(No Model.)

F. W. STOCKTON.

FIRE GUARD AND SOOT CATCHER.

No. 506,279. Patented Oct. 10, 1893.

Fig. 1.

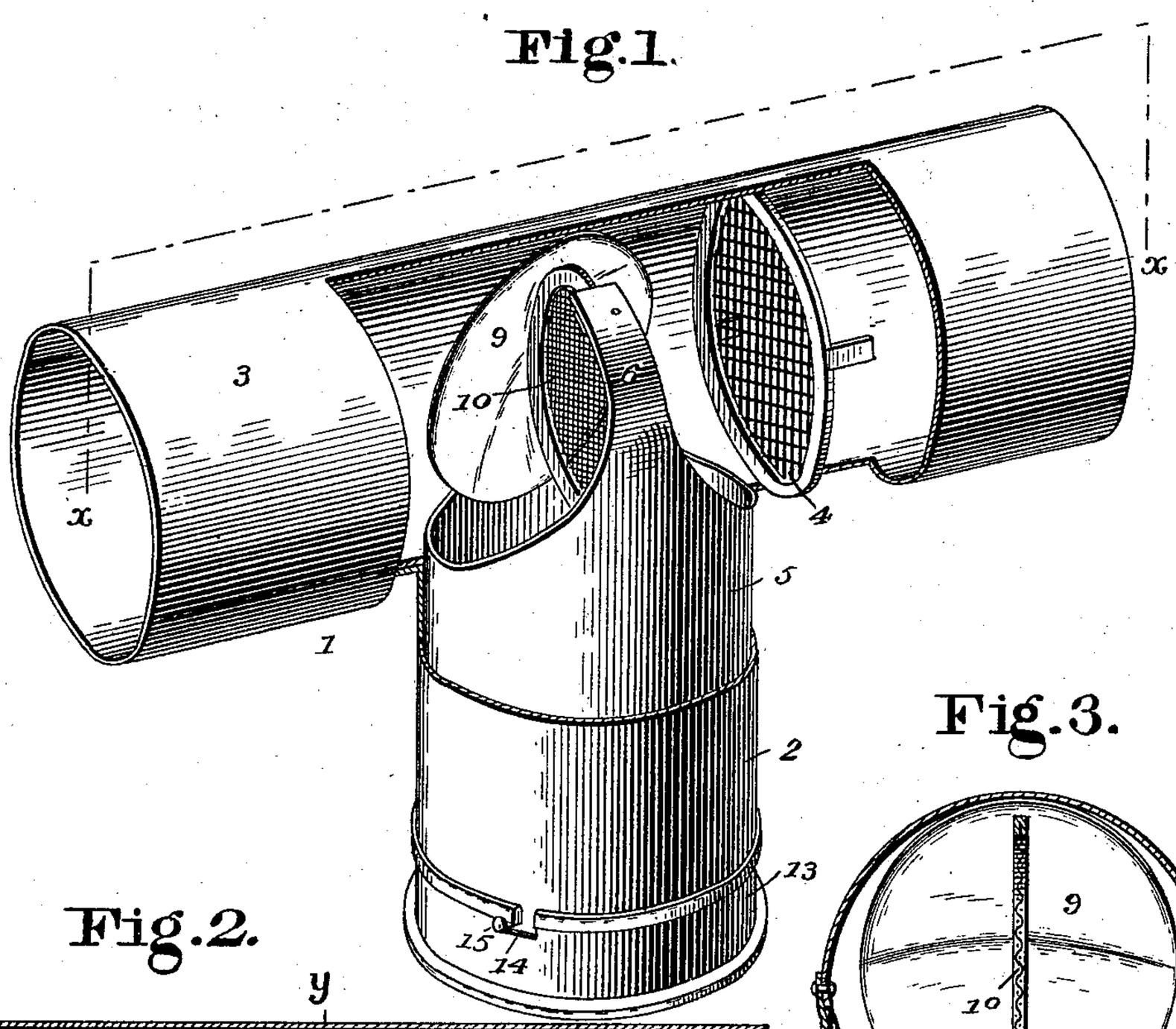


Fig. 3.

