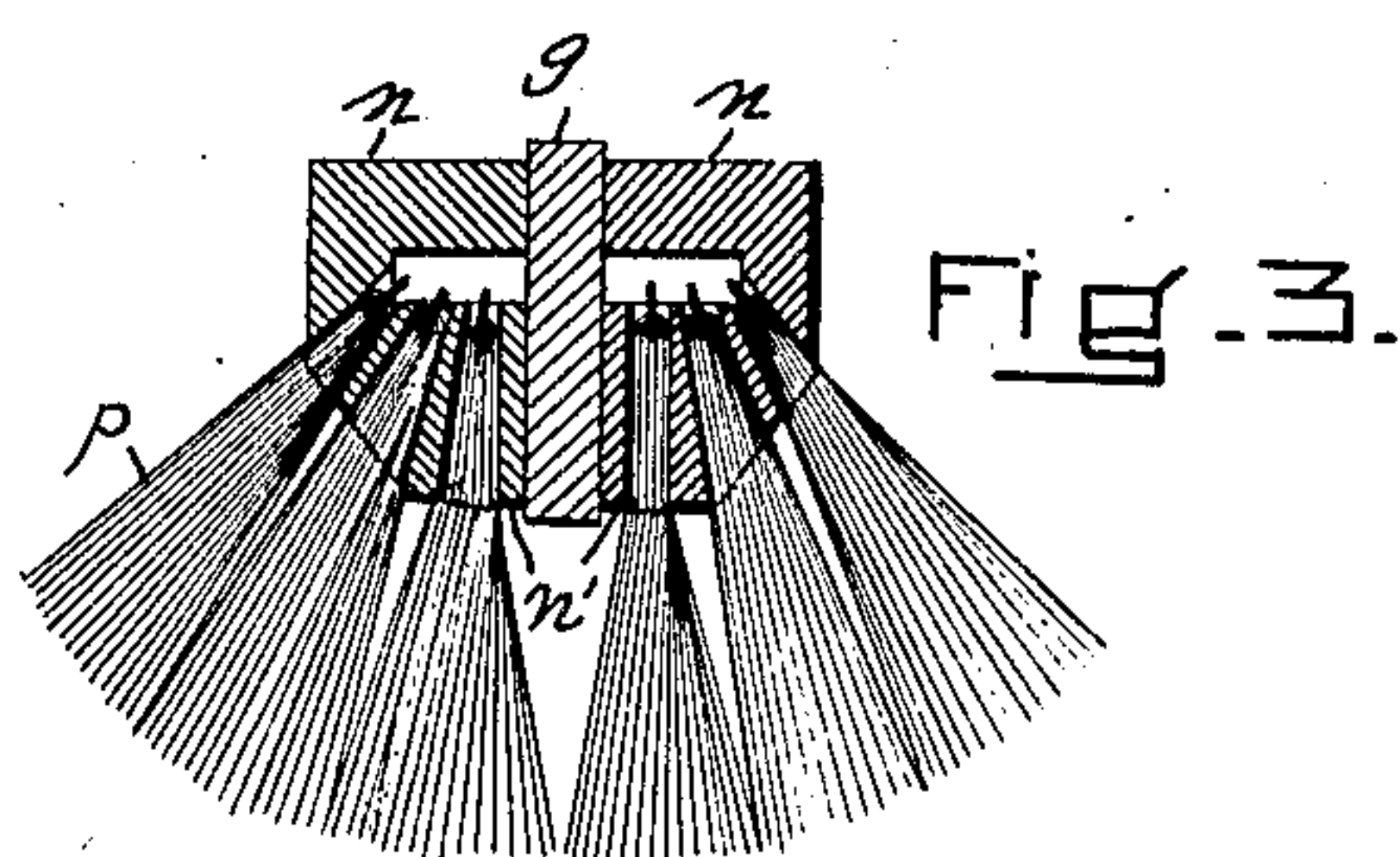
