

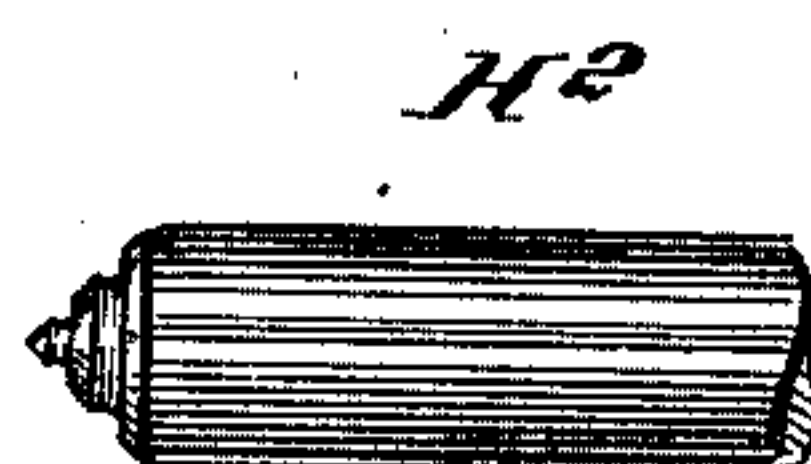
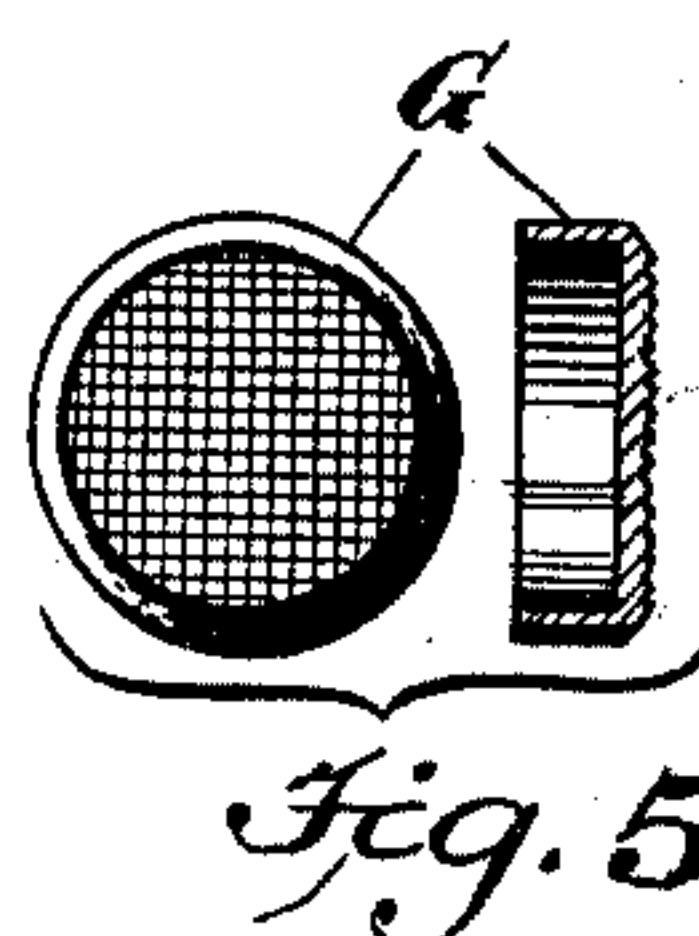
