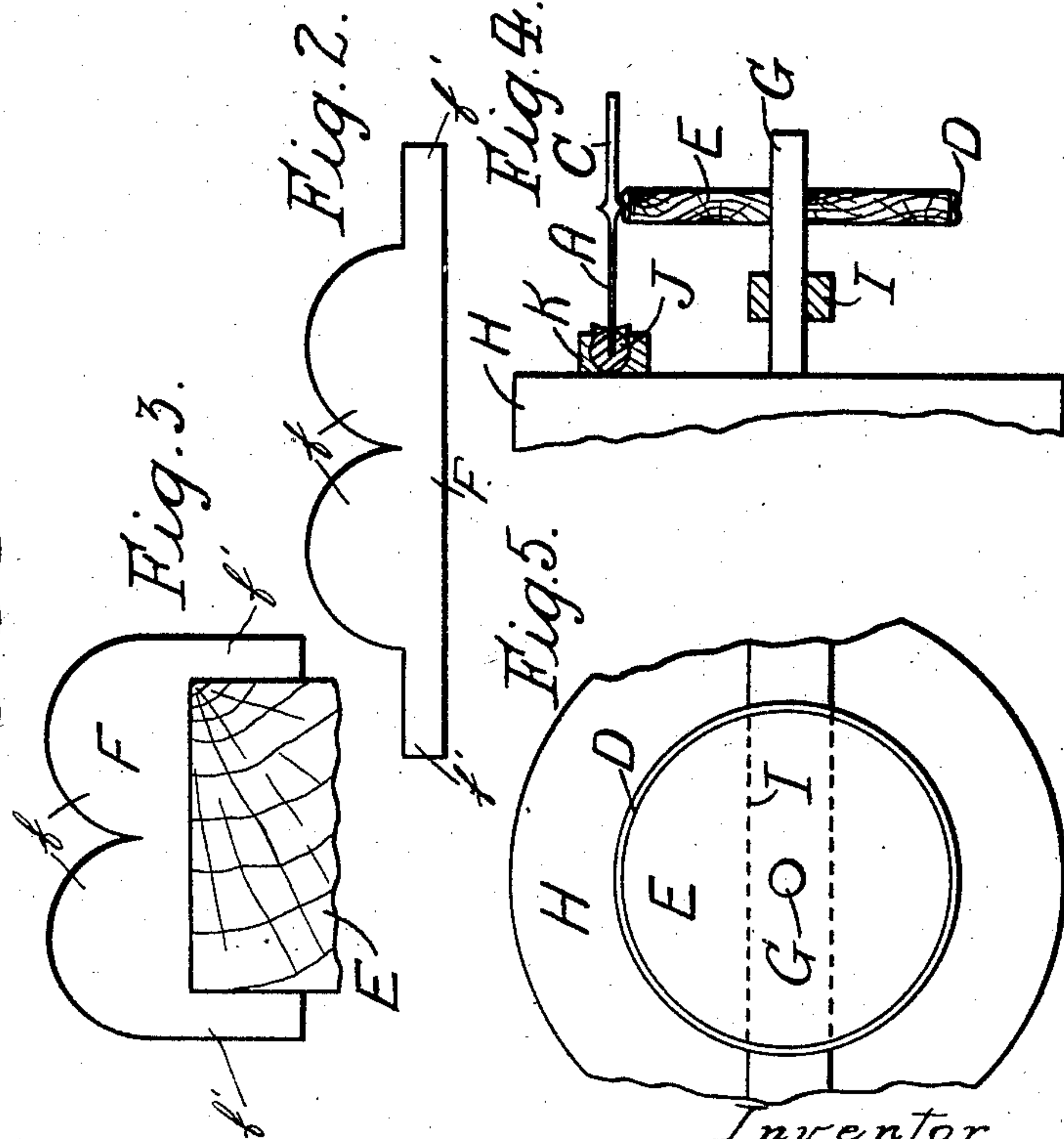
