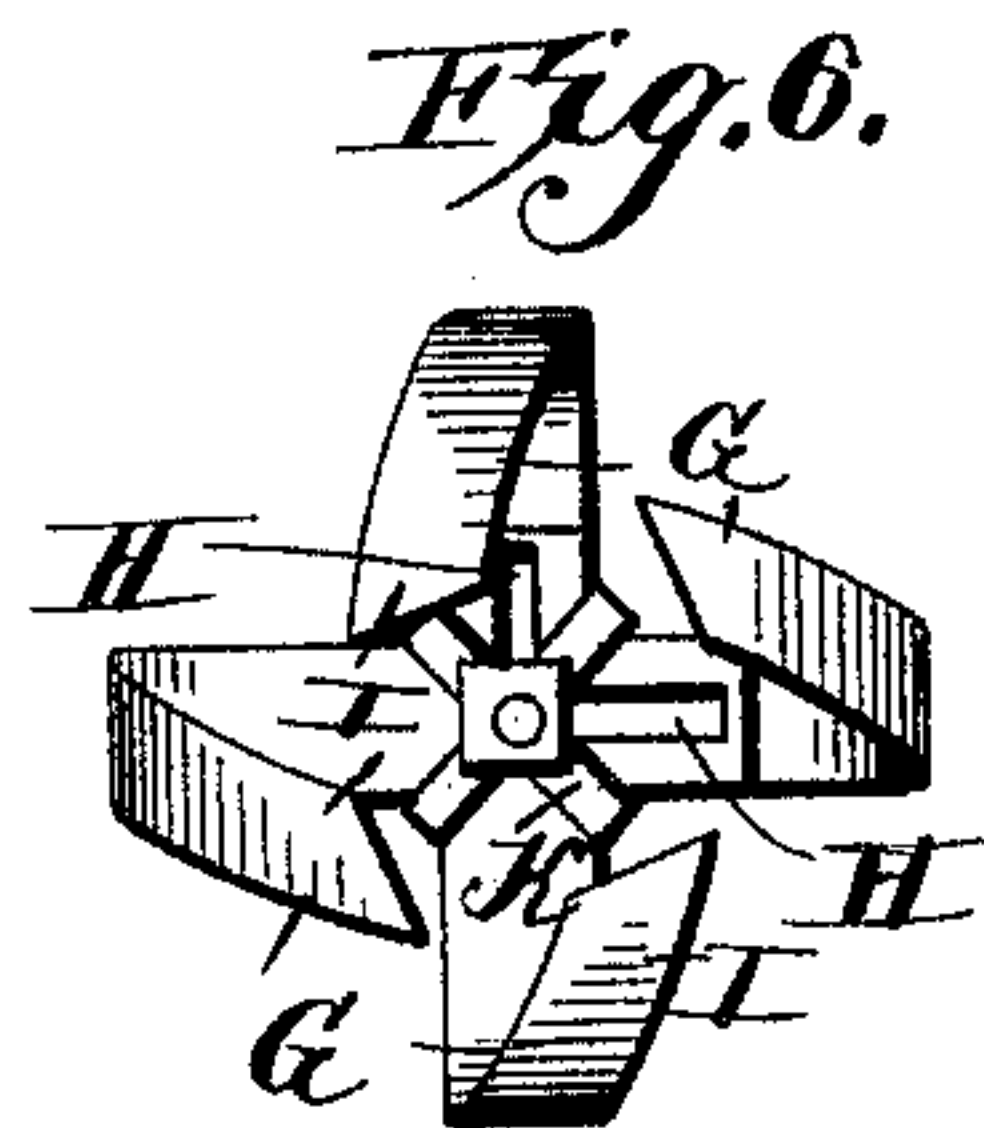
