

E. ROBERTS & A. H. GIBSON.
TIP FOR SUGAR SEPARATORS.
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1,015,510.

Patented Jan. 23, 1912.

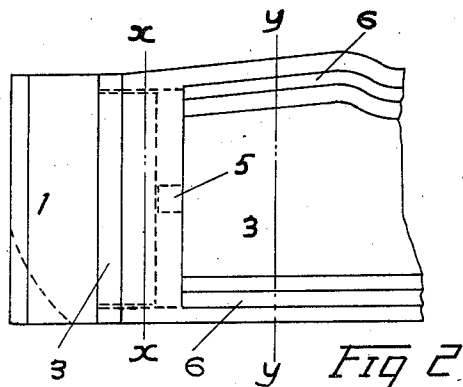


Fig 2

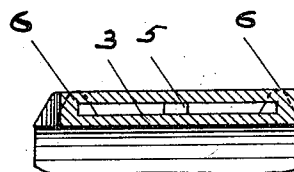


Fig 4

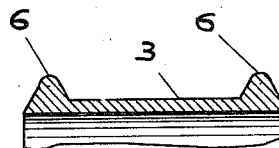


Fig 5

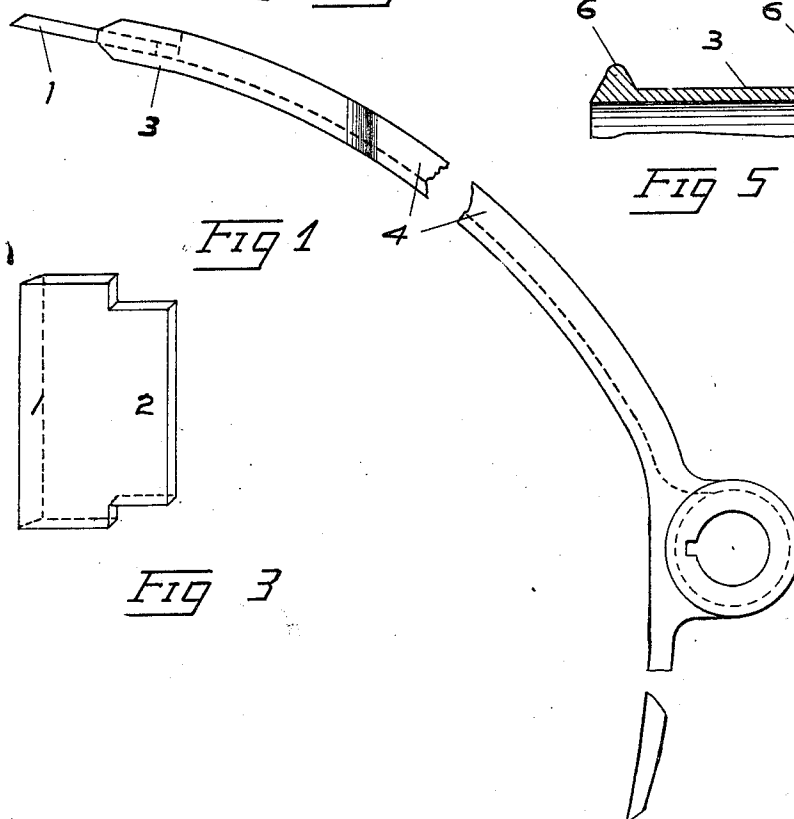


Fig 1

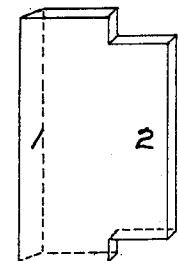


Fig 3

WITNESSES

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EUGENE ROBERTS AND ANGUS H. GIBSON, OF LEHI, UTAH.

TIP FOR SUGAR-SEPARATORS.

1,015,510.

Specification of Letters Patent.

Patented Jan. 23, 1912.

Application filed July 24, 1911. Serial No. 640,334.