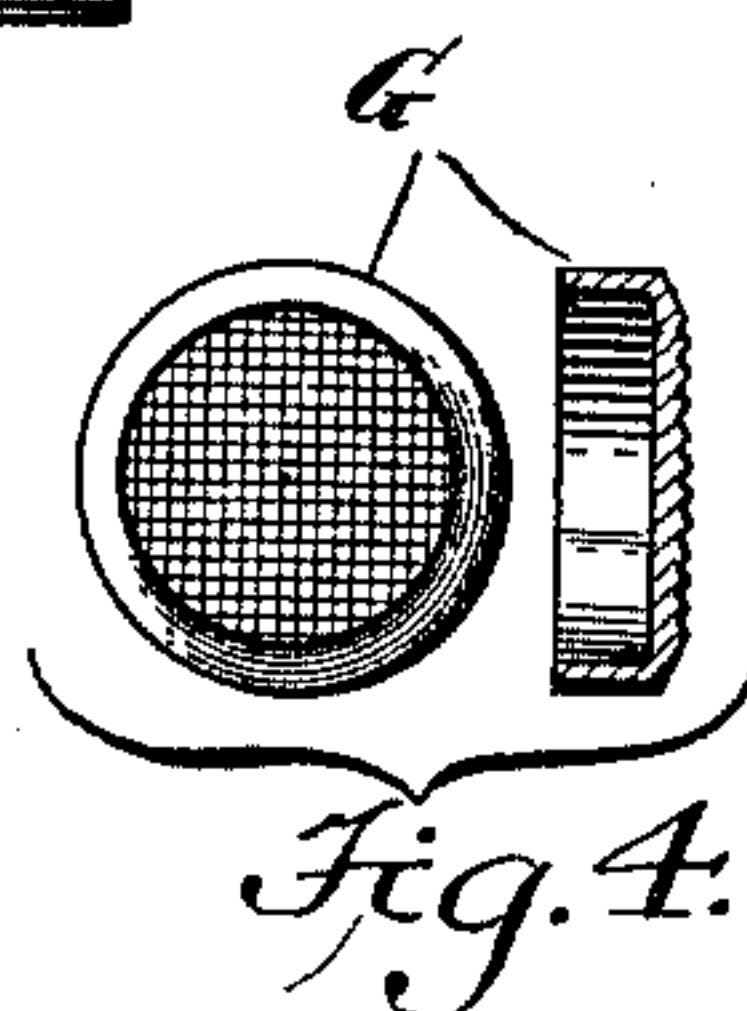
