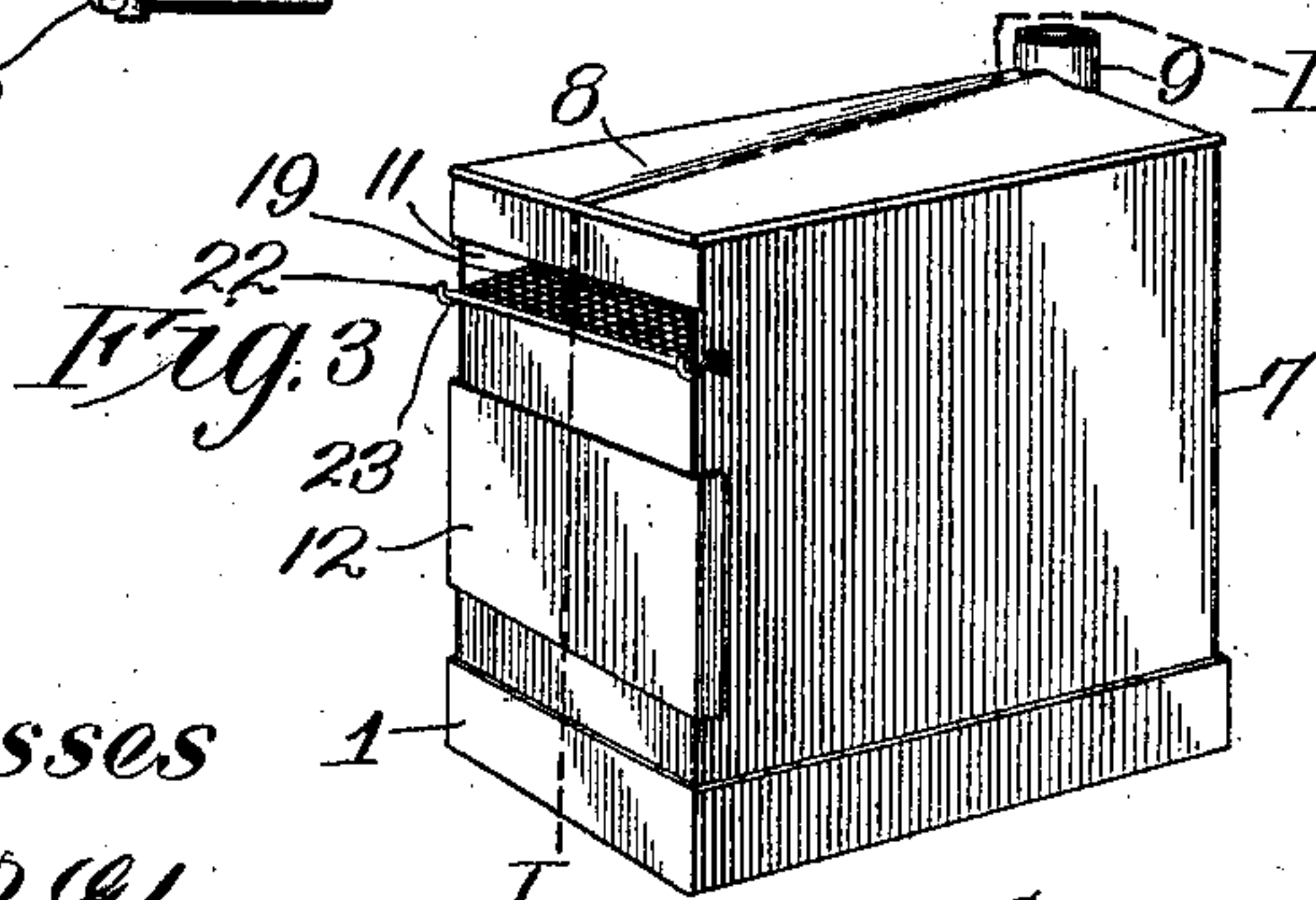
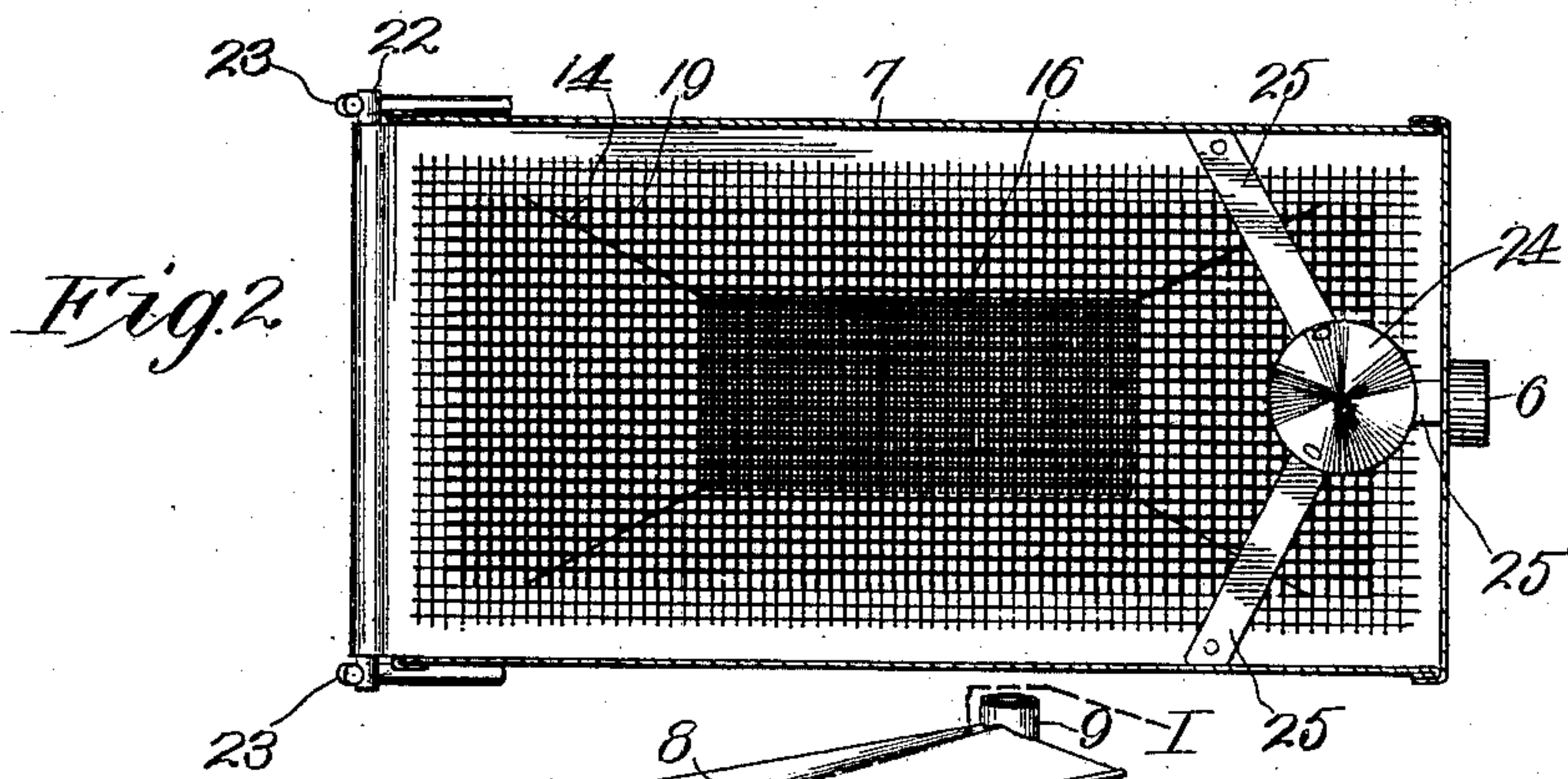
