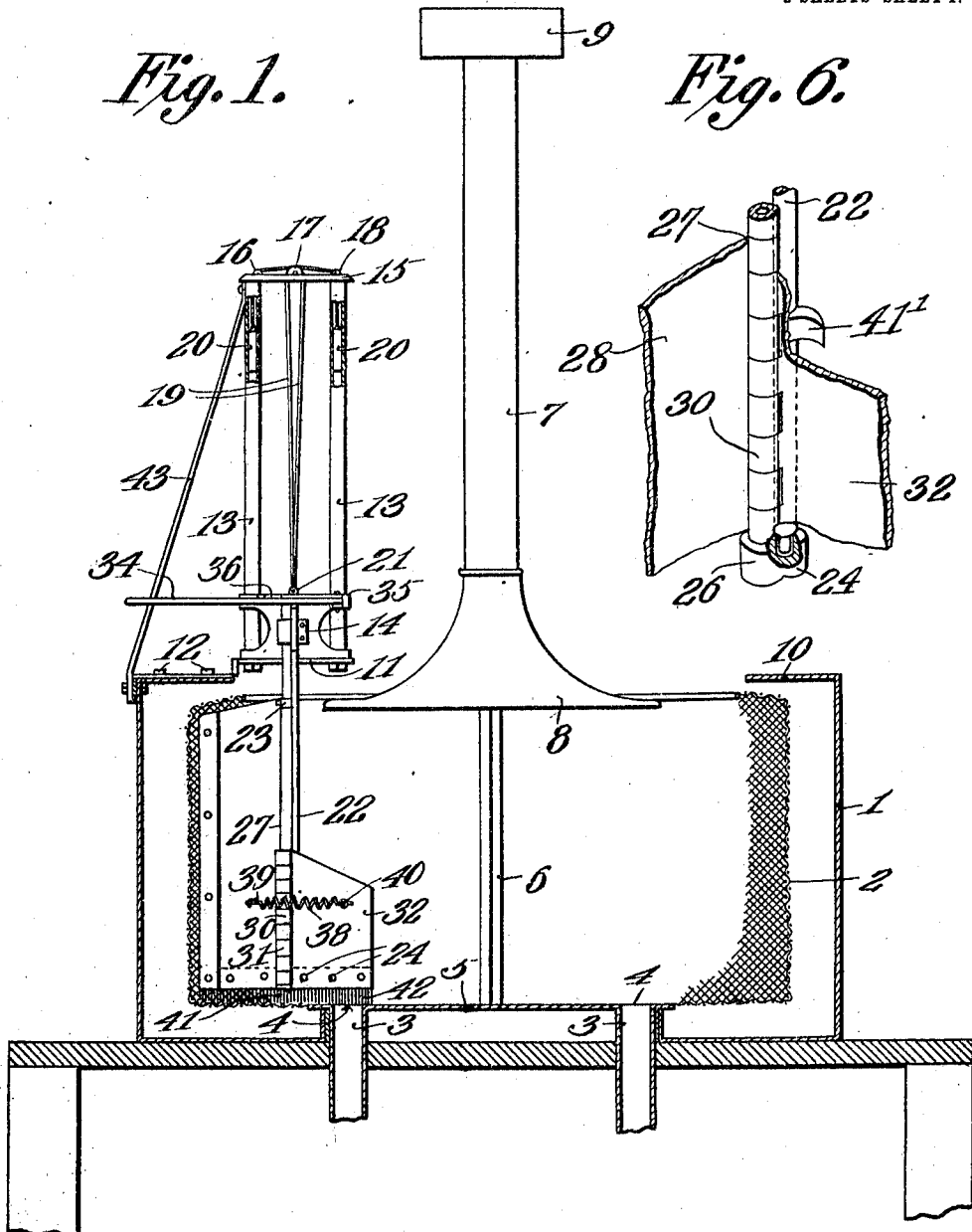


J. C. CHAIX & E. DUHÉ.
CENTRIFUGAL ATTACHMENT FOR SUGAR DRIERS.
APPLICATION FILED SEPT. 28, 1910.

1,004,556.

Patented Oct. 3, 1911.