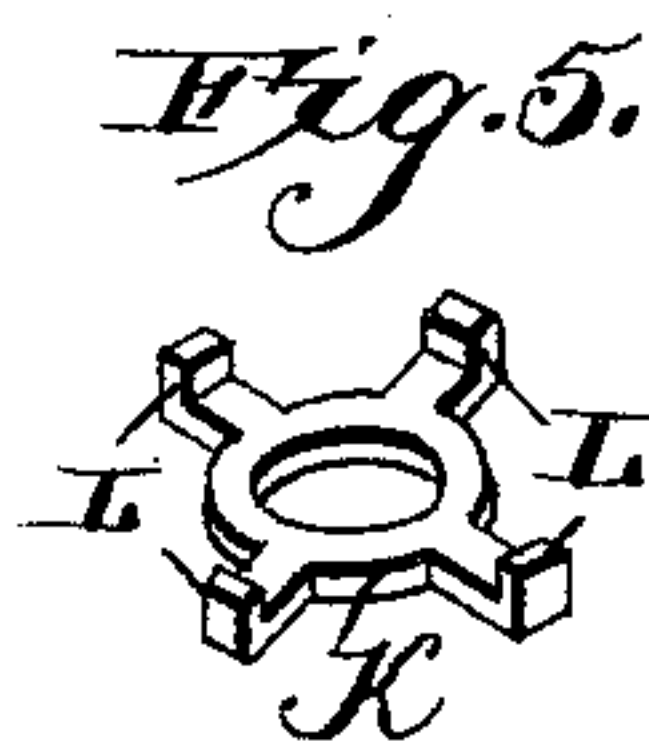
