

946,129.

C. T. HARMS.
STOVEPIPE CLEANER.
APPLICATION FILED AUG. 17, 1909.

Patented Jan. 11, 1910.
2 SHEETS—SHEET 1.

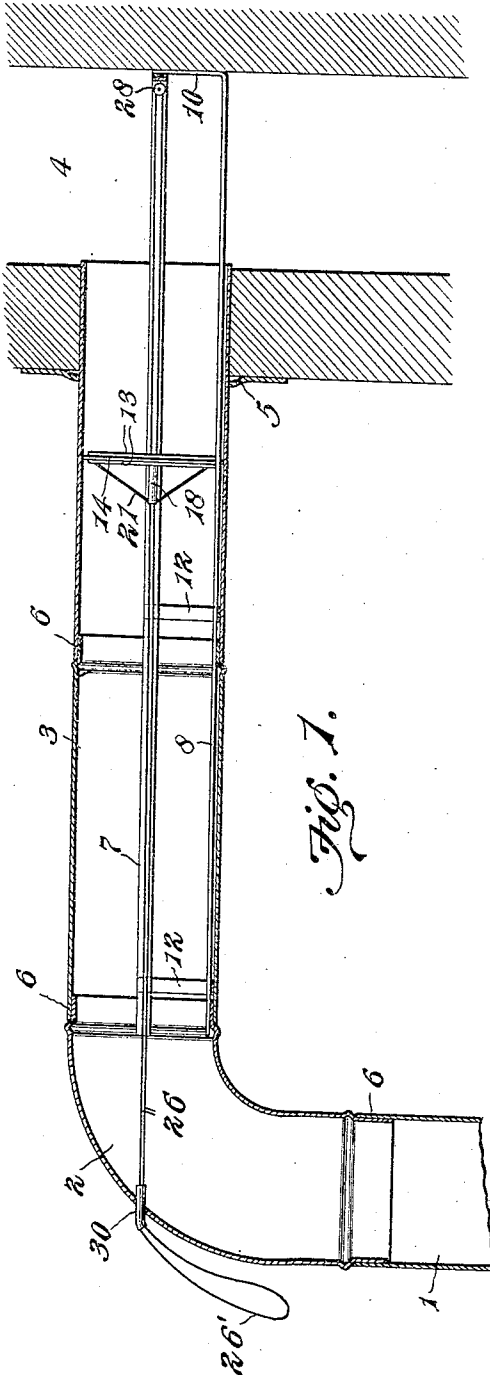


Fig. 1.

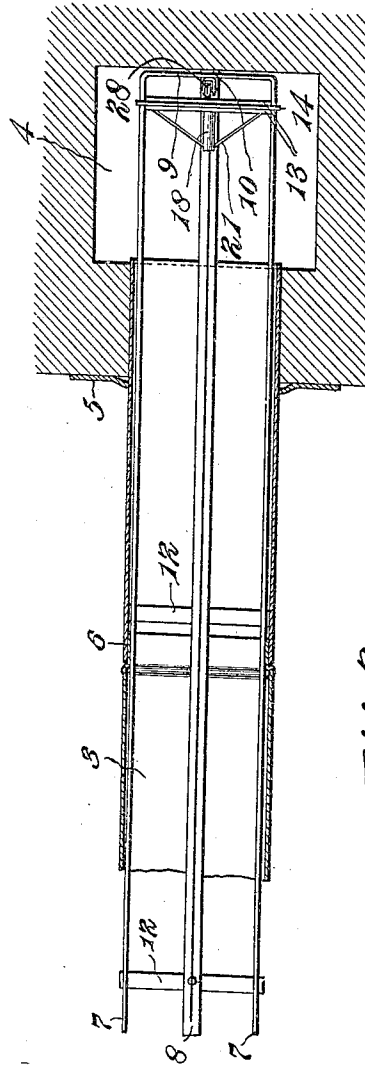


Fig. 2.

Witnesses

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Fig. 4.

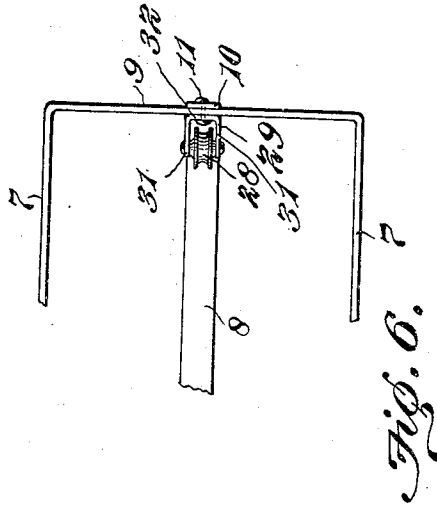
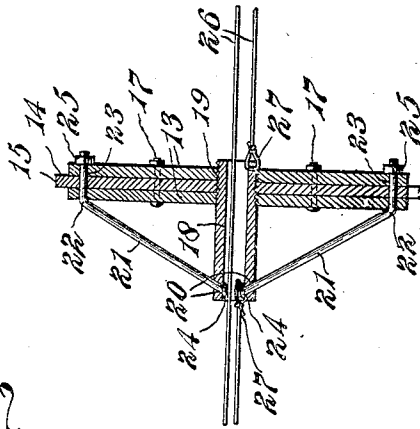


Fig. 3.

