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PATENTED SEPT. 4, 1906.

A. HOFFBAUER.
CENTRIFUGAL MACHINE.
APPLICATION FILED AUG. 11, 1905.

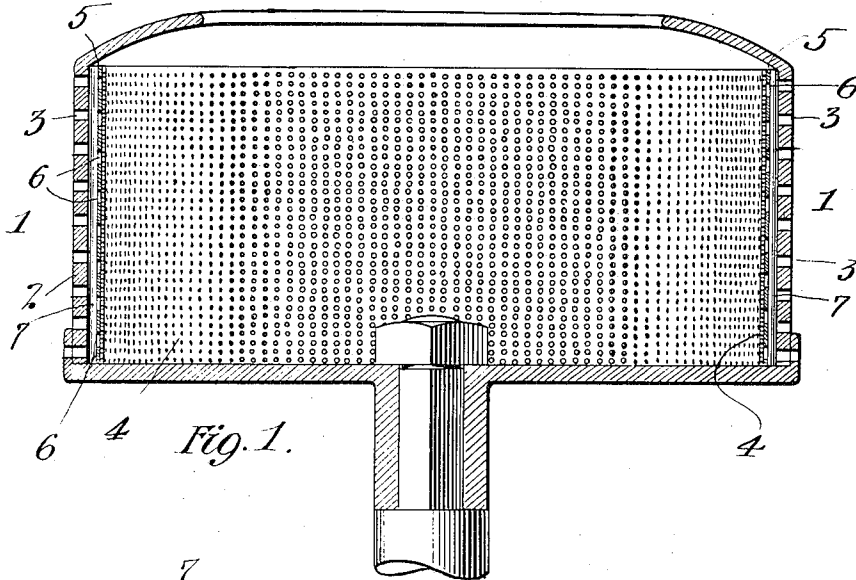


Fig. 2.

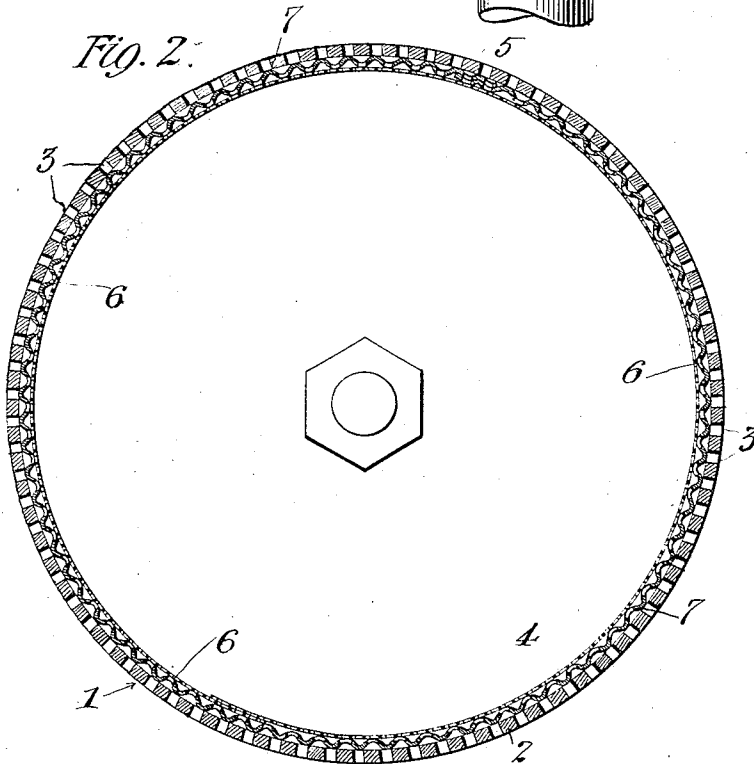
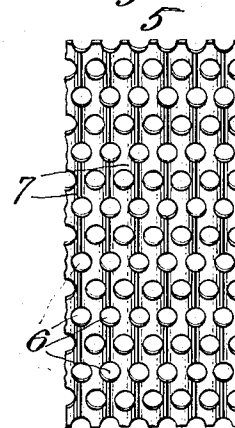


Fig. 3.