To all whom it may concern:

Be it known that we, EUGENE ROBERTS and ANGUS H. GIBSON, citizens of the United States, residing at Lehi, in the county of Utah and State of Utah, have invented certain new and useful Improvements in Tips for Sugar-Separators, of which the following is a specification.

Our invention relates to means to remove sugar from centrifugal separators after the saccharine crystals have been separated from the syrup, and consists of the tip and socket on the shoe to hold the tip.

The purpose of our invention is to provide a tip or paddle, with which the sugar is removed from the separator by rotating the separator, which will withstand the wear and cutting of the sugar crystals, and which may be turned in its socket to present different edges and faces to the banked crystals in the separator. These objects we accomplish with the device illustrated in the accompanying drawings in which similar letters of reference indicate like parts throughout the several figures.

Figure 1 is a plan view of the shoe with our socket and tip thereon parts cut away. Fig. 2 is an outside elevation of the point of the shoe, with our socket and tip therein. Fig. 3 is a perspective of the tip. Fig. 4 is a vertical transverse section on line $x x$ of Fig. 2. Fig. 5 is a vertical transverse section on line $y y$ of Fig. 2.

In the patent issued to us on May 10th, 1910, Number 957,715, of a centrifugal machine, the paddle shown and as used by us at that time was made of wood. In the constant use to which they were subjected, they would cut and wear away rapidly and in an uneven manner and were liable to split and become worthless. It required some considerable time to replace them with new ones and required the shutting down of the separator while making the change. In our present device we construct our tip and socket to take the place of the said wooden paddle and means of fastening it to the shoe.

The tip 1 is made of vulcanized fiber and has a tenon 2 formed integral thereon. The said tenon 2 is placed in a socket 3 which is formed integral on the end of the shoe 4. The shoe has the same journal and means of securing it to the rod of the machine as was used by us in our said prior patent. The

bottom of the socket 3 is left open except a stay rib 5 placed thereacross to hold the sides of the said socket from spreading, which opening allows the said tip to be struck on the end of the said tenon 2 and thus drive the tip out of the socket. Brace ribs 6 are provided on the edges of said socket 3 to add strength thereto; and the upper edge of the said socket 3 is given a slight angle increasing the width thereof to conform to the top of the separator, so the tip will cut the sugar out of the upper portion of the separator when the shoe is raised. In use the sugar crystals will cut or wear away the lower corner of the said tip 1, as shown in dotted lines Fig. 2. The tip is then removed from the socket and turned so the upper becomes the lower corner, which presents a sharp and square corner to the banked sugar and will cut much faster than when rounded, and it will also clean all of the sugar out of the corner of the separator, which can not be done with a round cornered tip. This turning may be repeated until the tip is worn away to near the point of the socket 3, as the fiber material of which we make our tips will not split. The said fiber material when subjected to the vulcanizing and pressure which we give it furnishes us a tip tough enough to withstand the extreme wear to which the tip is subjected. The particles of said fiber which are thus worn away and must of necessity mingle with the sugar are not observable nor injurious to the sugar.

Having thus described our invention we desire to secure by Letters Patent and claim:—

1. A tip for sugar separators comprising an arm, a socket on the end of said arm having closed sides and ends with an open bottom, a vulcanized fibrous tip with a tenon formed integral thereon and adapted to be held by said socket.

2. A tip for sugar separators comprising a member made of fibrous material, a tenon formed integral on said member, and a socket having closed sides and ends and an open bottom and adapted to receive said tenon.

3. In a tip for sugar separators the combination of a socket having closed sides and ends and an open bottom with a rib thereacross adapted to strengthen the sides of the socket, a vulcanized fibrous tip, and a

tenon formed integral on said tip and adapted to enter said socket.

4. In a tip for sugar separators the combination of a socket having an open bottom, a vulcanized fibrous tip, and a tenon
5 formed integral on said tip and adapted to be held within said socket.

In testimony whereof we have affixed our signatures in presence of two witnesses.

EUGENE ROBERTS.
ANGUS H. GIBSON.

Witnesses:

SAM RANEY,
W. R. WILLIAMS.