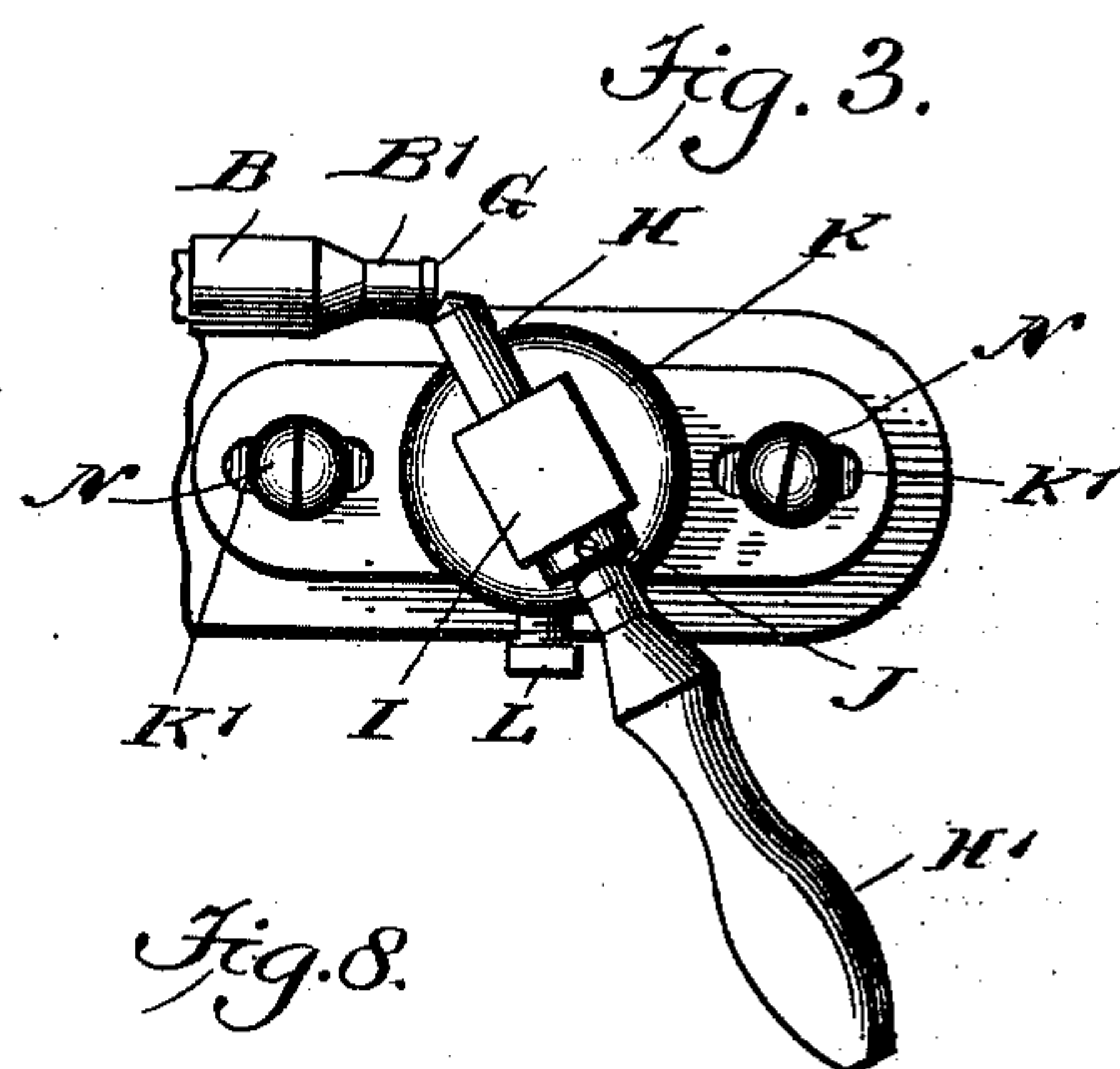
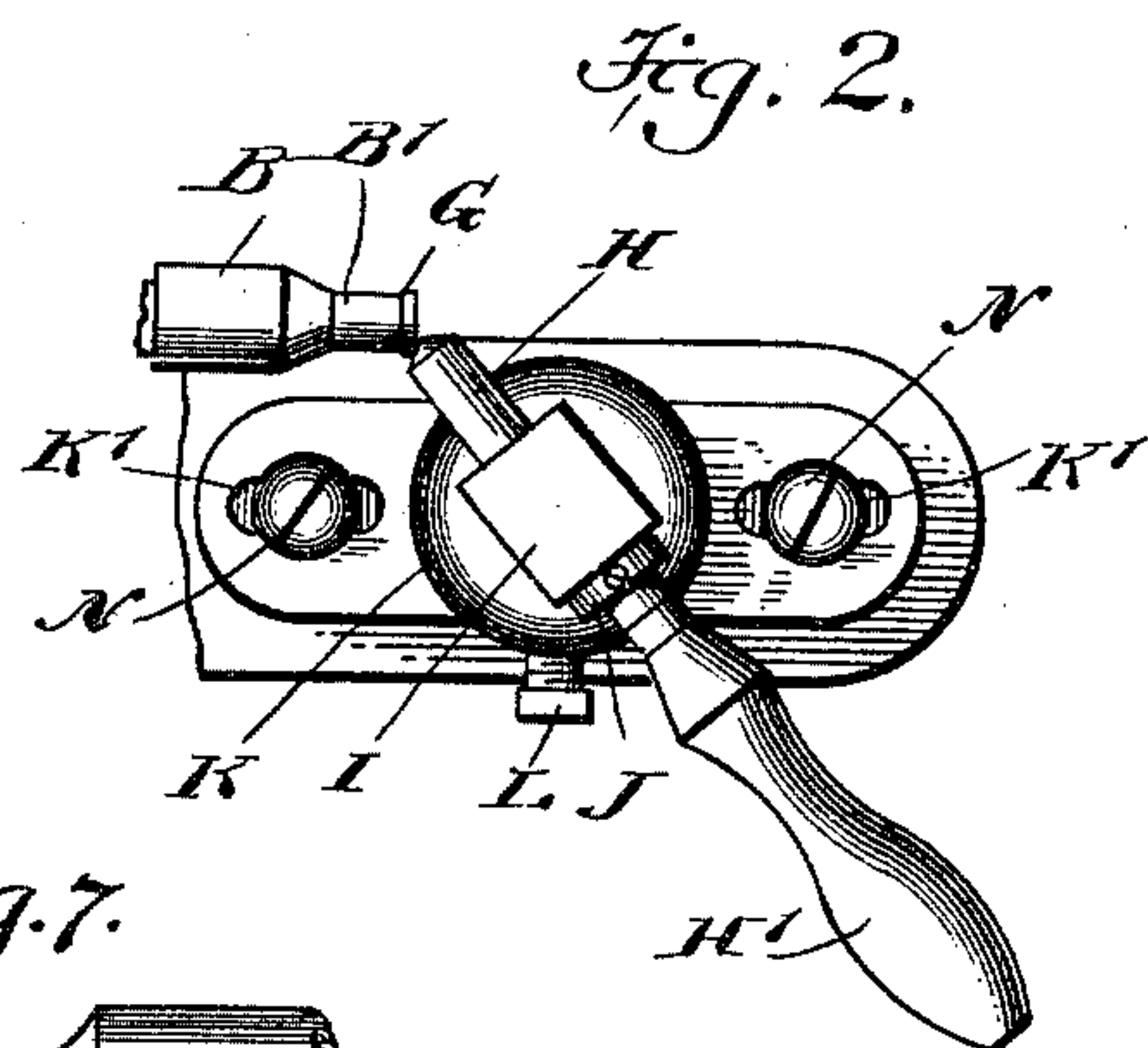