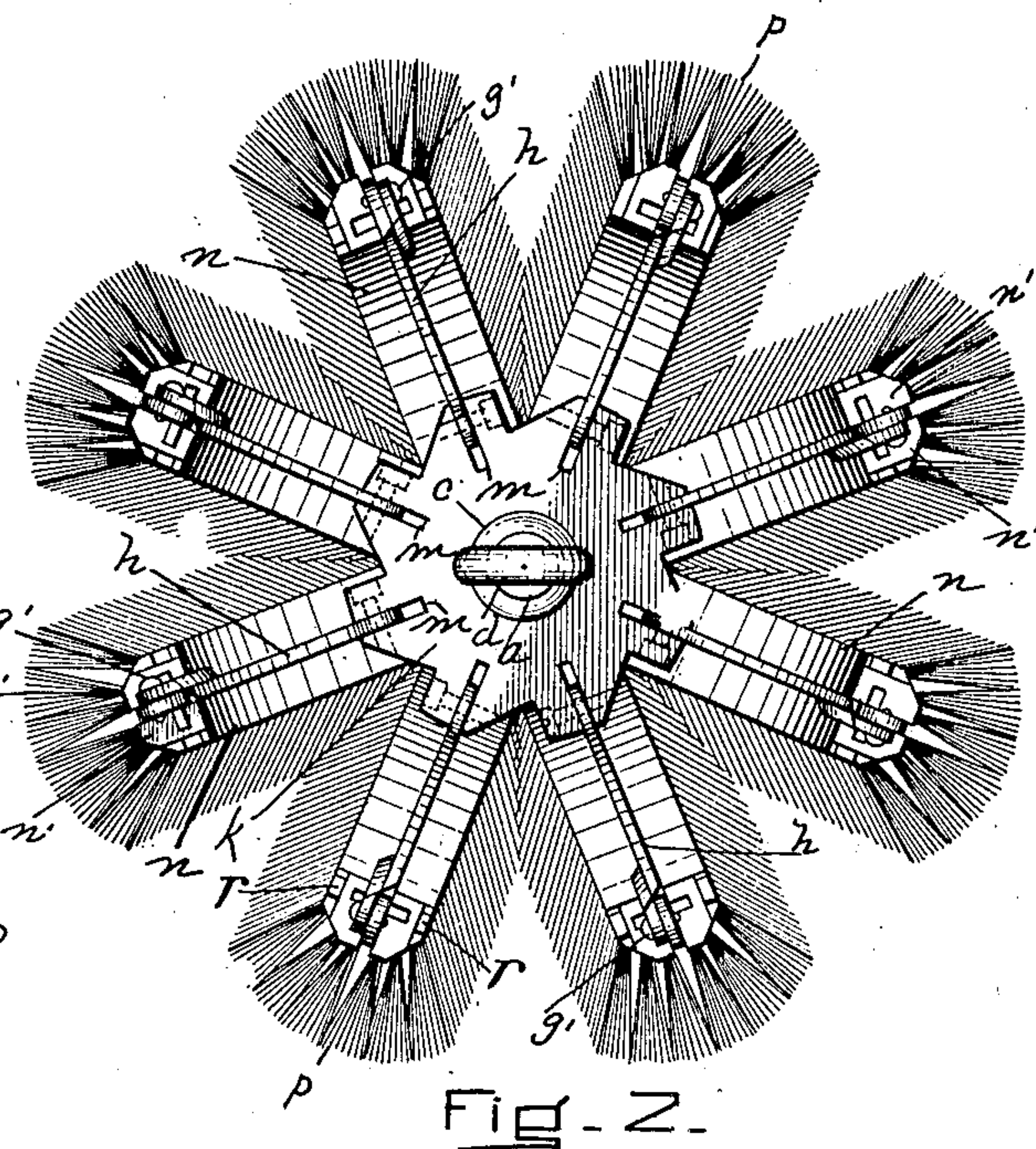
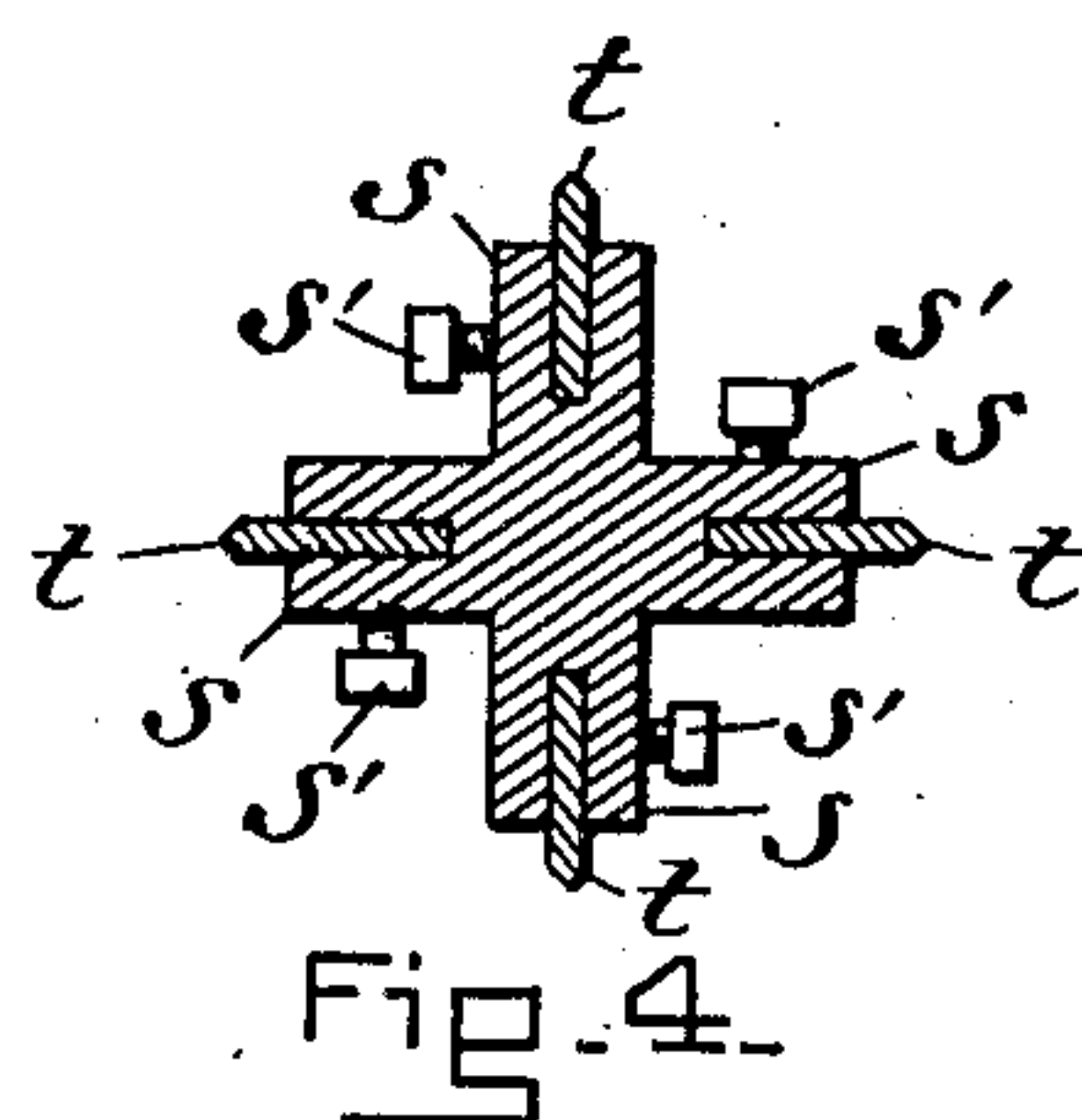