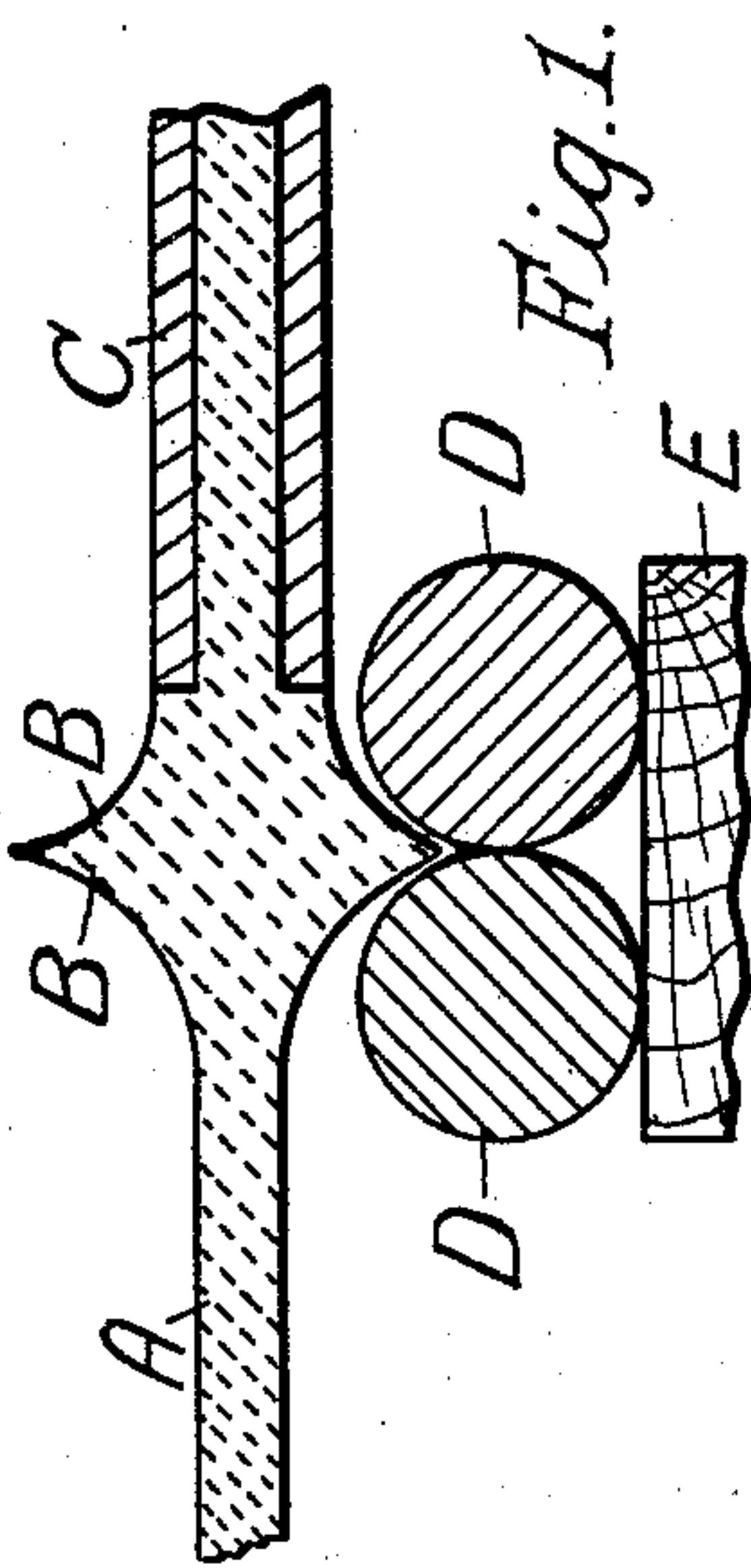
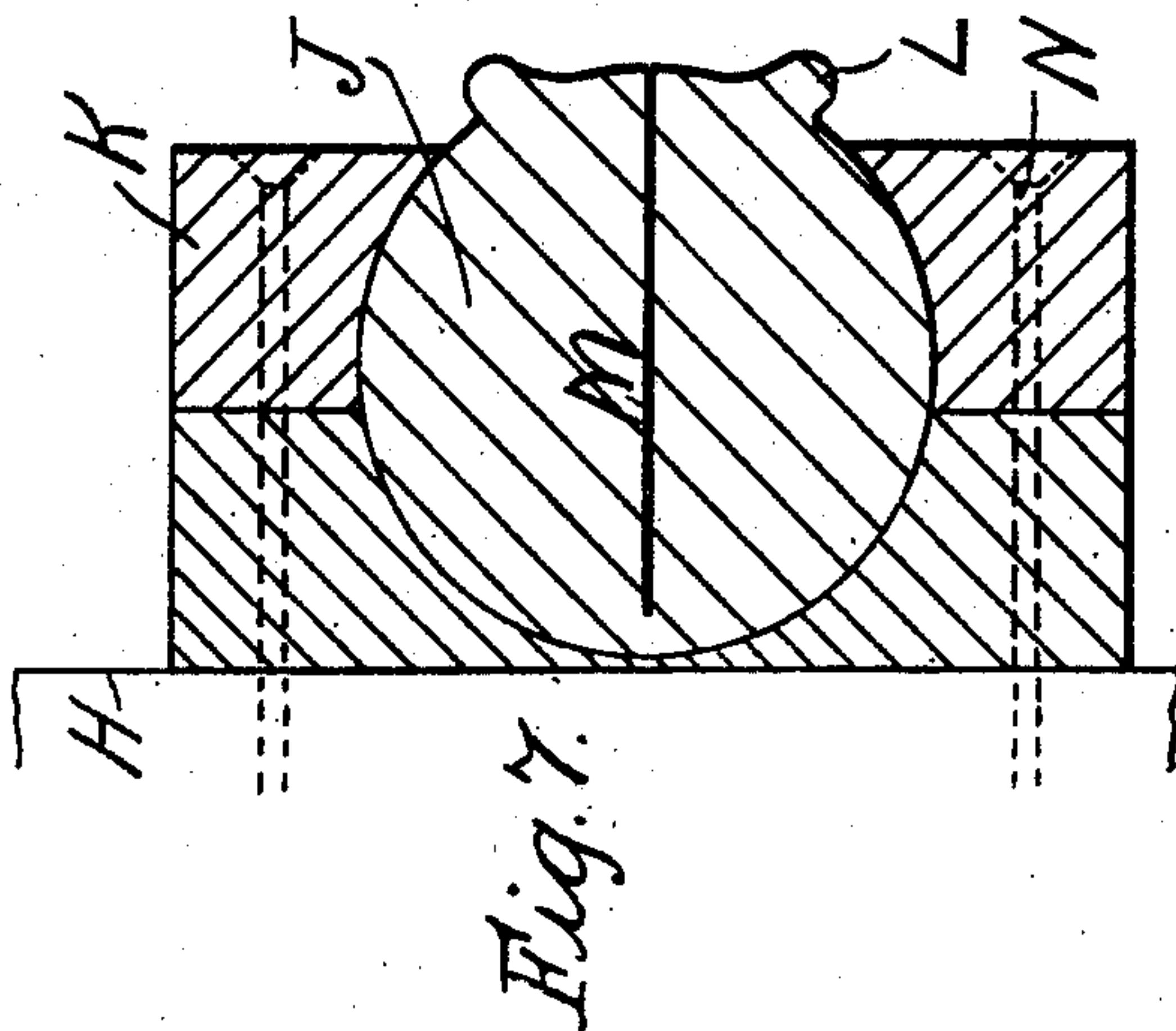