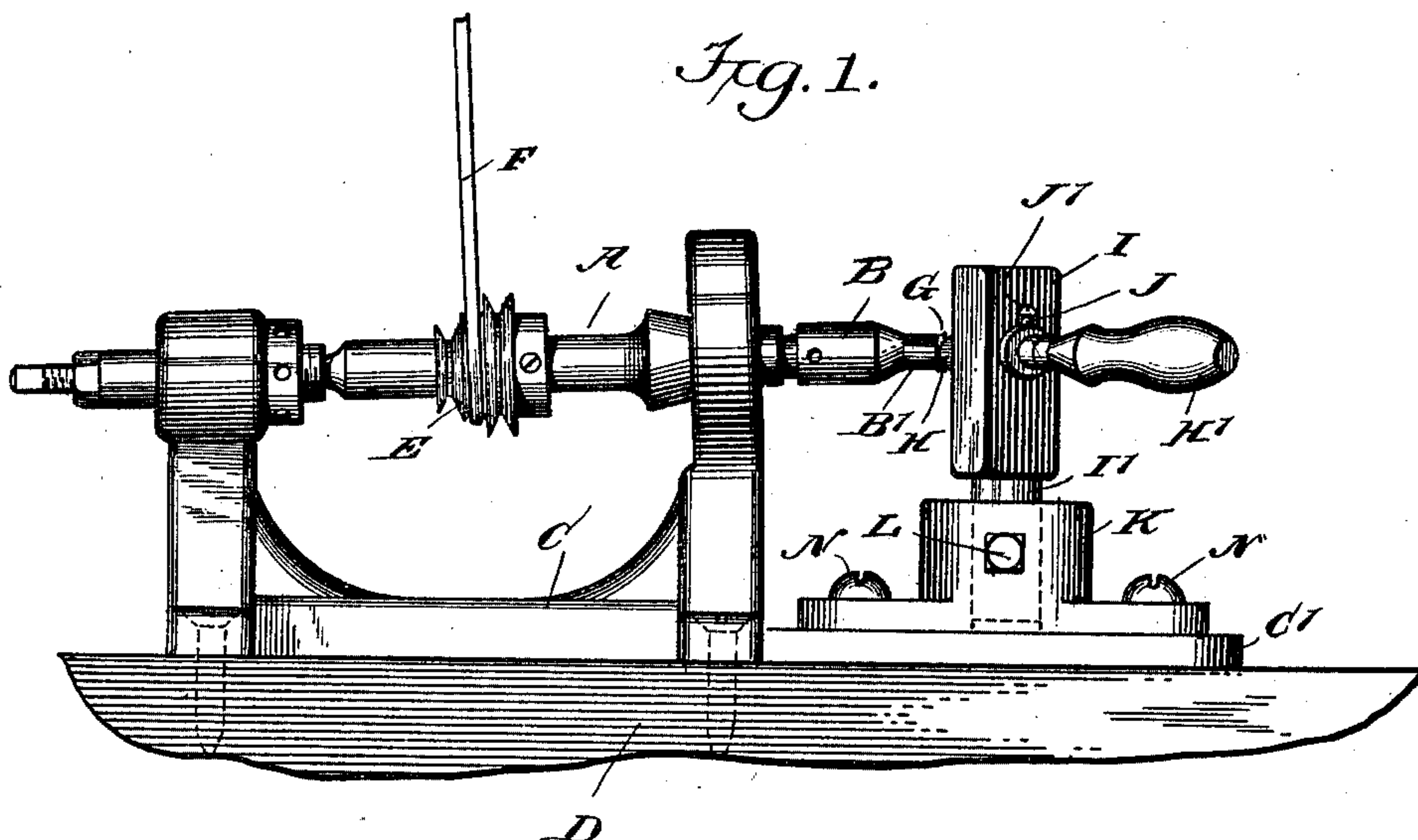
**No. 670,703.**