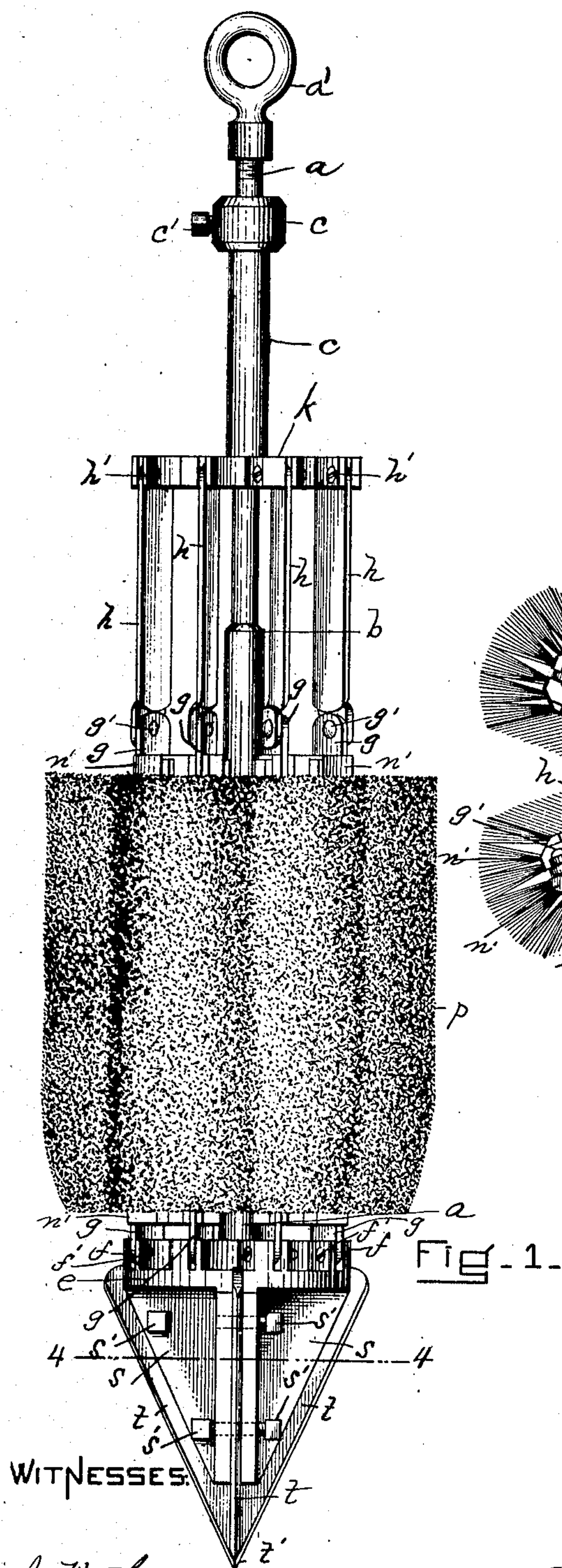


