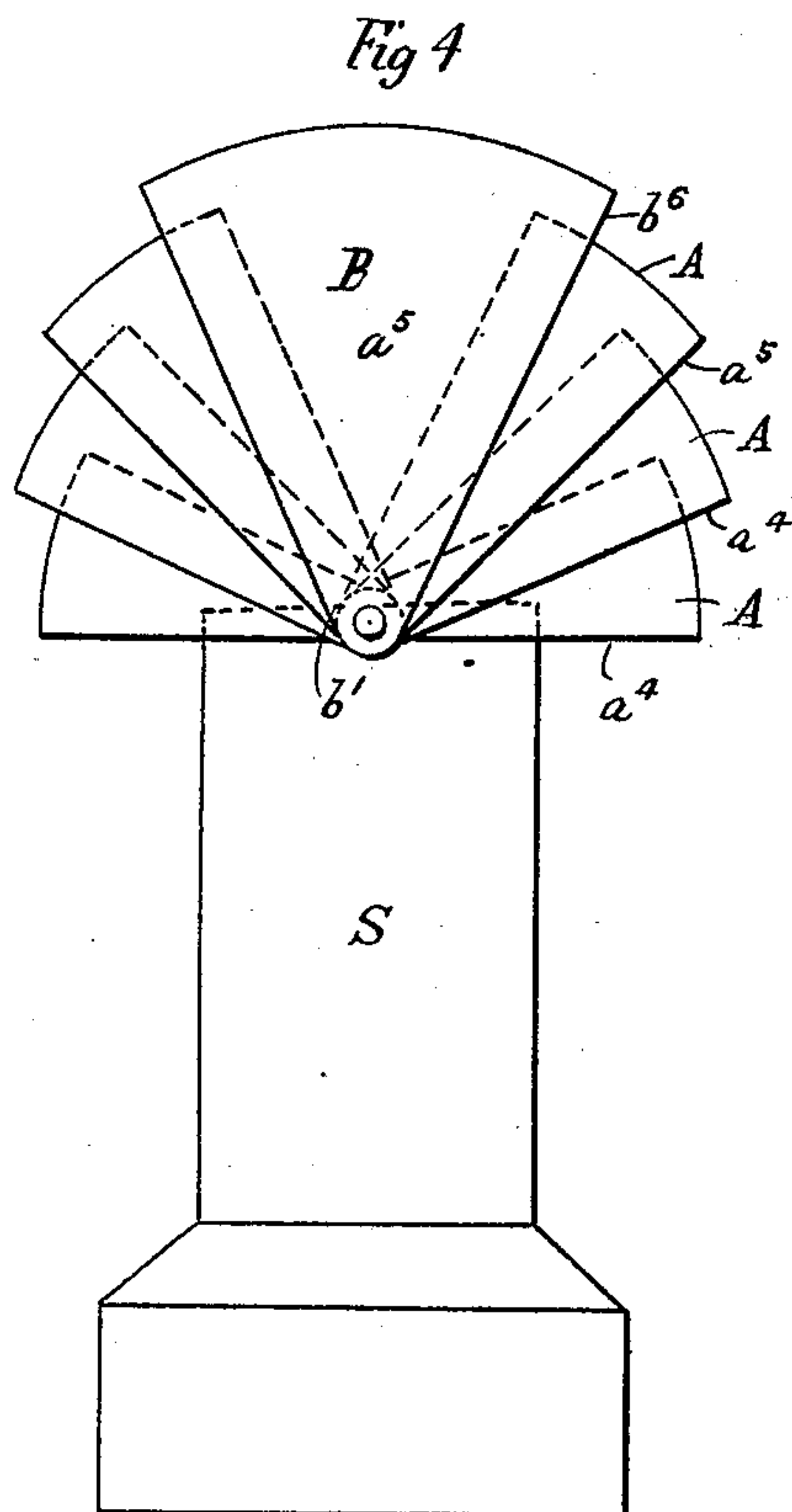