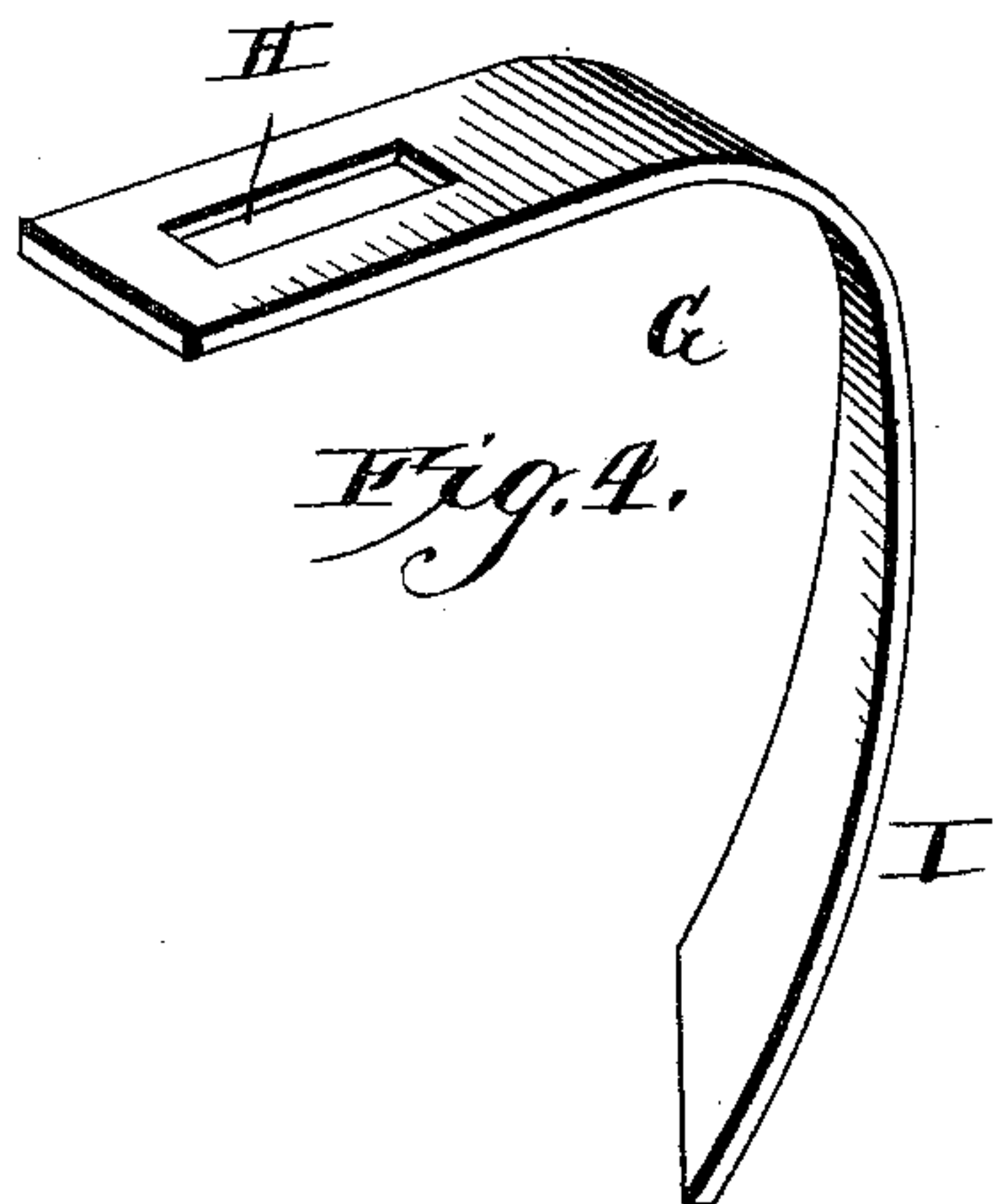
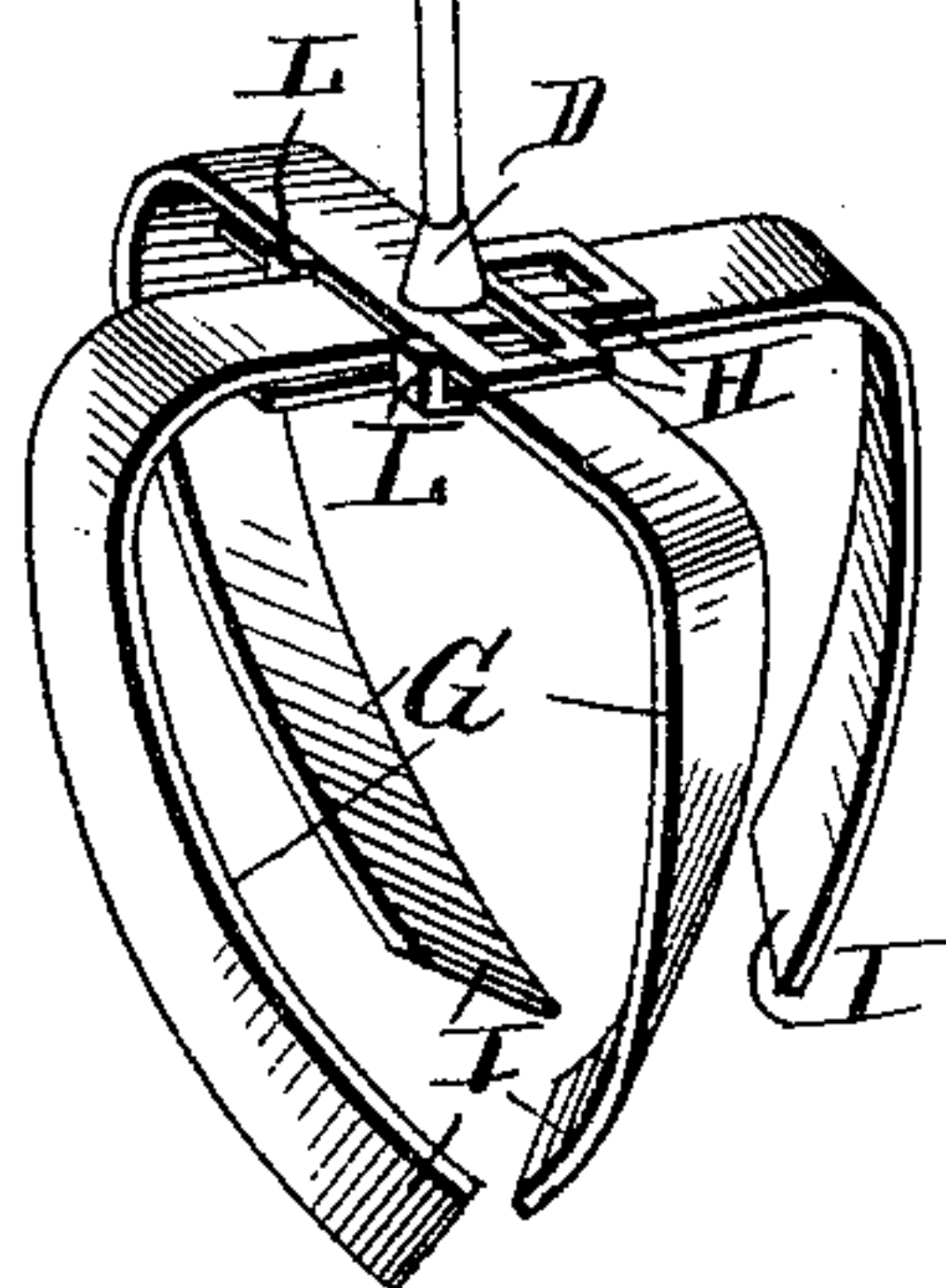