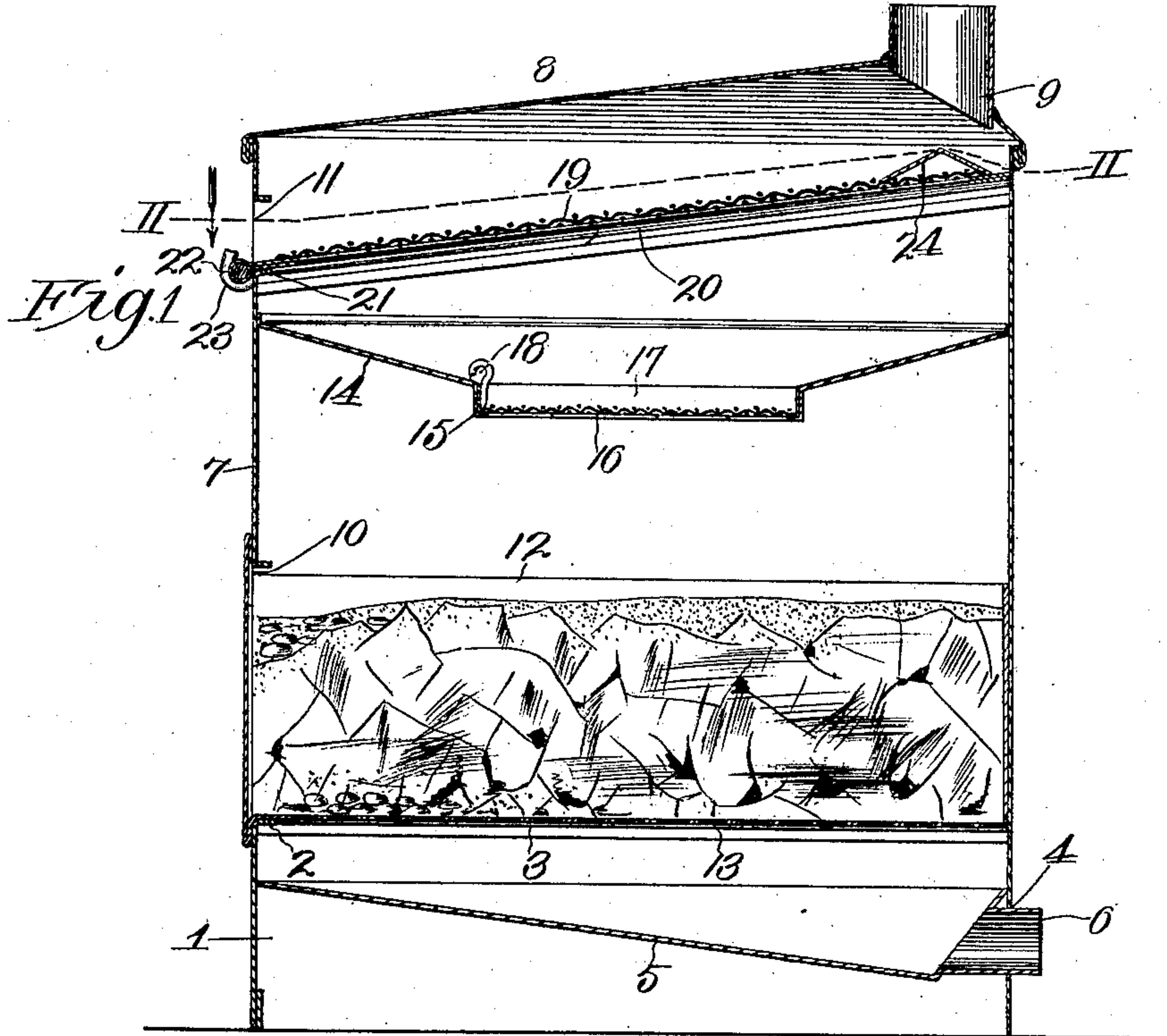