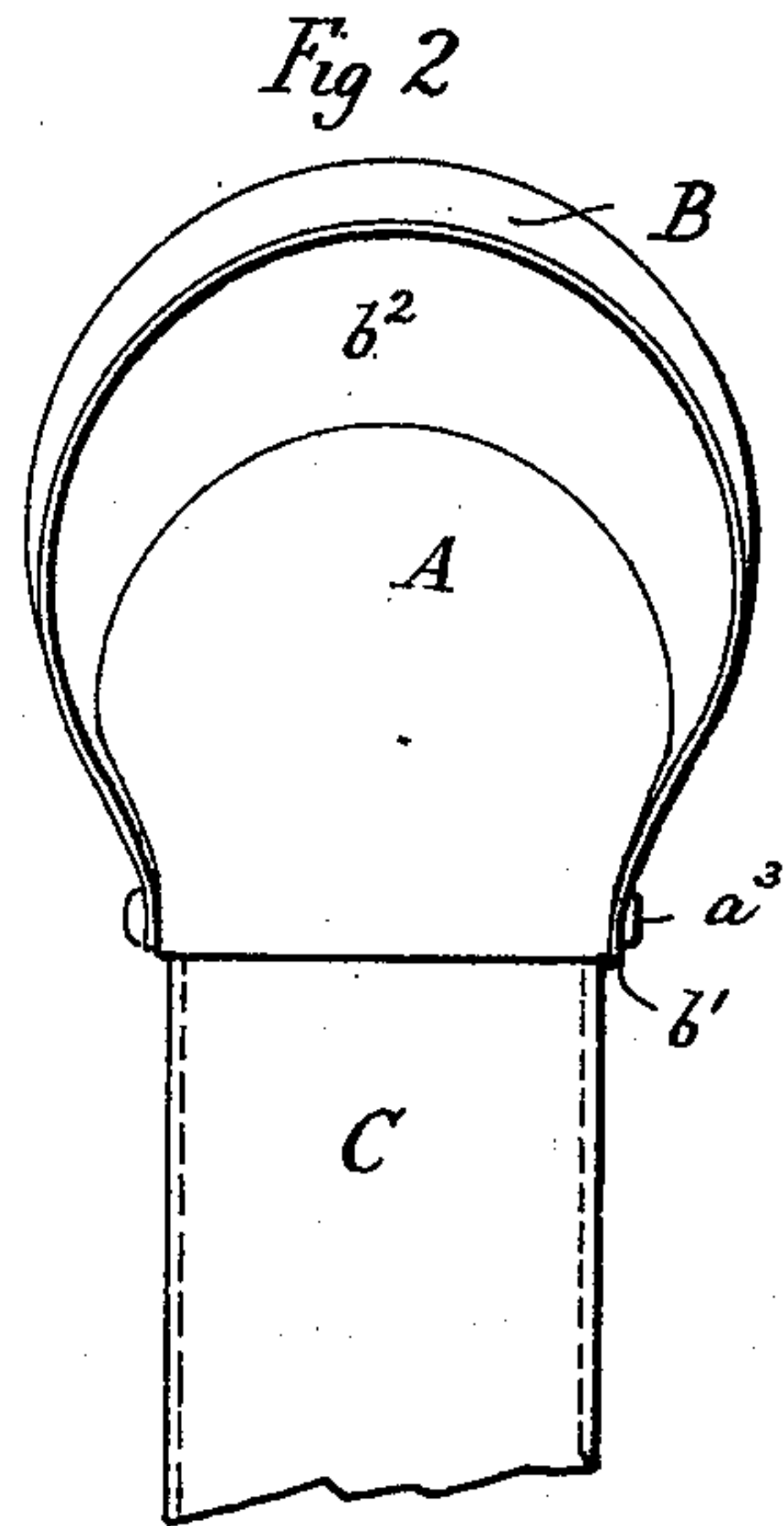