**Patented Mar. 26, 1901.**

**J. B. CAROLIN.**  
**BURNISHING MACHINE.**

(Application filed Dec. 29, 1900.)

(No Model.)



**WITNESSES:**

WITNESSES:  
*W. R. Applemann Jr.*  
*Geo. J. Foster*

INVENTOR  
*James B. Carolin*

BY *Mum*

**ATTORNEYS**



# UNITED STATES PATENT OFFICE.

JAMES B. CAROLIN, OF NEWARK, NEW JERSEY.

## BURNISHING-MACHINE.

SPECIFICATION forming part of Letters Patent No. 670,703, dated March 26, 1901.

Application filed December 29, 1900. Serial No. 41,492. (No model.)

*To all whom it may concern:*

Be it known that I, JAMES B. CAROLIN, a citizen of the United States, and a resident of Newark, in the county of Essex and State of New Jersey, have invented a new and Improved Burnishing-Machine, of which the following is a full, clear, and exact description.

The invention relates to the making of sheet-metal ware; and its object is to provide a new and improved burnishing-machine, which is simple and durable in construction, more especially designed for burnishingsheet-metal caps, buttons, and like articles without the aid of skilled labor.

The invention consists of novel features and parts and combinations of the same, as will be fully described hereinafter and then pointed out in the claim.

A practical embodiment of the invention is represented in the accompanying drawings, forming a part of this specification, in which similar characters of reference indicate corresponding parts in all the views.

Figure 1 is a side elevation of the improvement. Fig. 2 is a plan view of part of the same. Fig. 3 is a similar view of the same with parts in a different position. Fig. 4 represents the button in elevation and section and as produced with parts of the machine in the position shown in Fig. 2. Fig. 5 represents a button in elevation and section and as produced with the parts of the machine in the position shown in Fig. 3; and Figs. 6, 7, and 8 are side elevations of modified forms of the burnishing-tool.

