W. A BALDWIN.

DEVICE FOR TAKING A SAMPLE OF SYRUP OR MASSE CUITE.

APPLICATION FILED MAY 17, 1916.

1,205,838. Patented Nov. 21, 1916.

FIG. 1

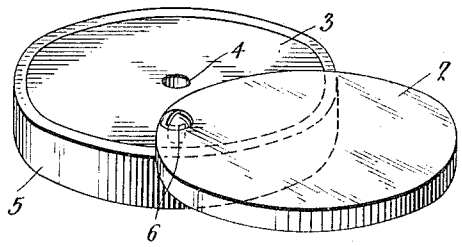


FIG. 2

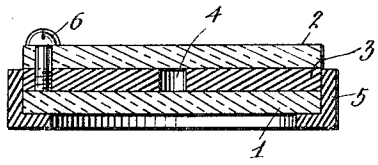


FIG. 3

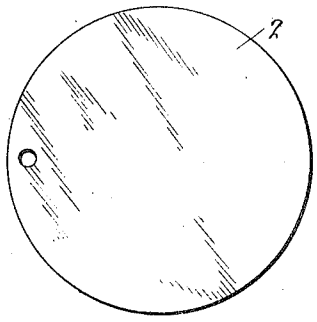


FIG. 4

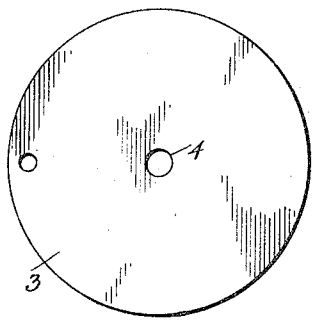


FIG. 5

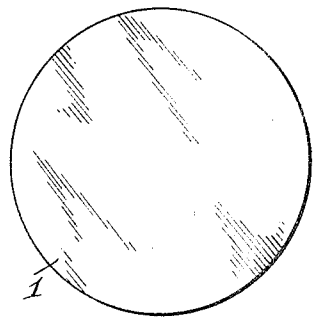
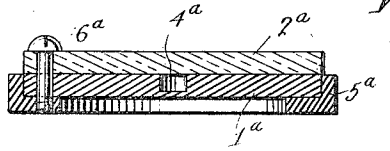


FIG. 6



Witnesses

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UNITED STATES PATENT OFFICE

WILLIAM A. BALDWIN, OF HAIKU, TERRITORY OF HAWAII.

DEVICE FOR TAKING A SAMPLE OF SYRUP OR MASSE-CUITE.

1,205,838. Specification of Letters Patent. Patented Nov. 21, 1916.

Application filed May 17, 1916. Serial No. 98,234.

To all whom it may concern:

Be it known that I, WILLIAM A. BALDWIN, a citizen of the United States, residing at Haiku, in the county of Maui and Territory of Hawaii, have invented new and useful Improvements in Devices for Taking a Sample of Syrup or Masse-Cuite, of which the following is a specification.

This invention relates to a device for taking a sample of syrup or massecuite of cane or sugar beet during its concentration for grain formation in vacuum pans.

The object of the invention is to provide a device for the purpose stated which shall be exceedingly simple and inexpensive in construction and by means of which a sample of definite volume may be trapped whenever desired and, as trapped, held for examination under the microscope or other magnifying medium which will enable the number of crystals in the sample to be accurately counted.

An embodiment of the invention is illustrated in the accompanying drawings, wherein:—

Figure 1 is a perspective view of a device in which the features of the invention are incorporated; Fig. 2 is a sectional view thereof showing the parts thereof disposed as in use; Figs. 3, 4 and 5 are detail plan views of the three disks which are employed in the construction disclosed; and Fig. 6 is a sectional view illustrating a modification.

Similar characters of reference designate corresponding parts throughout the several views.

The device consists of two outer transparent plates or disks 1 and 2 and an inner plate 3 having a central opening or pocket 4. The plates 1 and 3 are secured tightly against one another and are fitted in a flanged carrier ring 5.

The plates 1 and 2, in the use of the device, provide end closures for the opening or pocket 4 in which the sample to be examined is held. The plate 2 is fitted closely against the plate 3, being held in position by a screw or the like 6 arranged eccentrically and which also provides a pivot for the plate 2 about which the latter may be swung, as shown in Fig. 1, to uncover the opening 4. In use, the plate 2 is swung to one side and the opening 4 is filled from the sugar boiler's "proof-stick", or other device, with a sample of the syrup or massecuite to be examined, after which the plate 2 is moved to cover the opening 4. The device as an entirety is thereupon held between the magnifying medium and a source of light and the number of crystals in the sample in the opening 4 is determined by actual count. To facilitate this, either of the disks 1 or 2 may be provided with cross-hairs to sub-divide the opening 4. Since the volume of the sample in the opening 4 is definite, the device affords a reliable means for determining the condition of the syrup or massecuite; and by its use, the operator will know when the right moment is at hand at which to arrest the formation of grain.

The plate 2, notwithstanding its movable mounting, provides, in the use of the device, a tight closure for the opening 4 and prevents the escape of any of the liquid of the sample in said opening. For this purpose, the plates 2 and 3 have their adjoining faces perfectly smooth and flat to insure of the uniform contact thereof.

The device may be readily cleaned by moving the disk or plate 2 to one side and by dipping it in a cleaning solution or otherwise treating it with cleaning liquid.

In the modification shown in Fig. 6, a pair of transparent plates 1^a and 2^a are employed. The plate 1^a has a recess 4^a formed therein and which serves to contain the sample to be examined. The plate 1^a is mounted in a flanged carrier ring 5^a and the plate 2^a is pivotally slidable across the face of the plate 1^a, having as its axis a screw or pin 6^a by which it is connected to the ring 5^a.

I claim—

1. A device of the type described having a plate provided with a central pocket and having transparent end closures for said pocket, one of said end closures being mounted for sliding movement across the face of said plate and having uniform contact therewith.

2. A device of the type described comprising a pair of transparent plates and an interposed plate having a central opening, one of the transparent plates being mounted for sliding movement across the face of the interposed plate and both of said transparent plates having uniform contact with said interposed plate.

3. A device of the type described, comprising a pair of transparent plates and an

interposed plate having a central opening, one of the transparent plates being pivotally connected to said interposed plate for sliding movement across the face thereof and both of said transparent plates having uniform contact with said interposed plate.

4. A device of the type described comprising a pair of transparent plates, an interposed plate having a central opening, one of the transparent plates being mounted for sliding movement across the face of the interposed plate and both of said transparent plates having uniform contact with said interposed plate, and a flanged ring carrier for said interposed plate and one of the transparent plates.

5. A device of the type described comprising a pair of transparent plates, an interposed plate having a central opening, and a flanged ring carrier for one of the transparent plates and the interposed plate, the other transparent plate being movably mounted and when positioned against said interposed plate providing an end closure for said opening.

In testimony whereof I have hereunto set my hand in presence of two subscribing witnesses.

WILLIAM A. BALDWIN.

Witnesses:
AKI TOM,
E. S. SMITH.