No. 872,080.

PATENTED NOV. 26, 1907.

W. H. PERRY.  
CHIMNEY FLUE CLEANER.  
APPLICATION FILED JAN. 28, 1907.



WITNESSES:

A. R. Hood  
Frank B. Parker.

INVENTOR:  
William H. Perry.  
By his Atty.  
Henry Williams



# UNITED STATES PATENT OFFICE.

WILLIAM H. PERRY, OF CONCORD, NEW HAMPSHIRE.

## CHIMNEY-FLUE CLEANER.

No. 872,080.

Specification of Letters Patent.

Patented Nov. 26, 1907.

Application filed January 28, 1907. Serial No. 354,491.

*To all whom it may concern:*

Be it known that I, WILLIAM H. PERRY, a citizen of the United States, residing in Concord, in the county of Merrimack and State of New Hampshire, have invented a new and useful Improvement in Chimney-Flue Cleaners, of which the following is a specification.

This invention relates to an improved chimney-flue cleaner, adapted to be inserted from the upper end of the chimney; and it relates more particularly to the means whereby it is rendered expansible and contractible in order that it may be applicable to chimneys and chimney-flues of different sizes, and to a peculiar construction whereby when it is dropped into a chimney it penetrates any mass or substance which has collected in the chimney and closed or partially closed the flue.

The nature of the invention is fully described in detail below, and illustrated in the accompanying drawings, in which:—

Figure 1 is an elevation of my improved chimney-flue cleaner with its parts in a closed position, Fig. 2 is a plan view with the parts in an opened position. Fig. 3 is an enlarged detail in cross vertical section of one of the radial brushes. Fig. 4 is a horizontal section taken on line 4—4, Fig. 1.

Similar letters of reference indicate corresponding parts.