A spindle A, carrying a chuck B, is mounted to turn in suitable bearings in a head-stock C, secured to a bed D or other suitable support. On the spindle A is held a conical pulley E, connected by a belt F with other machinery to impart a rotary motion to the spindle A and the chuck B. On the reduced outer end B' of the chuck B is placed by the hands of the operator the article G to be burnished, said article being in the shape of a cap, button, or the like, as indicated in Figs. 4 and 5. A burnishing-tool H is adapted to engage with its conical end that portion of the article G to be burnished while the article is rotated with the chuck, and said burnishing-tool is provided with a suitable handle H'

and is fitted to slide and to turn in a bore or guideway formed in the tool-post I, the inward sliding movement of the burnishing-tool being limited by a stop-collar J, secured to the burnishing-tool by a set-screw J'.

The tool-post I is provided at its lower end with a shank I', mounted to turn in and to slide vertically in a bearing K and adapted to be secured therein by a set-screw L, as indicated in the drawings. The bearing K is fastened to a plate C' of the head-stock C by set-screws N, extending through elongated slots K' in lugs formed on the bearing K, so as to allow of adjusting the bearing K longitudinally. By the arrangement described the tool-post I can be adjusted vertically in the bearing K and turned around, so as to bring the pointed end of the burnishing-tool in proper position relatively to the article G, so that the article is burnished the desired distance at a desired point during the rotation of the chuck B and the article. After the tool-post I is adjusted vertically and turned in the bearing K to the desired position and secured in place by screwing up the set-screw L then the operator after placing the article G on the chuck inserts the burnishing-tool H in the bore of the guideway and pushes the burnishing-tool transversely to bring the pointed end in engagement with the article to burnish the same, the transverse sliding movement of the burnishing-tool finally coming to a stop by the collar J abutting against the outer face of the tool-post I. Thus the operator simply places the article in position on the chuck and presses the burnishing-tool transversely until the collar J abuts against the tool-post I to cause proper burnishing of the article and insure a uniform burnishing of the articles subsequently treated, with the post I in the position to which it was originally set.

It is understood that by setting the tool-post I to different positions the burnishing-tool H assumes a corresponding angle relatively to the chuck B, and consequently the conical end of the burnishing-tool engages a greater or less surface of the article G, as will be readily understood by reference to Figs. 2, 4, 3, and 5. By the vertical adjustment of the tool-post I the burnishing-tool is brought



in proper position relatively to the chuck—that is, the axis of the burnishing-tool intersects the axis of the chuck and spindle A.

For different work the conical point of the  
5 burnishing-tool is shaped accordingly, (see  
Figs. 7 and 8)—that is, for forming a number  
of polished ends, for instance, on the article  
the point is provided with a plurality of  
grooves, leaving finished rings between adja-  
10 cent grooves, as will be readily understood by  
reference of Fig. 6. For forming single pol-  
ished rings with greater or less width the  
plain conical point is used, the tool-post be-  
ing adjustable, so as to bring the burnishing-  
15 tool to the required angle, as above explained.

Having thus fully described my invention,  
I claim as new and desire to secure by Letters  
Patent—

A burnishing-machine having a tool-post  
with a guideway for the burnishing-tool to 20  
slide and to turn in, said tool-post being ad-  
justable to bring the burnishing-tool into  
the desired angular position relatively to the  
chuck holding the article to be burnished,  
and a stop on said burnishing-tool and adapt- 25  
ed to abut against the tool-post, to limit the  
sliding movement of the burnishing-tool in  
the tool-post, as set forth.

In testimony whereof I have signed my  
name to this specification in the presence of 30  
two subscribing witnesses.

JAMES B. CAROLIN.

Witnesses:

THEO. G. HOSTER,  
EVERARD BOLTON MARSHALL.