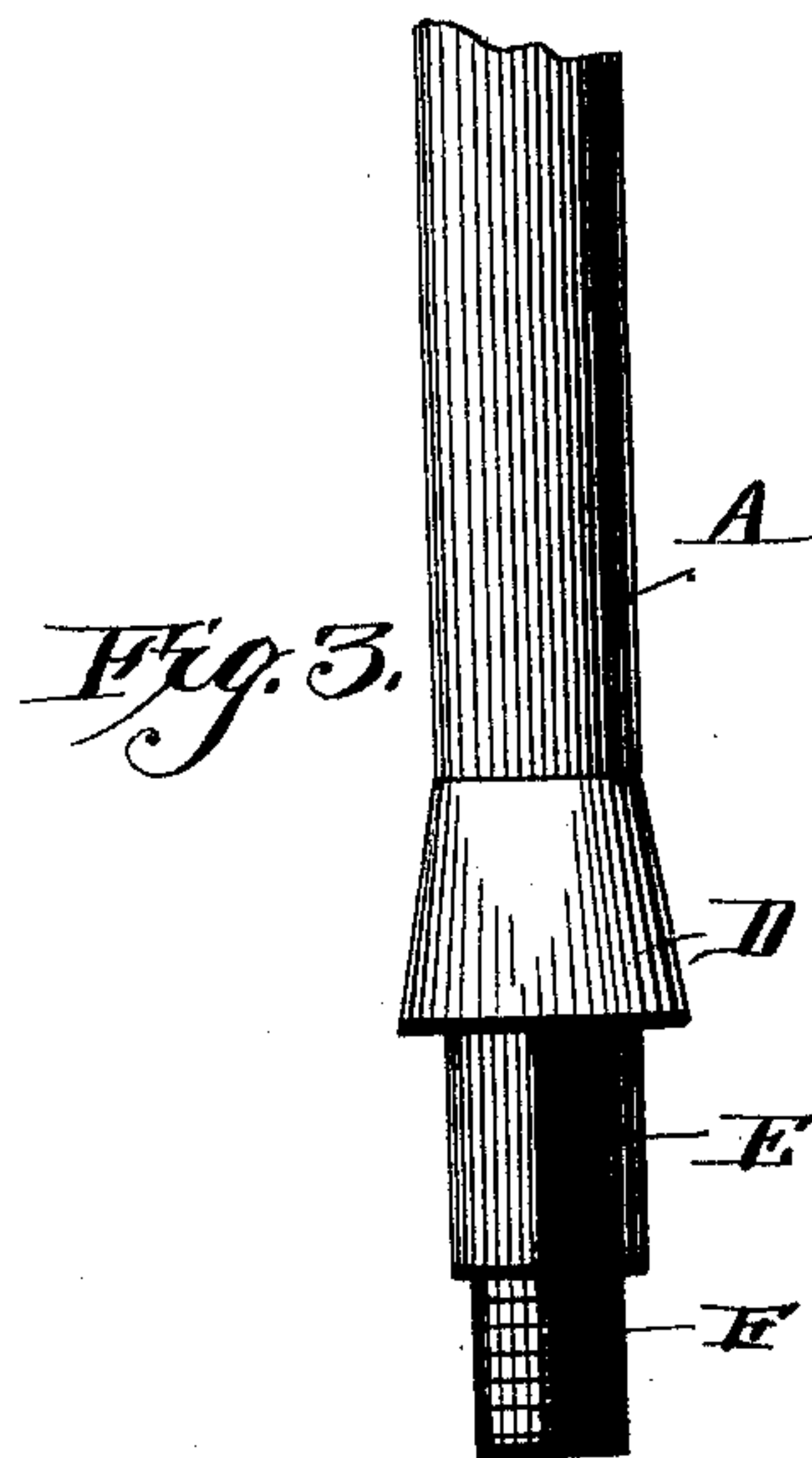
