The drawing accompanying this specification represents, in Figure 1, a sectional side view of my invention; Fig. 2 being a transverse or cross section of the same.

In this drawing, A represents the implement embodying my present invention as composed of a bar, *a*, of nearly prismatic form, the longitudinal ribs or pins *b* of which terminate in thin edges, which are converted into saw-teeth or other proper-shaped points, *c c*, &c. The bar terminates at one or both ends in a cylin-

drical cup-shaped or turreted head, *d*, whose outer end is concave or hollow, with the exception of a central cone or point, *e*, which makes part of it, the annular edge of such head being thin and formed into teeth *f f*, &c., similar to the teeth *c c*, &c., before named, the latter-named teeth, *f f*, &c., surrounding the point *e* in a clutch.

The teeth *f f*, &c., and the point *e* assist the teeth *c c* very materially in cutting, comminuting, and pulverizing the salt.

The entire implement, as above described, is to be cast in a composition mold in one mass of metal, after the usual method of manufacturing such articles.

The teeth *c* upon the longitudinal ribs *b* act in a novel and highly effective manner to cut, divide, and pulverize the salt.

Claim.

The herein-described tumbling rod or bar, composed of the barred toothed prism *a* and serrated or toothed head or heads *d*, substantially as and for the purposes stated.

FRANCIS B. RICHARDSON.

Witnesses:

F. CURTIS,

W. E. BOARDMAN.