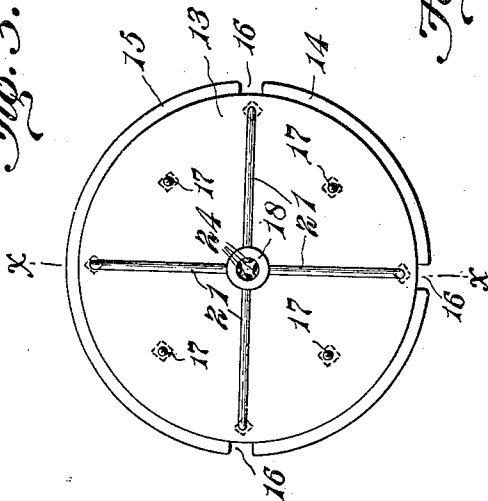
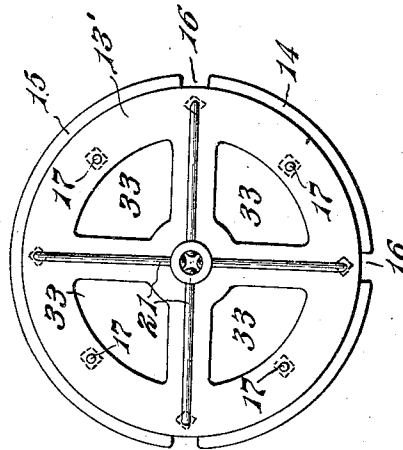


Fig. 5.



Witnesses

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STOVEPIPE-CLEANER.

946,129.

Specification of Letters Patent.

Patented Jan. 11, 1910.

Application filed August 17, 1909. Serial No. 513,275.

To all whom it may concern:

Be it known that I, CARL T. HARMS, a citizen of the United States, residing at Fayetteville, county of Lincoln, and State of Tennessee, have invented certain new and useful Improvements in Stovepipe-Cleaners, of which the following is a specification.

My invention relates to stove pipe cleaners and more particularly to devices for cleaning the horizontal portion of stove pipes without necessitating disjoining or taking down of the pipe.

The object of my invention is to provide an improved device whereby the stove pipe, particularly in the horizontal portion thereof may be readily kept clean and free from soot.

A further object of my invention is to provide a stove pipe cleaner as mentioned which shall be adapted to rest within the chimney or flue when not in use and provided with means for actuating the same and means for guiding the cleaner into the stove pipe.

A further object of my invention is to provide a device of the class mentioned which shall not interfere with the draft when not in operation.

A further object of my invention is to provide a stove pipe cleaner characterized as above mentioned, which shall be of simple construction, strong and durable and of low cost to manufacture.

Other objects will appear hereinafter.

My invention will be more readily understood by reference to the accompanying drawings forming a part of this specification in which—

Figure 1 is a longitudinal vertical section through a portion of a stove pipe and flue equipped with a stove pipe cleaner embodying my invention in its preferred form, Fig. 2 is a horizontal section through a portion of the same, Fig. 3 is a front elevation of the cleaning disk, Fig. 4 is a section of the same on the line $x-x$ of Fig. 3. Fig. 5 is a front elevation of a modified form of the disk, and Fig. 6 is a plan view of the inner end of the disk guide illustrating the pulley mounted thereon.

Referring now to the drawings 1 indicates a stove pipe having the usual elbow 2 and horizontal portion 3, the latter extending into the flue 4, and 5 indicates the usual collar. The stove pipe is made up in the

usual manner of a number of sections connected by the detachable joints 6.

In carrying out my invention I arrange a metal skeleton frame within the horizontal portion of the pipe and the adjacent portion of the flue and provide a pipe cleaning disk slidably mounted on said frame and equipped with means for drawing the same back and forth through the horizontal portion of the pipe to clean the same of soot which adheres to the inner walls of the pipe or settles in the bottom thereof, said frame constituting a track or guide for the disk. The frame comprises a plurality of longitudinal metal strips arranged parallel with each other, preferably three in number and consisting of two side strips 7—7 and a bottom strip 8 each of which is adapted to lie close against the adjacent wall of the pipe. The strips 7 are preferably formed of a single strip connected at the inner end by transverse portion 9 at right-angles to the portion 7 as clearly shown in Fig. 2. The strip 8 is co-extensive in length with the strip 7 and is provided at its inner end with an upturned portion 10 which is secured as by a rivet 11 to the center of the transverse portion 9. See Figs. 2 and 6. To hold the strips 7 and 8 in proper relation to each other and to form a rigid frame the strips are preferably connected by semi-circular strips 12 securely fixed thereto. If preferred the members 12 may constitute springs for holding the frame firmly in position within the pipe.