Witnesses
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UNITED STATES PATENT OFFICE.

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CENTRIFUGAL MACHINE.

No. 830,230.

Specification of Letters Patent.

Patented Sept. 4, 1906.

Application filed August 11, 1905. Serial No. 273,754.

To all whom it may concern:

Be it known that I, ALFRED HOFFBAUER, a citizen of the United States, residing at the city of New York, in the borough of Brooklyn and State of New York, have invented certain new and useful Improvements in Backing-Sieves for Centrifugal Machines, of which the following is a full, clear, and exact description.

10 The object of my invention is to provide a backing-sieve for centrifugal machines which is incapable of lateral or vertical contraction under any conditions, and therefore serves to provide a firm and unyielding support for the inner perforated lining no matter to what degree of centrifugal force the same may be subjected.

Other objects and advantages of the invention will hereinafter appear, and the novel features thereof will be set forth in the claims.

15 In the drawings forming part of this specification, Figure 1 is a vertical sectional view of a portion of a centrifugal machine, showing my improved backing-sieve applied thereto. Fig. 2 is a horizontal section of the same, and Fig. 3 is a detail perspective view of a portion of the backing-sieve.

Like reference-numerals indicate like parts in the different views.

20 The rotary drum 1 is provided with the cylindrical walls 2, having rather coarse perforations 3 therein, and with the usual lining 4 of finely-perforated sheet metal. All these parts are old and well known and so far as my present invention is concerned may be of any suitable form and construction. Interposed between the cylindrical walls 2 of the drum and the perforated lining 4 is my improved backing-sieve 5. This consists of an elongated strip of vertically crimped or corrugated sheet metal having perforations 6 therein. The same has its ends overlapping, with the crimped portion of one end fitting within the crimped portion of the adjacent end, as shown in Fig. 2 of the drawings. It extends from the bottom of the drum 1 up to the top thereof and thus forms a firm support for the inner lining 4 at all points.

By reason of the fact that the crimped or corrugated portion of one of the overlapping

ends of the backing-sieve 5 fits within the corresponding portions of the adjacent end the two ends of said sieve are in a measure interlocked one with the other and the tendency of the sieve to longitudinally expand or elongate at this point is reduced to a minimum. In order that such elongation or longitudinal expansion may take place, it is necessary for one of the free overlapping ends of the backing-sieve to move inwardly toward the center or axis of the drum. This action is of course very strongly resisted by the centrifugal force acting outwardly from the axis. As a result the backing-sieve is practically held against separation at its ends.

65 The vertical corrugations 7 in the backing-sieve provide for the separation of the lining 4 from the inner surfaces of the walls 2, so that there is no obstruction to the passage of the liquid through the perforations 3. These corrugations also permit of the longitudinal expansion of the backing-sieve, due to the action of centrifugal force, when the drum 1 attains a high rate of speed; but although this expansion or elongation is permitted it is absolutely impossible for any lateral or vertical contraction of the sieve 5 to take place. Consequently under all conditions the lining 4 is provided with a continuous backing or support at all points. No bending of this lining along its upper and lower edges can take place, as is common with the old form of backing-sieve, and consequently the action of the device as a whole is just as satisfactory at one time as it is at another. Furthermore, by reason of the fact that the backing-sieve is made from a strip of sheet metal it is much more substantial and durable than the old form of backing-sieve.

Having now described my invention, what I claim is—

1. The combination with the perforated cylindrical walls of a centrifugal machine and the perforated lining thereof, of a backing-sieve of vertically-crimped perforated sheet metal interposed between said lining and said walls, the said sieve being in contact with, and serving to prevent contact between, said walls and said lining.

2. The combination with the perforated

cylindrical walls of a centrifugal machine and
the perforated lining thereof, of a backing-
sieve of vertically-crimped perforated sheet
metal interposed between said lining and
5 said walls, the ends of said sieve being free
and the crimped portion of one end fitting
within the corresponding portion of the other.

In witness whereof I subscribe my signature
in the presence of two witnesses.

ALFRED HOFFBAUER.

Witnesses:

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