2 SHEETS—SHEET 1.



Joseph Chancelé Chaix
and Elie Duhé,

Inventors

by

C. A. Snow & Co.

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Witnesses:

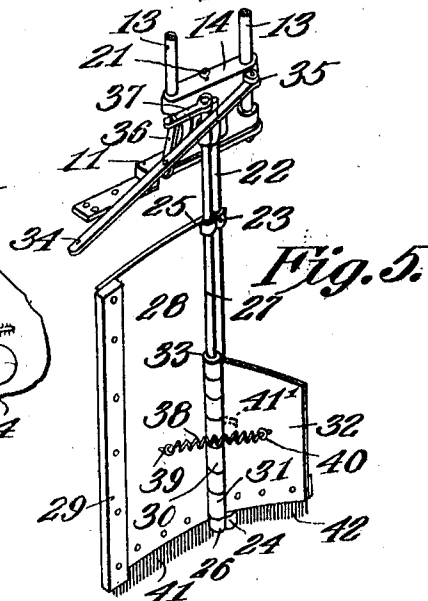
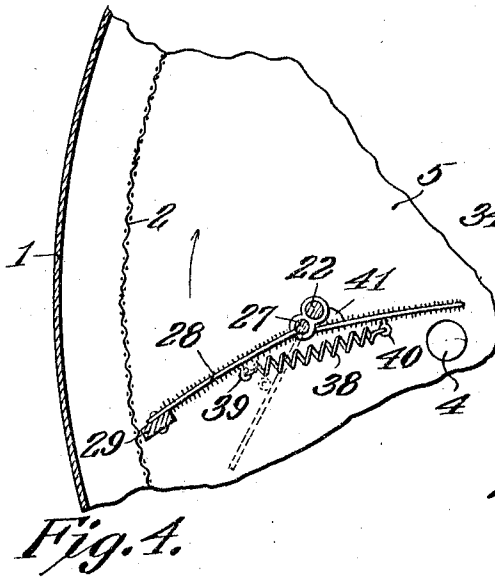
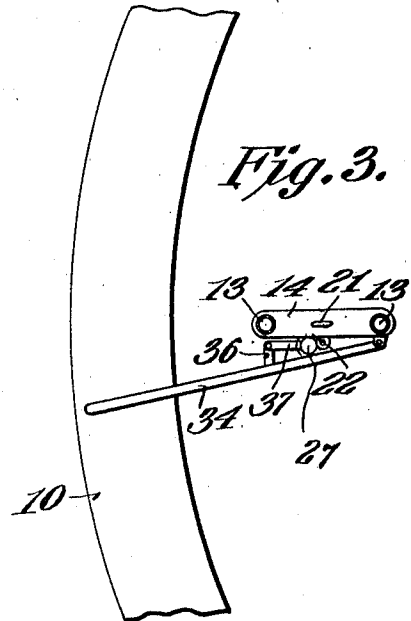
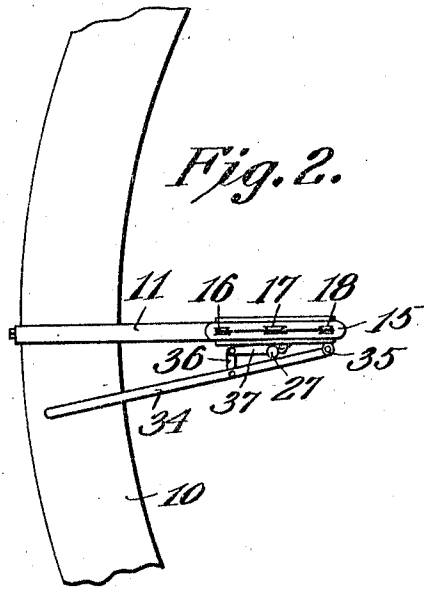
J. P. Dorein
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2 SHEETS-SHEET 2.



Joseph Chancelé Chaix
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UNITED STATES PATENT OFFICE.

JOSEPH CHANCELE CHAIX AND ELIE DUHÉ, OF HAHNVILLE, LOUISIANA.

CENTRIFUGAL ATTACHMENT FOR SUGAR-DRIERS.

1,004,556.

Specification of Letters Patent.