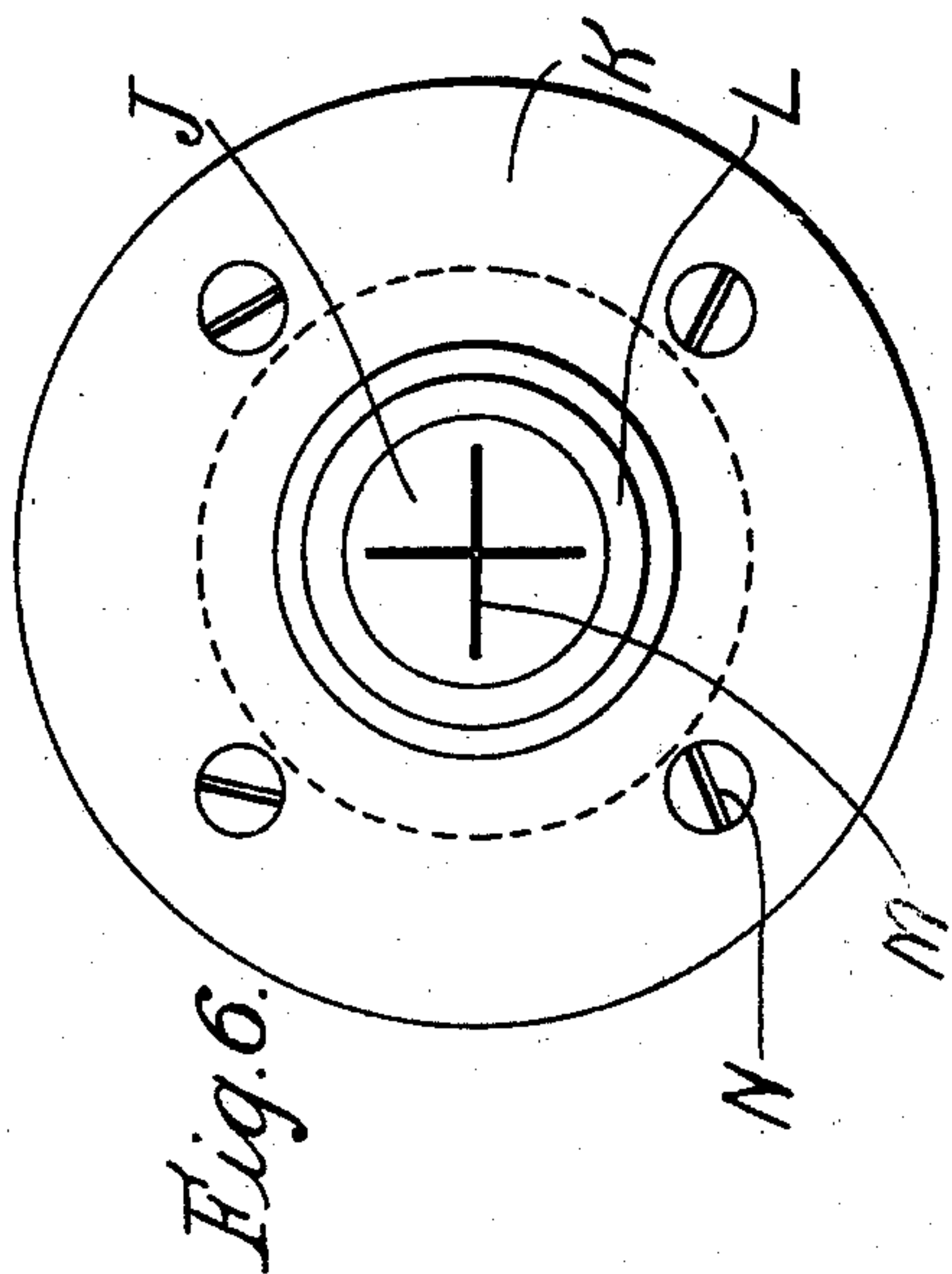