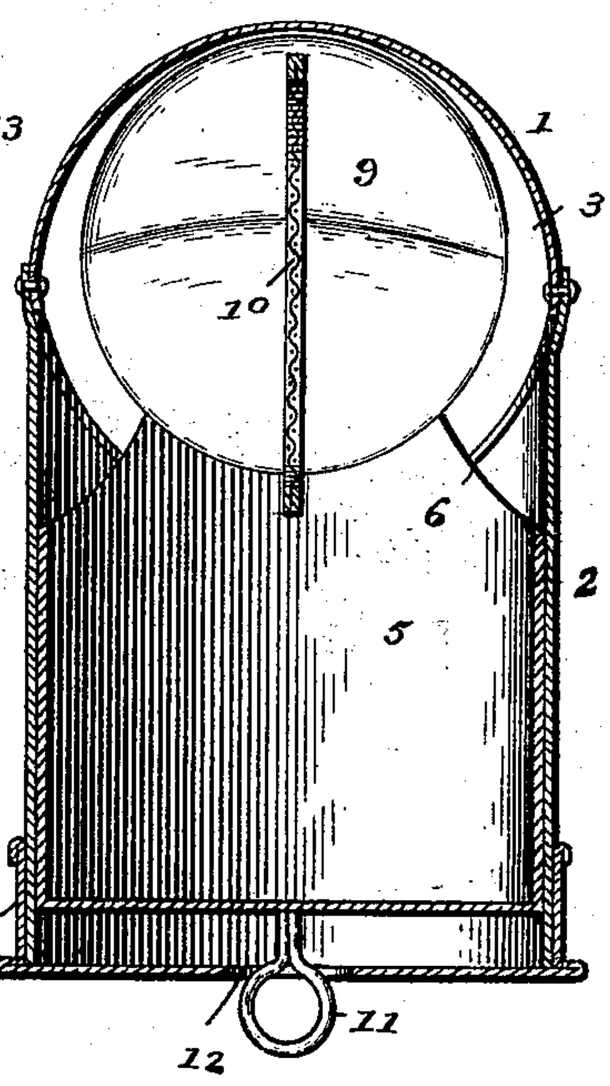
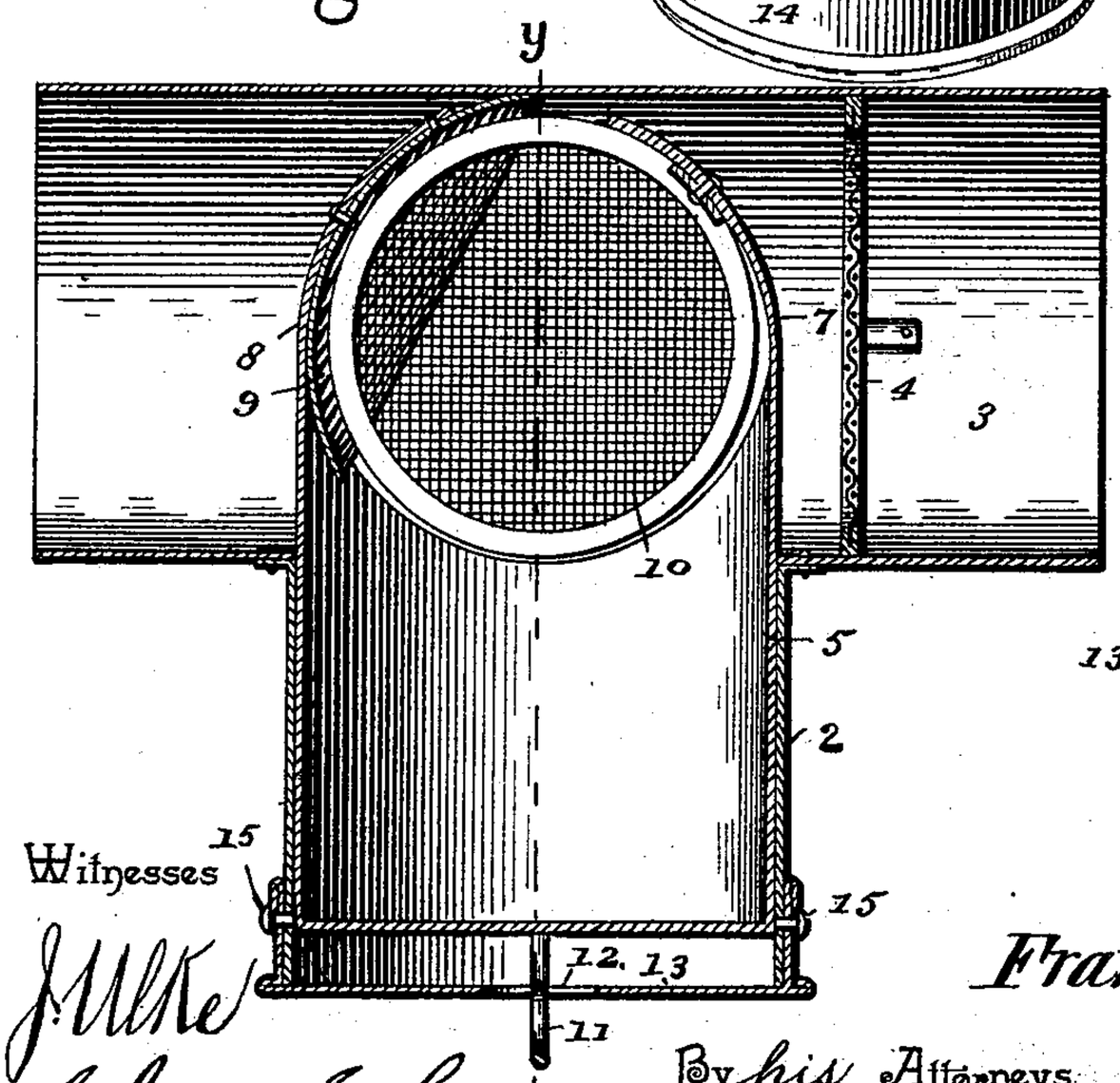