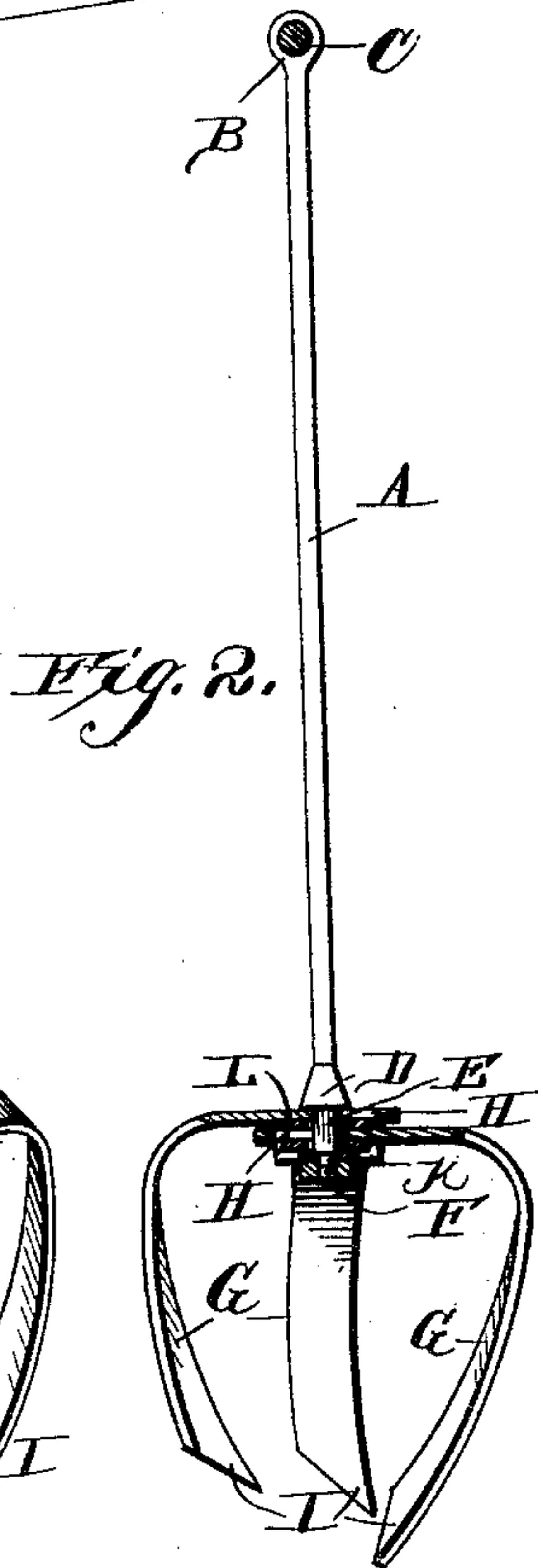