No. 840,400.

PATENTED JAN. 1, 1907.

R. E. TIPTON.
PLATFORM FILTER FOR CISTERNS.

APPLICATION FILED OCT. 13, 1906.



Witnesses
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UNITED STATES PATENT OFFICE.

RAY E. TIPTON, OF AGRA, KANSAS.

PLATFORM-FILTER FOR CISTERNS.

No. 840,400.

Specification of Letters Patent.

Patented Jan. 1, 1907.

Application filed October 13, 1906. Serial No. 338,716.

To all whom it may concern:

Be it known that I, RAY E. TIPTON, a citizen of the United States, residing at Agra, in the county of Phillips and State of Kansas, have invented certain new and useful Improvements in Platform-Filters for Cisterns, of which the following is a specification.

This invention relates to devices for filtering rain-water, and more especially to a platform-filter for cisterns; and my object is to produce a device of this character which performs its function efficiently and reliably, which prevents the access of trash, insects, and other foreign matter to the filtering substance, and consequently to the cistern, which can be easily and quickly cleaned, and which is of simple, strong, durable, and inexpensive construction.

With this general object in view and others, as hereinafter appear, the invention consists in certain novel and peculiar features of construction and organization, as hereinafter described and claimed, and in order that it may be fully understood reference is to be had to the accompanying drawings, in which—

Figure 1 is a vertical section on the line I I of Fig. 3. Fig. 2 is a horizontal section taken on the line II II of Fig. 1. Fig. 3 is a perspective view of the filter on a reduced scale.

In the said drawings, 1 indicates a rectangular base portion open at the top and bottom by preference and provided with a front flange or cleat 2 and side flanges or cleats 3. It is also provided with an opening 4 in the back wall and with a hopper-shaped partition 5, which in practice forms the actual bottom of the device and is equipped with a pipe 6, projecting outwardly through opening 4 and adapted for connection with a pipe (not shown) leading to the cistern.

7 indicates the body portion of the device, the same being superposed with respect to and secured upon base portion 1 and provided with a top or roof 8, equipped with an upwardly-projecting pipe 9, to be connected directly or indirectly to the rain-spout. (Not shown.)