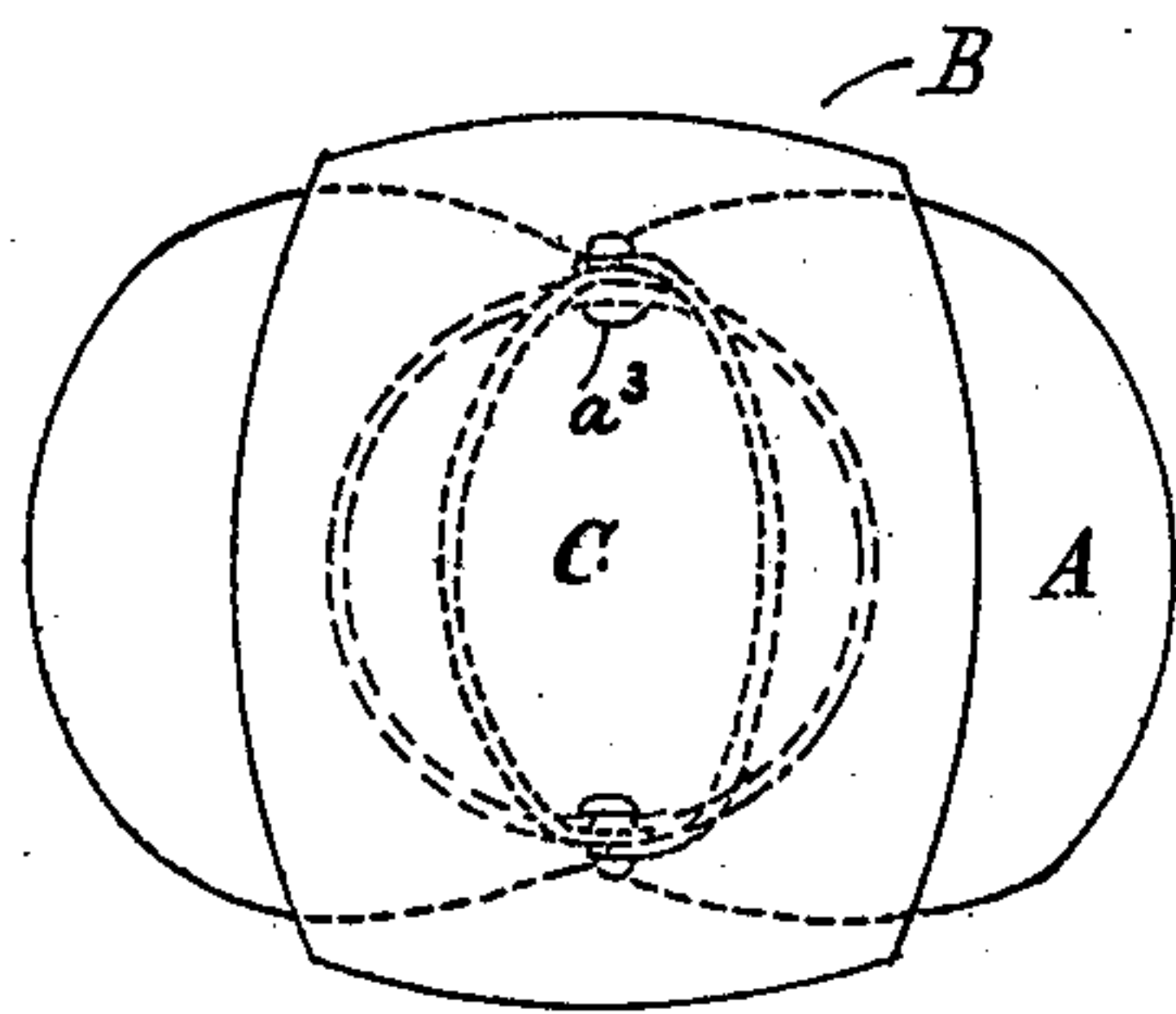