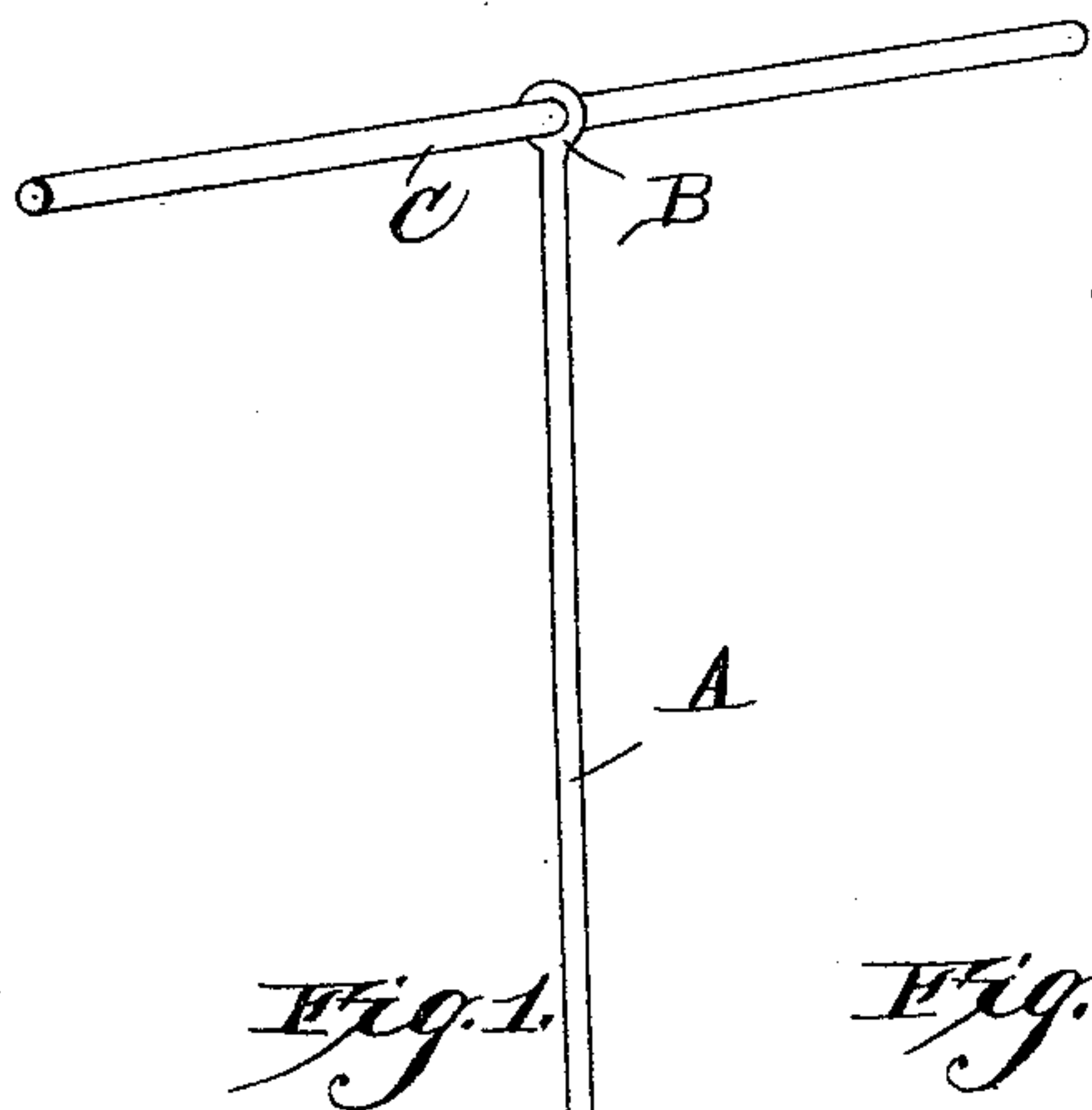