Patented Oct. 3, 1911.

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To all whom it may concern:

Be it known that we, JOSEPH CHANCELE CHAIX and ELIE DUHÉ, citizens of the United States, residing at Hahnville, in the parish of St. Charles, State of Louisiana, have invented a new and useful Centrifugal Attachment for Sugar-Driers, of which the following is a specification.

This invention relates to a centrifugal attachment for sugar driers.

The object of the invention is, in a ready, simple and practical manner, to eliminate the hand work which is at present used in sugar houses and refineries, to cut the dry sugar from the inner sieve and force the same out of the centrifugal, whereby labor and time will be saved and the work of drying the sugar greatly expedited.

A further object is to provide an attachment of this character which shall be of such construction that its attachment to a centrifugal already in use will not require any change in the structural arrangement of the latter.

A further object is to provide a sugar removing attachment for a centrifugal that will not in any manner injure the sieve, and which when not in use may readily be removed to a point within convenient reach when again needed.

With the above and other objects in view, as will appear as the nature of the invention is better understood, the same consists in the novel construction and combination of parts of a centrifugal attachment for sugar driers, as will hereinafter be fully described and claimed.

In the accompanying drawings forming a part of this specification and in which like characters of reference indicate corresponding parts:

Figure 1 is a view in side elevation of a centrifugal showing the sugar removing attachment applied thereto. Fig. 2 is a top plan view. Fig. 3 is a horizontal sectional view. Fig. 4 is a detailed view in horizontal section of the attachment. Fig. 5 is a perspective view of the attachment. Fig. 6 is a fragmentary detail view in perspective, on an enlarged scale, showing more clearly the connection between certain parts of the apparatus.

Referring to the drawings, 1 designates the outer shell of a centrifugal of any preferred type, 2 the sieve, 3 the discharge chutes, which are disposed beneath openings 4 in the imperforate portion 5 at the center of the sieve, 6 a polygonal spindle rigid with the portion 5, and 7 a sleeve movable on the spindle and provided at its lower end with a base 8 arranged normally to close the openings 4, and at its upper end with a pulley 9 that is designed to be driven, by a belt, not shown, actuated from any suitable source of power.

As usual, the shell is provided with an in-turned flange 10, upon which is bolted the attachment which consists, in part, of a bracket 11 that is secured to the flange by bolts 12 so as to be removable when desired. Bolted to the bracket are two vertically disposed tubular bars 13 which pass loosely through orifices in a head 14 and have their upper ends connected by a plate 15 carrying three sheaves 16, 17 and 18, the first and last named sheaves being disposed over the open upper ends of bars 13. These sheaves are engaged by a rope or chain 19, the two ends of which pass around the sheave 17 in opposite directions and around the sheaves 16 and 18 and have attached to their free ends counterweights 20. The lower end of the rope is secured to an eye 21 arranged on the upper end of the head 14, which latter slides on the bars.

Carried by the head and rigid therewith, is the upper end of a shaft 22, the lower end of which terminates a short distance above the floor of the screen. Secured upon the shaft are two collars 23 and 24, each of which is provided with a tubular extension 25 and 26 respectively, and these extensions are engaged loosely by a shaft 27 that is stepped into the extension 26 and is thus held against dropping. Hinged to the shaft 27 is a curved metallic plate 28, having secured to its outer edge a wooden bar 29 that is designed to scrape the sugar from the screen, wood being employed to prevent cutting of the latter. The plate is provided with a series of hinge butts 30 that interlock with similar butts 31 carried by one edge of a curved plate 32, the two series of butts being engaged by the shaft 27. In operation

the member 28 constitutes a cutter, and the member 32 a sweep, and by these terms these parts will hereafter be referred to. In order to swing the cutter to bring it into engagement with the sugar to be cut, a lever 34 is provided which is pivoted at one end between a pair of ears 35 projecting from the head 14. The intermediate portion of the lever has connected with it one end of a link 36, the other end of which connects with an arm 37, rigidly secured to the upper end of the shaft 27. It will be seen by this arrangement that when the lever 34 is moved toward the head the cutter will be brought into contact with the sugar, a reverse movement holding it out of contact with the sugar. Normally the sweep lies close to the cutter, being held in that position by means of a coiled spring 38, the ends of which are secured in eyes 39 and 40 carried respectively by the cutter and the sweep. The lower end of both of these last named elements has a brush 41 and 42 connected with it in order to sweep the bottom of the centrifugal free from the sugar. To limit the outward movement of the sweep, a stop 41 is provided, which is rigid with the shaft 22, as clearly shown in Fig. 4.

