

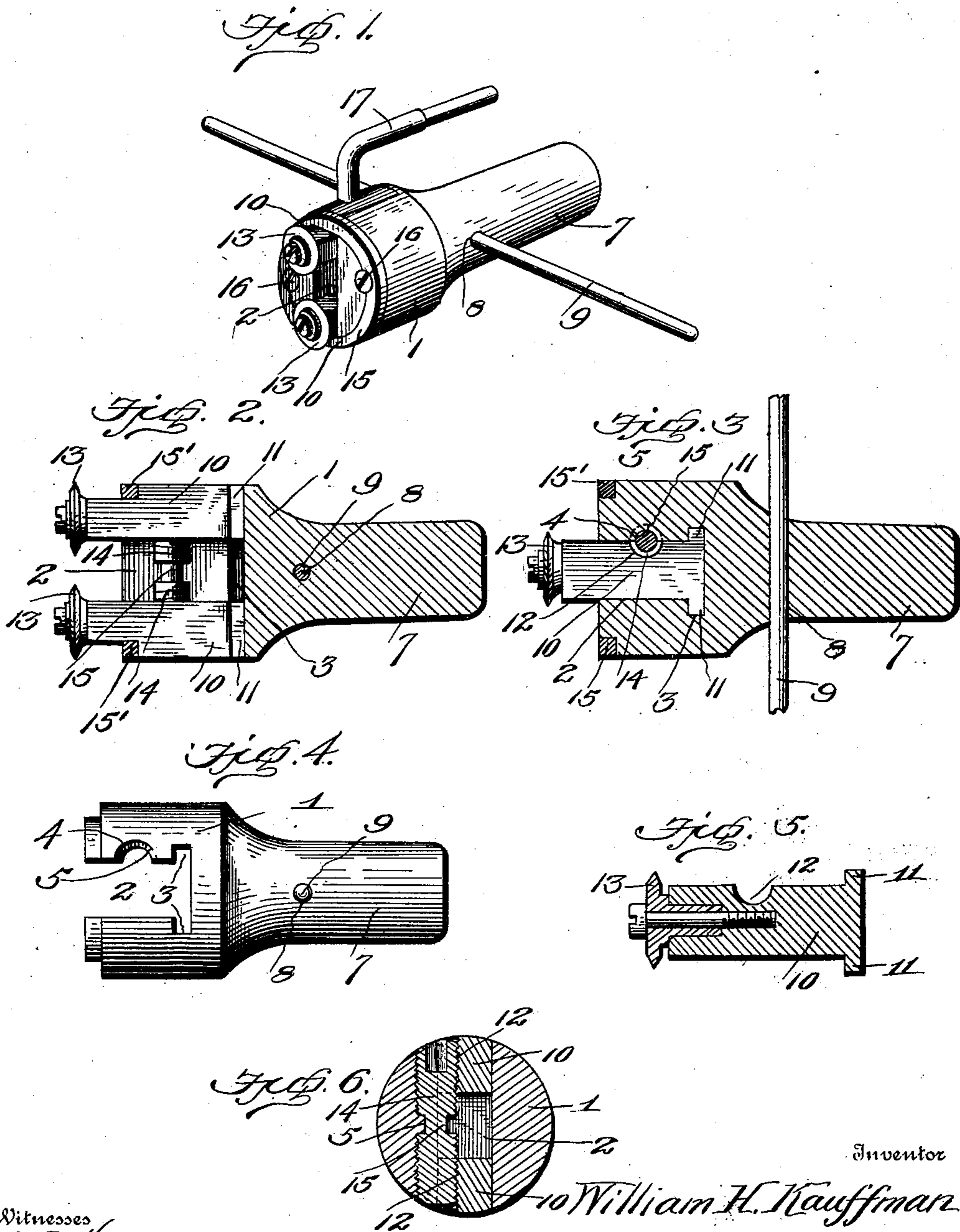
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Patented Nov. 11, 1902.

W. H. KAUFFMAN.
ADJUSTABLE FLUE CUTTER.

(Application filed Mar. 6, 1902.)

(No Model.)



Witnesses
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UNITED STATES PATENT OFFICE.