(No Model.)

J. C. DUCLOS.  
POST HOLE DIGGER.

No. 410,640.

Patented Sept. 10, 1889.



Witnesses

Henry G. Dietrich  
Wm. Baggett

By his Attorneys

Chas. Snow

Inventor,  
John C. Duclos,

# UNITED STATES PATENT OFFICE

JOHN C. DUCLOS, OF CREIGHTON, MISSOURI, ASSIGNOR OF ONE-HALF TO  
RICHARD E. WELDON, OF SAME PLACE.

## POST-HOLE DIGGER.

SPECIFICATION forming part of Letters Patent No. 410,640, dated September 10, 1889.

Application filed May 18, 1889. Serial No. 311,217. (No model.)

*To all whom it may concern:*

Be it known that I, JOHN C. DUCLOS, a citizen of the United States, residing at Creighton, in the county of Cass and State of Missouri, have invented a new and useful Post-Hole Auger, of which the following is a specification.

This invention relates to post-hole augers; and it has for its object to provide a device of this class in which the blades may be conveniently adjusted so as to form a hole of any desired diameter and by the use of which post-holes may be formed rapidly and without much expenditure of power.

With these ends in view the invention consists in the improved construction and combination of parts, which will be hereinafter fully described, and particularly pointed out in the claims.

In the drawings hereto annexed, Figure 1 is a perspective view of a post-hole auger embodying my improvements. Fig. 2 is a vertical section of the same. Fig. 3 is a side view of the handle with the blades detached. Fig. 4 is a detail perspective view of one of the blades. Fig. 5 is a detail view of the washer used to separate the blades from each other, and Fig. 6 is a bottom view.

The same letters refer to the same parts in all the figures.

A designates the handle or stock of my improved post-hole auger, which is provided at its upper end with a horizontal eye B, forming a socket in which the lever or handle C may be mounted detachably. The stock A is provided near its lower end with an annular flange D, below which a squared portion E is formed, which terminates at its lower end in a screw-threaded extremity F.

G G designate a series of blades having outwardly-extending horizontal upper ends, which are provided with longitudinal slots H and downwardly-curved outer portions provided with inwardly-curved ends I, which form the cutting-blades, and the front edges of which are sharpened so as to cut readily into the ground. The sections I I of the blades may be curved spirally so as to cut into the ground in the manner of an auger. The cutting-blades are four in number, and they are so set or adjusted with relation to the

stock that each shall be slightly in advance of the one next preceding it, with the exception, of course, of the first blade, which is closer to the central stock than the remaining blades. In other words, the radius of the circle which in operation is described by the second blade is slightly greater than that of the first, while that of the third is larger than that of the second, and so on. By this arrangement of the cutting-blades the operation will be rendered more effective, while no force is expended unnecessarily.

K designates a washer which is adjusted upon the lower end of the stock below the cutting-blades, and which is provided with a series of upwardly-extending lugs or studs L L, adapted to fit between the adjacent edges of the blades, which are thereby spaced and prevented from being forced together while in operation.

Upon the screw-threaded extremity at the lower end of the central stock is placed a nut N, by means of which the washer K and the cutting-blades may be tightened against the annular flange D and thus be secured firmly in position for operation.

Instead of the nut at the lower end of the stock, the latter may be provided with a transverse slot adapted to receive a wedge-shaped key, by means of which the washer and the cutting-blades will be held securely in position.

Other changes and modifications of a like nature may be made without departing from the spirit of my invention.

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

1. In a post-hole auger, the combination of the central stock having a squared lower end, the cutting-blades having longitudinal slots in their upper horizontal portions, a spacing-washer having upwardly-extending lugs or studs adapted to be fitted between the adjacent edges of said cutting-blades, and a nut for securing said washer and cutting-blades in position upon the stock, substantially as and for the purpose set forth.

2. In a post-hole auger, the combination of the central stock having an annular flange and a squared section below said flange, the



blades or cutters having longitudinally-slotted  
horizontal upper portions and downwardly-  
extending spirally-curved outer portions pro-  
vided with inwardly-curved ends, the washer  
5 having upwardly-extending lugs or studs, and  
a nut or key for securing the said washer and  
cutting-blades upon the lower end of the  
stock, substantially as set forth.

In testimony that I claim the foregoing as  
my own I have hereto affixed my signature in 10  
presence of two witnesses.

JOHN C. DUCLOS.

Witnesses:

D. B. WALLIS,  
J. L. MILES.