Fig. 2.



Witnesses
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UNITED STATES PATENT OFFICE.

FRANK W. STOCKTON, OF PARSONS, KANSAS.

FIRE-GUARD AND SOOT-CATCHER.

SPECIFICATION forming part of Letters Patent No. 506,279, dated October 10, 1893.

Application filed May 22, 1893. Serial No. 475,034. (No model.)

To all whom it may concern:

Be it known that I, FRANK W. STOCKTON, a citizen of the United States, residing at Parsons, in the county of Labette and State of Kansas, have invented a new and useful Fire-Guard and Soot-Catcher, of which the following is a specification.

This invention relates to fire-guards and soot-catchers, and has for its object to prevent the passage of ignited particles of combustion through a stovepipe or flue, and also to provide means for collecting the soot within a removable receptacle, the parts being simple and effective in their construction and operation.

With these and other objects in view, the invention consists of the construction and arrangement of the parts thereof as will be hereinafter more fully described and claimed.

In the drawings: Figure 1 is a perspective view of a section of pipe showing the improved appliances in connection therewith, the pipe being broken away to clearly illustrate the parts. Fig. 2 is a section on the line *x—x*, Fig. 1, showing the parts in a different position. Fig. 3 is a transverse vertical section on the line *y—y*, Fig. 2.

Similar numerals of reference indicate corresponding parts in the several figures of the drawings.

