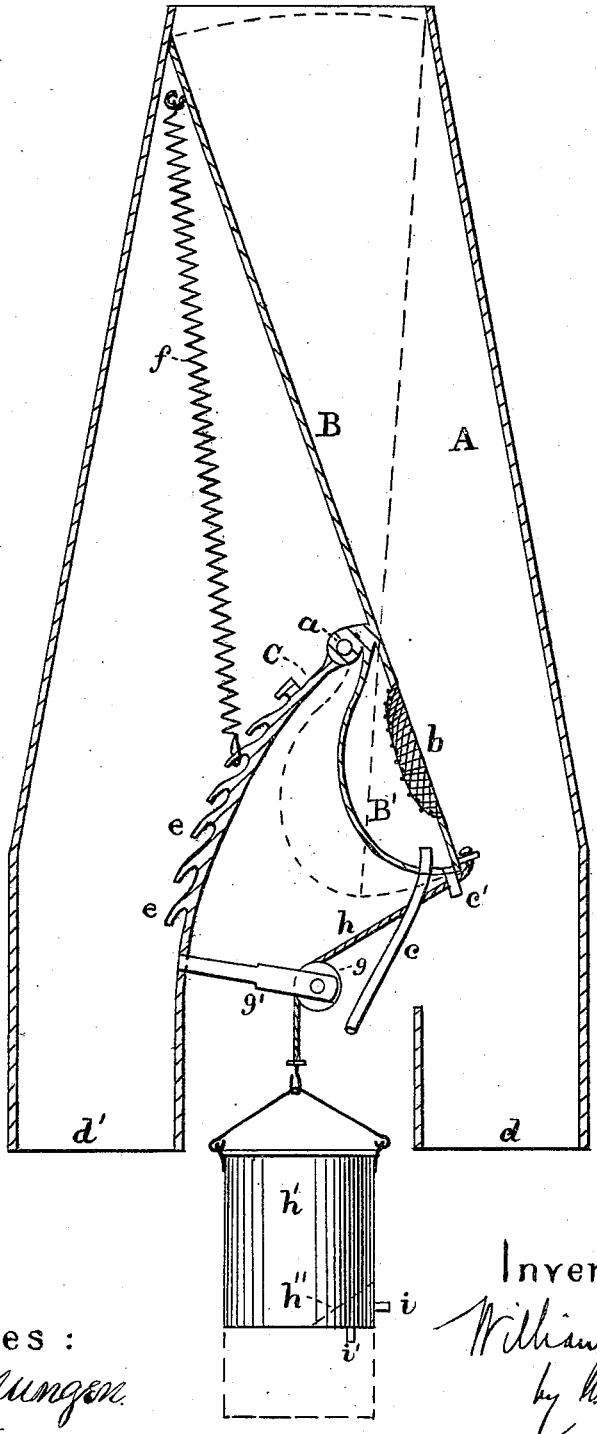
W. B. WILSON.

Cistern-Filter and Water-Separator.

No. 169,130. Patented Oct. 26, 1875.



Witnesses:
Theodore Mungen
J. H. Robertson

Inventor:
William B. Wilson,
by his Attys. W. J. Howell & Co.
Attorneys.

UNITED STATES PATENT OFFICE.

WILLIAM B. WILSON, OF JEFFERSON COUNTY, KENTUCKY.

IMPROVEMENT IN CISTERN-FILTERS AND WATER-SEPARATORS.

Specification forming part of Letters Patent No. **169,130**, dated October 26, 1875; application filed August 2, 1875.

To all whom it may concern:

Be it known that I, WILLIAM B. WILSON, of the county of Jefferson and State of Kentucky, have invented a Cistern-Filter and Water-Separator, of which the following is a specification:

This invention relates to means hereinafter described, whereby rain-water is collected from the roofs of buildings in a pure and wholesome condition, and free from such impurities as coal-dust, soot, &c., which ordinarily find their way into the cisterns, and render the water unfit or undesirable for domestic use.

In the accompanying drawing is represented a vertical section of the invention.

A is a casing, made of some non-corroding metal. It is shaped, as seen from the front, about as shown in the drawing, its top being about four inches square in the clear. The casing is increased in width toward its bottom, its front and back being parallel with each other. B is a plate, pivoted at *a* to a partition, C, and adapted, as hereinafter described, to be moved across the casing. When so moved it assumes the position indicated by dotted lines. The lower end of the plate B is formed into a cup-shaped receptacle, B′, the face of which is covered by a gauze-sheet, *b*. The cup B′ is provided with a descending pipe, *c*, leading to a point central of the casing, and also with a small pipe, *c′*, the office of which pipes is hereinafter explained.

The partition C serves to separate the lower portion of the casing into two sections, one of which terminates in a waste-pipe, *d*, the other, *d′*, leading to the cistern. The left-hand side of the partition C is provided with a rack having hooks *e*, to any one of which, as may be desired, the spring *f* is attached, the said spring extending to the top of the plate B, to which it is secured, as shown. A pulley, *g*, is supported in a stand, *g′*, extending from the partition C, over which pulley passes a cord, *h*, sustaining a bucket, *h′*, the other end of the said cord being secured to the lower portion of the cup B′. The bucket *h′* is provided with small apertures *i i′* covered with gauze *h″*.

The operation of the apparatus is as follows: The upper end of the casing connects with the down spout, which conveys water from the roof. On a brisk shower or rain occurring the main body of the water is led down the plate B into the waste-pipe *d*, a portion, however, passing through the gauze *b* into the cup B′, and thence through the pipe *c* into the bucket or receiver *h′*. The impurities from the roof are prevented by the gauze *b* from entering into the bucket, and are washed from the gauze into the waste-pipe. Sufficient water having entered the bucket to overcome by its weight the action of the spring *f*, the plate B is moved so that its top is made to bear against the opposite side of the casing, as shown by the dotted lines. The water is then conducted free from impurities into the cistern through the pipe *d′*.

It will be understood that the spring *f* and the bucket *h′* are of such strength and capacity as to allow of this result when sufficient rain may be supposed to have fallen to wash the roof.

The small pipe *c′* at the bottom of the cup B′ is intended to drain the cup of such small amounts of water as may collect therein from dew-fall and light showers, which produce too small a quantity of water to effect the result aforenamed.

The tension of the spring *f* may be adjusted by moving the spring from one of the hooks *e* to another.

The purpose of the small gauze-covered openings *i i′* is to slowly empty the receiver *h′* and admit of the readjustment of the several parts when the fall of rain is over.

I claim as my invention and wish to secure by Letters Patent of the United States—

1. The casing A, divided by the partition C and leading to the waste-pipe and cistern, as specified, the pivoted plate B, and gauze-covered cup B′, having the pipes *c c′*, combined with the suspended automatically-emptying receiver *h′* and reactionary spring *f*, substantially as and for the purpose set forth.

2. In the casing A, the combination of the pivoted plate B, partition C, having the hooks *e*, and spring *f*, substantially as described, and for the purpose specified.

WILLIAM B. WILSON.

Witnesses:

E. J. HYMAN,

HORACE BASHAW.