It will be observed by reference to Fig. 1, that the attachment has no other support than the flange 10 of the shell, and in order to prevent the latter from sagging from the weight of the attachment a brace 43 is employed, one end of which is bolted to the side of the shell, and to the other end to the bar 13, and this arrangement will positively hold the attachment in vertical, and thus operative position and insure proper contact between the scraper and the screen.

In operation when a fresh charge of massecuite is to be supplied to the screen, the head 14 is raised, thereby lifting the cutter and sweep out of the screen, and the sleeve is lowered to cause its base to close the openings 4, and the driving belt, (not shown) is positioned on the pulley 9, it being understood that the belt is removed each time the sleeve is raised. The centrifugal is now started and continues to run until all of the liquid is expelled and the dried sugar has accumulated on the walls and bottom of the screen. The sleeve 7 is now raised to the position shown in Fig. 1 where it is held by any suitable overhead mechanism not necessary to be shown, and the attachment lowered until the head contacts with the arm of the bracket 11, thus bringing the parts of the attachment in proper position for operation. It may be stated at this point, that the counterweights will balance the cutter and sweep and the shafts to which they are attached, so that no means need be employed for holding the attachment out of the screen. The cen-

trifugal is again started and the operator swings the lever 34 to one side thereby bringing the cutter into engagement with the walls of the screen and as soon as the sugar begins to accumulate on the bottom it will bank up against the sweep and the latter will be forced outward from the position shown in dotted lines in Fig. 4 to that shown in full lines, where it is held by the stop 41. This sweep in conjunction with the brushes will force the sugar down the openings 3 where it will be received in a suitable receptacle. When the operation is completed the attachment is again raised, the sleeve lowered and the operation of drying again repeated.

We claim:

1. An attachment for centrifugal sugar driers comprising a stationary cutter having a scraper arranged at one edge, a sweep having pivotal relation to the cutter, and means for holding the sweep normally in folded position relative to the cutter.
2. An attachment for centrifugal sugar driers comprising a bracket, bars supported thereby, a head slidable on the bars, a shaft rigid with and depending from the head, a second shaft supported for rotary movement by the first shaft, a fixed cutter and a hinged sweep supported by the second shaft, and means for rotating the second shaft to move the cutter toward the walls of the screen.
3. An attachment for centrifugal sugar driers comprising a bracket, bars rigid therewith, a head slidable on the bars, a shaft rigid with and depending from the head, a second shaft supported from the first shaft, a fixed cutter and a movable sweep carried by the second shaft, and a lever operatively connected with the second shaft to rotate the same.
4. An attachment for centrifugal sugar driers comprising a bracket, bars rigid therewith, a head slidable on the bars, a shaft rigid with and depending from the head, a second shaft supported by the first shaft, a fixed cutter and a hinged sweep carried by the second shaft, means for imparting a rotary movement to the second shaft whereby to move the cutter from the screen, and counterbalancing means connected with the head.
5. An attachment for centrifugal sugar driers, comprising a bracket, tubular bars secured at their lower ends to the bracket, a plate connecting the upper ends of the bars, pulleys carried by the plate, ropes passing around the pulleys and carrying weights at their free ends disposed within the bars, a head slidable on the bars and to which the lower end of the rope is secured, a shaft rigid with and depending from the head, a second shaft supported by the first

shaft, a fixed cutter and a hinged sweep carried by the second shaft, the sweep being arranged normally to lie close to the cutter, and a lever connected with the upper end
5 of the second shaft to move the cutter toward the centrifugal.

In testimony that we claim the foregoing

as our own, we have hereto affixed our signatures in the presence of two witnesses.

JOSEPH CHANCELE CHAIX.

ELIE DUHÉ.

Witnesses:

JAS. S. PATTERSON,

LEON C. VIO.