Referring to the drawings, the numeral 1 designates a section of pipe, which comprises a horizontal member 2, with a vertical depending extension 3, communicating therewith and forming a T-joint, the construction as set forth indicating a horizontal flue or pipe, and where the said pipe is arranged vertically or straight the T-joint and soot-catcher will be slanting a trifle. Within the horizontal member of the pipe-section, in advance of the point where the depending extension communicates therewith, is located a vertically-disposed wire gauze disk 4, of rather coarse mesh and closely fitting the inside of the said horizontal member. Within the depending vertical extension 3 is removably mounted a soot-catcher or receptacle which consists of a cylindrical body 5, formed with oppositely-situated upper curved recesses 6, to cause the same to align with the horizontal member of the pipe-section and thereby avoid obstruction of the draft of the same. The said body of the soot-catcher, between the recesses 6, is formed with upwardly-extending curved arms 7 and 8, and to the inner side of the arm 8 is secured a parabolic damper 9, and between the said damper and the opposite arm 7 is rigidly fixed a wire gauze screen 10, of finer mesh than the screen 4, the said screen 10 standing at a right angle to the damper and attached to the arm 7, so as to suspend the same over the soot-catcher. The soot-catcher and the parts carried thereby are adapted to be revolved within the extension 3, and to provide for readily attaining this operation a wire handle 11 is attached to the lower end of the soot-catcher and has both ends thereof run through a hole 12 in a lid 13 which is removably fitted over the lower end of the said extension 3 and supplied with opposite bayonet-slots 14, adapted to engage oppositely-disposed studs 15, on the said extension. The hole 12 is just large enough to permit the handle 11 to be revolved in adjusting the soot-catcher and the parts carried thereby; and when desired it will be seen that the lid 13 may be readily detached and the soot-catcher removed to clean the same. By the position of the handle it can be readily ascertained whether the damper be opened or closed, and by this means a full control of the draft can be obtained at the proper place.

In operation, the smoke, carrying particles of combustion either in ignited or dead condition, passes through wire-gauze screen 4, and then through the screen 10, and by this means the soot is caused to drop within the soot-catcher and the smoke is permitted to pass on through the flues without being laden with any solid or depository particles therein. By this means it will be seen that it is impossible for a spark to pass through the screens, and even though a defective flue may exist a safeguard against fire is provided. By means of the soot-catcher and its function the flue will be kept clean and when the damper is turned in closed position a drum is formed in the pipe from the same and the soot-catcher clear to the stove, thus obtaining the benefit of every pound of fuel that is consumed.

The device serves an exceptionally useful and benficial function, as has been stated;

and it is obviously apparent that changes in the form, proportion, and the minor details of construction may be resorted to without departing from the principle or sacrificing any of the advantages of this invention.

Having described the invention, what is claimed as new is—

1. In a device of the character set forth, the combination of a pipe or flue, a wire gauze screen mounted therein, a removable soot-catcher adjacent to the said screen, and another screen carried by the upper part of said soot-catcher and of finer mesh than the aforesaid screen, substantially as described.

2. In a device of the class set forth, the combination of a pipe-section, a pair of screens mounted in said section which are spaced apart from each other and varying in degree of mesh, and a removable soot-catcher relatively co-acting with said screens, substantially as described.

3. In a device of the class described, the combination of a pipe-section, a screen of rather coarse mesh mounted therein, a soot-catcher removably mounted adjacent to said screen and adapted to be revolved, a damper secured to one side of the upper part of said soot-catcher, and another screen attached to the opposite side of said soot-catcher at an angle to the said damper and of finer mesh than the aforesaid screen, substantially as described.

4. In a device of the class described, the combination of a pipe-section having a screen mounted therein, and a soot-catcher adjacent to said screen that is adapted to be removed and revolved and supports another screen and a damper, substantially as described.

5. In a device of the class described, the combination of a horizontal pipe-section with a lower extension, a screen mounted in said horizontal pipe-section, a soot-catcher removably and rotatably mounted in said extension having upper oppositely-disposed curved recesses with curved arms between the same, and a lower handle, a damper carried by one of the said arms, a screen fixed to the opposite arm and of finer mesh than the aforesaid screen and standing at an angle to the said damper, and a lid removably fitted over the lower end of the said extension and having an opening in the center thereof through which the said handle projects, substantially as described.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in the presence of two witnesses.

FRANK W. STOCKTON.

Witnesses:

J. F. LEWIS,

CHAS. H. TANNER.