The body portion is provided in the lower portion of its front wall with an opening 10 and in the upper portion of its front wall with an opening 11, the first-named opening being for the admission and removal of a drawer 12, provided with a perforated bottom 13, said drawer resting upon the flanges or cleats 2 and 3. This drawer is adapted

to contain charcoal or any other suitable or equivalent filtering substance.

14 indicates a shallow hopper partitioning the body portion between openings 10 and 11, the bottom of said hopper being provided with depending marginal angle-flanges 15, and removably seated in said hopper is a fine-mesh screen 16, provided with walls 17, which project upward to the upper edges of flanges 15 and in conjunction with the screen form a screen-bottomed receptacle to catch and retain small insects or other foreign particles, and said screen-bottomed receptacle is provided with a hook or eye 18, whereby it may be conveniently removed from the filter for cleansing of other purposes. If the filter is of such size that one's hand cannot readily pass through opening 11, a hook or other device (not shown) may be engaged with the hook or eye 18 for the purpose of removing the screen-bottomed receptacle.

19 indicates a coarse-mesh screen partitioning the bottom portion above the hopper 14 and resting on the side cleats 20 and front cleat 21, rigid with the body portion, said cleats occupying an inclined plane which is pitched downwardly and forwardly. The front end of the coarse screen extends through the opening 11 and is equipped with a cross-rod 22 to fit down in the hooks 23, secured to the sides of the body portion in any suitable manner, said hooks thus preventing any possibility of forward sliding movement of said screen and yet permitting its front end to be lifted until the rod is disengaged from the hooks for the purpose of permitting the screen to be withdrawn from the filter.

In order to protect the coarse screen from injury which might result from the direct impact of the water and twigs and other foreign particles therein, I equip the rear end of the screen with a conical plate 24, the same being located directly below pipe 9, and to relieve the screen proper said plate is connected to the frame of said screen by a plurality of metal strips 25.

In practice as the water enters the filter it strikes and is distributed by the plate 24, the water and that portion of the foreign particles of sufficiently minute size passing through the screen 19, while the twigs and other foreign particles too large to pass through the screen are caused by the force of the water and the downward and forward in-

clination of said screen to travel forward thereon and eventually be discharged through the opening 11. The water and fine particles which pass through screen 19 fall into hopper 14, small insects and practically all particles of sufficient size to be perceptible being retained in the screen-bottomed receptacle 17, from which they can be removed in the manner hereinbefore explained. The water after passing through the screen 16 falls into the drawer containing the filtering substance and is purified. It then passes through the perforated bottom of the drawer onto the bottom 5, from which it passes through pipe 6 and thence to the cistern. For the purpose of cleansing or renewing the purifying substance in the drawer the latter can be quickly withdrawn through opening 10.

I wish it to be understood that I do not desire to be limited to the exact details of construction shown and described, for obvious modifications will occur to a person skilled in the art.

Having thus described the invention, what I claim as new, and desire to secure by Letters Patent, is—

1. A filter provided with an inlet-pipe and an opening in one of its walls below the plane of the inlet-pipe, a screen within the filter below said pipe and projecting through said opening, and hooks secured to the filter and engaging the front end of the screen to prevent the latter slipping through said opening.

2. A filter provided with an inlet-pipe and an opening in one of its walls below the plane of the inlet-pipe, a screen within the filter below said pipe and projecting through said opening and provided with a plate to receive the impact of the water entering the filter

through said pipe, and hooks secured to the filter and engaging the front end of the screen to prevent the latter slipping through said opening.

3. A filter provided with an inlet-pipe and an opening in one of its walls and occupying a lower plane than said pipe, a screen partitioning the filter and pitched downwardly and forwardly to the lower edge of said opening, a hopper within the filter below said screen and provided with a depending angle-flange wall, and a fine screen covering the opening of the hopper and provided with upwardly-projecting walls.

4. A filter provided with an inlet-pipe in its roof near the upper margin thereof, and a pair of openings in its front wall, downwardly and forwardly inclined cleats secured within and to the side walls of the filter, a screen resting on said inclined cleats and projecting at its front end through the contiguous opening in the front wall, cleats within and secured to the side walls of the filter in the plane of the lower margin of the other opening in the front wall, a filtering-drawer projecting through said last-named opening and resting on said cleats and provided with a perforated bottom, a hopper partitioning the filter between said screen and drawer and equipped with a screen-bottomed receptacle, and means below the drawer to conduct water which passes through the latter from the filter.

In testimony whereof I affix my signature in the presence of two witnesses.

RAY E. TIPTON.

Witnesses:

J. W. WOMER,
A. R. QUINTARD.