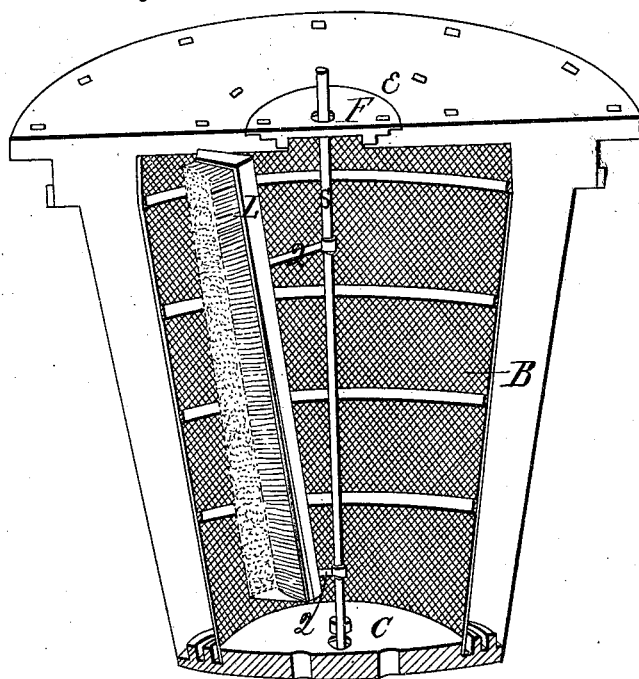


*J. Watson,*  
*Water Filter,*  
*No 5,404,      Patented Dec. 28, 1847.*

*Fig. 4.*



*Yues.*

# UNITED STATES PATENT OFFICE.

JOHN WATSON, OF WASHINGTON, DISTRICT OF COLUMBIA.

## CLEANING FILTERS.

Specification of Letters Patent No. 5,404, dated December 28, 1847.

*To all whom it may concern:*

Be it known that I, JOHN WATSON, late of Kingston, Jamaica, but now of Washington city, District of Columbia, have invented  
5 a new and improved mode of constructing a filter for the manufacture of sugar by combining with it a brush to keep the inner surface clear of clog or impurities; and I do hereby declare the following is a full and  
10 exact description.

To enable others skilled in the art to make and use my invention, I will proceed to describe its construction and operation.

Figure 4 of the annexed drawings is a  
15 vertical section of the apparatus showing its interior, the filter being conical in form and the drawing showing its concave surface.

The improvement consists in the application of a vertical brush, L, Fig. 4, connected at top and bottom to an upright shaft, S, Fig. 4, by horizontal arms, Q Q', Fig. 4. The lower end of this shaft, S, Fig. 4, is stepped on the center of the bottom plate, C, Fig. 4,  
25 of the apparatus, the upper end of said shaft extending upward through the lid, F, Fig. 4, and projecting above it so as to allow motion to be communicated to said shaft S. This is done by providing the upper end of  
30 said shaft with a band or cogged gearing; or it may be terminated by a crank to be turned by hand.

As the brush, L, Fig. 4, is to keep the inner surface of the wire sieve from being obstructed by the impurities of the syrup 35 it must necessarily be in immediate contact with this surface, and must also be of the same height to allow its acting upon every part exposed to the syrup.

As the sieve is of a conical form—larger 40 at top than bottom—so must the upper arm, Q, connecting the brush L with the shaft, S, be longer than the lower arm, Q', which connects the lower end of the brush with the corresponding end of the shaft; or the brush 45 itself may be made of a conical form to meet the same end.

In place of the brush above described a scraper or other analogous material may be used to perform the same objects. 50

What I claim as my invention and desire to secure by Letters Patent is—

The use of the brush or scraper in combination with a filter for the manufacture of sugar and for other purposes, the whole being 55 combined and operating, substantially as is herein set forth.

JOHN WATSON.

Witnesses:

SAMUEL STREETER,  
GEO. C. THOMAS.