*a* represents a vertical rod preferably enlarged at its lower portion whereby an annular shoulder *b* is produced. The upper portion of this rod is provided with a sleeve *c* which is held adjustably as to height by a setscrew *c'* which extends through the enlarged upper portion of the sleeve. The extreme upper end of the rod has screwed to it an eye *d* whereby the device may be suspended by a rope. The lower end of the rod *a* is rigid with a plate *e*, circular, or approximately so, and provided next its periphery with pairs of upwardly extending ears *f*. The ears constituting each pair have pivotally secured to and between them at *f'* the lower end of a flat bar *g* whose upper end is pivotally connected at *g'* with a bar *h*, said bars *g* and *h* constituting a jointed lever. A disk-shaped plate *k* is rigid on the lower end of the sleeve *c* and is adapted when the setscrew *c'* is loosened to slide with said sleeve down on the rod *a* as far as the shoulder *b*, said plate *k* being provided with peripheral and substantially radial slots *m* in which the upper ends of the levers *g h* are pivotally se-

cured at *h'*. The member *g* of the lever *g h* is flanked, as shown in Fig. 3, by two parallel portions which constitute a hollow brush-back, said portions consisting of the flat rear portion *n* and the portion *n'* which receives rows *p* of bristles, preferably made of wire, said rows being arranged substantially radially. The brush-back is secured to the opposite sides of the flat bar *g* in any suitable manner, preferably by bolts *r*, see Fig. 2. Thus the brush-backs are arranged on substantially radial planes, and the bristles are on lines which spread from the backs, so that when the cleaner is closed, as in Fig. 1, the bristles entirely surround the rod and operating mechanism.

The lower plate or disk *e* constitutes the circular base of a downwardly extending conical plunger comprising said disk *e* and four radial wings *s* each of which is provided with a vertical and radial slot into which is bolted at *s'* a plunging knife *t*, said knives projecting beyond the outer edges of the wings *s* and their edges being sharpened and parallel with said outer edges. The outer edges of these knives therefore extend below the wings *s* and converge at *t'*, whereby the structure which consists of the parts *e*, *s* and *t* produces a cone-shaped plunger with radially extending knives coming to a point at their advancing ends.

In operation, the brush-holder is expanded from its closed position indicated in Fig. 1 to an open position such as is indicated in Fig. 2, the degree to which it is expanded being regulated by the flue into which it is to be inserted, and the limit of expansion being controlled by the shoulder *b*. After it has been properly expanded, the stop *c* may be set against the upper disk *k* and the device with a rope tied to its upper end at *d* is dropped into the chimney-flue from the upper end. In case obstructions are met with, even if they wholly close the flue, the plunger with its radial and pointed knives quickly penetrates them and clears a space for the brushes behind it. The fact that the device is necessarily somewhat heavy, being made of iron, causes its fall to be sufficiently powerful for the conical end to penetrate any mass of soot which may be found in chimney-flues.

In constructing these devices variations in the size and length of the levers and in the radial or approximately radial positions of the slots *m* and ears *f* may be produced in



order to render the shape of the brush when expanded to conform approximately to the shape and size of the flue in connection with which it is to be used.

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

1. An expansible chimney-flue cleaner  
10 comprising a rod, a lower disk rigid on said rod, an upper disk adapted to slide on said rod, a series of jointed levers arranged around the rod and each pivotally connected at its opposite ends to the upper and lower disks,  
15 a series of hollow brush-hacks each consisting of two parts bolted to the opposite sides of the lower member or bar of a jointed lever, and radially disposed bristles secured to the outer wall of each brush-back, for the purpose set forth.

2. In an expansible chimney-flue cleaner, 20 a rod, expansible mechanism surrounding said rod, brushes supported by said mechanism, a reversed cone-shaped plunger extending from the lower end of the rod and comprising a base and a plurality of substantially 25 radial wings, and knives or cutters supported by said wings and corresponding substantially in shape thereto with their lower ends meeting at a central point below the plunger, substantially as and for the purpose set 30 forth.

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

WILLIAM H. PERRY.

Witnesses:

DANIEL F. DUDLY.  
ARCHER F. LOWE.