WILLIAM H. KAUFFMAN, OF ERIE, KANSAS.

ADJUSTABLE FLUE-CUTTER.

SPECIFICATION forming part of Letters Patent No. 713,108, dated November 11, 1902.

Application filed March 6, 1902. Serial No. 96,996. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM H. KAUFFMAN, a citizen of the United States, residing at Erie, in the county of Neosho and State of Kansas, have invented certain new and useful Improvements in Adjustable Flue-Cutters; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

The invention relates to adjustable flue-cutters, and is primarily designed for cutting out the flues of boilers.

The object of the invention is to provide a flue-cutter of this character which shall be simple of construction, durable in use, comparatively inexpensive of production, and which will have a wide range of adjustment to cut flues of different diameters.

With these and other objects in view the invention consists in certain novel features of construction, combination, and arrangement of parts, which will be hereinafter more fully set forth, and particularly defined in the appended claims.

In the accompanying drawings, Figure 1 is a perspective view of my improved flue-cutter. Fig. 2 is a longitudinal vertical sectional view. Fig. 3 is a longitudinal transverse view. Fig. 4 is a side elevation of the cutter-head with the jaws, cutters, and screw removed. Fig. 5 is a longitudinal sectional view through one of the jaws and cutter-disks, and Fig. 6 is a cross-sectional view on the line of the adjusting-screw.

In the drawings, 1 denotes the cutter-head, which is provided with a transverse opening 2, the base of which is provided with a communicating guideway 3, and one of the side walls of which is provided with a transverse semicircular recess 4, having a semicircular rib or projection 5. The outer end of the cutter-head is turned to form a shoulder 6 of less diameter than the body portion of the cutter-head, and the neck 7 of the cutter-head is provided with a transverse hole 8, through which is adapted to be inserted the rod or bar 9 for rotating the cutter-head.

10 denotes jaws mounted to slide transversely upon and provided with guide-flanges

11, adapted to slide in the guideways 3, and formed on their sides which face the recess 4 with screw-threaded recesses 12, the threads of one recess being cut right hand and those of the other recess cut left hand. These jaws carry at their lower ends rotary cutter-disks 13, which may be of any well-known or approved construction and which may be connected to the lower ends of said jaws in any desired manner.

14 denotes a right and left hand screw having a smooth unthreaded portion 15, which is adapted to coact with the semicircular rib 5 and prevent endwise movement of the screw. Said screw is adapted to fit within the semicircular recess and to engage the right and left hand threads of the jaws to move them simultaneously in opposite directions toward and from each other to adjust the cutter-disks to the parts being acted upon.

15' denotes a collar secured by screws 16 to the shoulder 6 and serves to limit the outward movement of the jaws.

17 denotes a wrench having a square end which is adapted to fit into a square socket formed in the screw and by means of which said screw may be rotated.

From the foregoing description, taken in connection with the accompanying drawings, the construction, operation, and advantages of my invention will be readily apparent, it is thought, without requiring a more extended explanation.

Various 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 my invention.

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

1. In an adjustable flue-cutter, the combination with the cutter-head provided with a transverse opening and with communicating guideways and a communicating recess, of cutter-carrying jaws mounted in said opening and engaging said guideways and formed on their sides which face the semicircular recess with semicircular recesses provided with right and left hand screw-threads, and a right and left hand screw journaled against

endwise movement in the recess of the cutter-head and engaging the right and left hand threads of the jaws, substantially as set forth.

2. In an adjustable flue-cutter, the combination with the cutter-head provided with a transverse opening and with communicating guideways and a communicating recess, of cutter-carrying jaws mounted in said opening and engaging said guideways and formed on their sides which face the semicircular recess with semicircular recesses provided with right and left hand screw-threads, a right and left hand screw journaled against endwise

movement in the recess of the cutter-head and engaging the right and left hand threads of the jaws, and a ring secured upon the end of the cutter-head to limit the movement of the cutter-head, substantially as set forth.

In testimony whereof I have hereunto set my hand in presence of two subscribing witnesses.

WILLIAM H. KAUFFMAN.

Witnesses:

JOHN GREGG,
J. O. COLLINS.