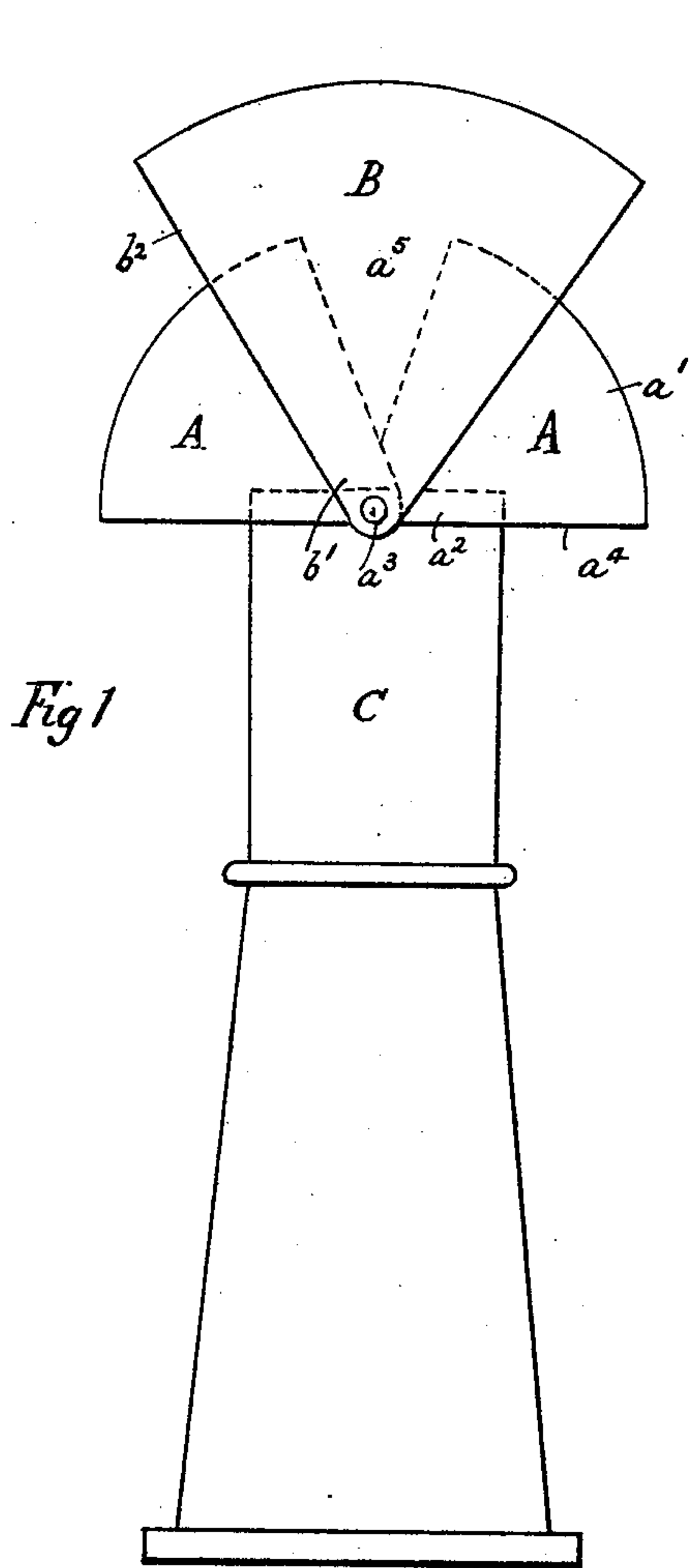