The cleaning disk comprises a pair of similar metal disks 13—13 and an asbestos disk 14 secured between them. The asbestos disk 14 is of substantially the same diameter as the internal diameter of the stove pipe and the metal disks 13 are somewhat smaller leaving a peripheral projecting edge 15 of asbestos. The metal disks 13 are preferably of such diameter as to fit within the above described frame and the cleaning disk slides freely on said frame which constitutes the guide for the cleaning disk and prevents the same from catching in the joints of the pipe which would tend to separate the sections thereof. The projecting edge 15 of the asbestos disk is provided with the notches 16 to receive the strips 7 and 8 of the frame or guide. The disks 13 are detachably connected by a plurality of bolts 17 extending through the same and clamping the asbestos

disk 14 firmly between them. Extending through the several disks is a short pipe or tubular member 18. This is preferably threaded into the rear metal disk 13 as at 5 19 and it extends some distance in front of the front disk. The forward end of the member 18 is provided with perforations 20 through each of which extends a diagonal brace rod 21, the outer end of which is bent 10 as at 22 to extend through perforations 23 in the disks adjacent the peripheries. The brace rods 21 are provided with the heads 24 on their inner ends to prevent drawing through the perforations 20, and the opposite ends of the rods are threaded and provided with the nuts 25 by means of which 15 the tension of the rods may be adjusted. The rods 21 are of small diameter and preferably formed of stout wire and with the nuts 25 serve as additional means for binding the disks together. When it is desired to renew the asbestos disk when it becomes worn the bolt 17 and nuts 25 are loosened after which the disks 13 may be separated, 20 the worn asbestos disk removed and a new one inserted, after which said bolts and nuts are tightened or replaced.

To operate the cleaning disk I provide a flexible fire proof cord or wire member 26 30 the free ends of which are secured as at 27 to the cleaning member, preferably at the ends of the tubular member 18 as shown in Fig. 4. The member 26 extends rearwardly to the end of the frame where it passes about a pulley 28 mounted in a bracket 29 35 secured to the transverse member 9 of the frame. The member 26 then extends forwardly through the tubular member 18, which affords a passage way for the same without interfering with the cleaning or 40 scraping edge of the device, and the looped forward end 26' thereof extends through a sleeve 30 secured in the outer wall of the elbow 2. It is obvious that by pulling upon one side of the looped end 26' the disk or 45 cleaning member may be drawn forwardly, scraping the soot into the vertical portion of the pipe where it will descend into the stove from whence it may be readily removed. By 50 pulling up on the other side of the looped end the disk will be drawn backwardly to the rear end of the frame and the back of the flue as shown in Fig. 2, the position there shown being the normal position of the disk 55 in order that it will not interfere with the draft. It should be understood that the pulley supporting bracket 29 may be secured to the transverse member 9 by the rivet 11, said bracket being formed of a single strip 60 of metal comprising the parallel arms 31 connected by the transverse base member 32.

The device is intended for use in cleaning the stove pipe before a fire is made, however it may be desirable at times to use the device 65 while a fire is in the stove. In order to avoid

the escape of gases while operating the device at such times, I provide a modified form of disk as shown in Fig. 5. In this form of the device the construction is substantially the same with the exception that the several 70 disks are each of skeleton form providing a plurality of apertures 33 through which the gases or smoke may freely pass while the disk is within the pipe.

Having described my invention what I 75 claim as new and desire to secure by Letters Patent is:

1. In a device of the class described a frame adapted to be arranged within a stove pipe and comprising a plurality of longitudinal metal members and a plurality of transverse members connecting the same, a cleaning member slidably mounted on said frame said longitudinal members constituting tracks for said cleaning member and 85 means for actuating said cleaning member.

2. In a device of the class described a frame adapted to be arranged within a stove pipe and comprising a plurality of longitudinal metal strips, means connecting said 90 strips at one end a spring member connecting said strips adjacent the opposite end and adapted to clamp said frame within the pipe, a cleaning member slidably mounted on said frame and means for actuating said 95 cleaning member.

3. In a device of the class described a cleaning disk comprising a pair of metal disks secured together and an asbestos disk secured between them, the periphery of said 100 asbestos disk forming an extension beyond the peripheries of said metal disks and guides for said cleaning disk, said extension being notched to receive said guides, substantially as described. 105

4. In a device of the class described a cleaning disk comprising a pair of metal disks and an asbestos disk secured between them, a tubular member secured in said cleaning disk and extending forwardly a 110 considerable distance from the front face thereof, and brace members extending from the forward end of said tubular member and secured to said cleaning disk adjacent the periphery thereof, substantially as described. 115

5. A stove pipe cleaning disk comprising a pair of metal disks of less diameter than that of the pipe to be cleaned, and an asbestos disk of greater diameter clamped between the same, said disks being of skeleton 120 form providing a plurality of apertures forming passage ways for the gas, substantially as described.

In testimony whereof I have signed my name to this specification in the presence of 125 two subscribing witnesses.

CARL T. HARMS.

Witnesses:

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F. L. MERRITT.