(No Model.)

G. COOPER.  
VENTILATOR AND CHIMNEY TOP.

No. 538,366.

Patented Apr. 30, 1895.



Witnesses,  
James Esch Blackburn.  
Sumner S. S. S.

Inventor  
George Cooper  
per Henry Francis Brighton  
Attorneys

# UNITED STATES PATENT OFFICE.

GEORGE COOPER, OF SHEFFIELD, ENGLAND.

## VENTILATOR AND CHIMNEY-TOP.

SPECIFICATION forming part of Letters Patent No. 538,366, dated April 30, 1895.

Application filed August 8, 1893. Serial No. 482,653. (No model.) Patented in England April 4, 1893, No. 6,915.

*To all whom it may concern:*

Be it known that I, GEORGE COOPER, a subject of the Queen of Great Britain, and a resident of The Wicker, Sheffield, in the county of York, England, have invented certain new and useful Improvements in Ventilators and Chimney-Tops, (for which I have obtained a patent in Great Britain, No. 6,915, dated April 4, 1893,) of which the following is a full, clear, and exact specification thereof.

My invention relates to improvements in ventilators and chimney tops, and the objects of my improvements are, first, to lift a volume of air from a confined space by the action of the wind, and, second, to prevent the wind blowing down the chimney or ventilating shaft, or any back current or air; to attain which I apply to the top of a chimney or ventilating shaft, two or more curved wings which are bent over in the form of oblique shields leaving an opening at their lower edges, and a space between each shield at the upper parts, and over the space between the two upper shields I place a further curved shield whose sides extend either in a vertical or slanting direction. Each of said curved shields is wider at its center than at its ends, and the ends of all the shields are swiveled or riveted to the chimney shaft.

In order to make my invention better understood and so that it may be readily carried into effect I will proceed to describe the same by reference to the accompanying sheet of drawings, in which—

Figure 1 is a side elevation of my improvements applied to the top of a chimney, and Fig. 2 is an elevation taken at right angles to Fig. 1, and Fig. 3 is a plan of same. Fig. 4 is a side elevation of a modification of my said invention applied to a ventilating shaft top.

Similar letters of reference denote corresponding parts in each view.

Referring to Figs. 1, 2 and 3 I employ three curved shields marked A and B. The two shields A are wider at  $a'$  than at  $a^2$ , and they are bent to the curved shape shown and are preferably riveted at their ends at  $a^3$  to the chimney shaft C by rivets  $a^3$ . A suitable opening is left at  $a^4$  at the lower part of each shield A, and a space  $a^5$  is left between the upper edges of the said shields A, above or over which the shield B is arranged, (which corresponds in curved form to the shields A)

and its ends  $b'$  are riveted by the rivets  $a^3$  to the chimney or shaft C, and it is arranged so as to leave suitable spaces  $b^2$  at each end. Where preferred instead of rivets  $a^3$  being used suitable pins may be employed upon which the shields A and B may swivel so as to be placed in any required radial position over the shaft or chimney C. The wind blowing against the shields A and B in any direction is found to accelerate the draft up the chimney-top or shaft C, and no matter in which way the wind impinges upon the shields a down draft is impossible.

Referring to Fig. 4 I fix to the top of the ventilating shaft S, six curved shields A, and one shield B, as shown, so arranged as to cover up the top of the shaft S in a radial fashion having spaces marked  $a^4$ ,  $a^5$  and  $b^6$ .

It will be obvious that the arrangement shown at Fig. 4 could be applied to a chimney top, or the arrangement shown at Figs. 1, 2 and 3 could be applied to a ventilating shaft. I do not however limit my invention to any special number of shields A or B although I prefer in the case of a chimney top to have two shields A, and in the case of a ventilating shaft top to have six shields A.

I am aware that prior to my invention ventilators and chimney tops have been arranged with a single shield of parallel width extending over the open top, and also that a double cone shaped drum has been placed in horizontal position under such a parallel shield having suitable spaces between. I therefore do not claim the use of a shield B *per se* or the combination of a shield B and a cone shaped drum; but

What I do claim as my invention, and desire to secure by Letters Patent, is—

A chimney cap consisting of a number of metal plates, wider in the middle than at the end, bent to form curved shields, arranged in an overlapping series, and adjustably mounted on a common pivot passing through their ends.

In witness whereof I have hereunto signed my name in the presence of two subscribing witnesses.

GEORGE COOPER.

Witnesses:

TOM FOSTER,  
18 Trinity Street, Sheffield.

ALFRED HENRY JACKSON,  
89 Bressingham Road, Sheffield.