No. 859,563.

PATENTED JULY 9, 1907.

A. L. JOHNSTON.  
KNIFE CLEANING MACHINE.  
APPLICATION FILED OCT. 30, 1906.



Witnesses  
J. M. Myer  
A. O. Knight

Inventor  
Adam Lawson Johnston  
By *Knight Bros*  
Attys.



# UNITED STATES PATENT OFFICE.

ADAM LAWSON JOHNSTON, OF WIMBLEDON, ENGLAND.

## KNIFE-CLEANING MACHINE.

No. 859,563.

Specification of Letters Patent.

Patented July 9, 1907.

Application filed October 30, 1905. Serial No. 285,073.

*To all whom it may concern:*

Be it known that I, ADAM LAWSON JOHNSTON, a subject of the King of the United Kingdom of Great Britain and Ireland, and a resident of Wimbledon, in the county of Surrey, England, have invented a certain new and useful Improvement in Knife-Cleaning Machines, of which the following is a specification.

This invention has for its object to provide a device for cleaning and burnishing the shoulders of table knives and the like.

Under the invention I provide an attachment for knife cleaning machines such as ordinarily in use—whether power-driven or hand-driven—with rotating surfaces that enter the concavities in the knife shoulders and polish the same thoroughly.

The invention is illustrated in the accompanying drawing in which

Figure 1 is a sectional view showing part of a knife at the junction of the blade and the handle, and the rubbing surfaces. Fig. 2 shows the contour of a strip or band of leather or the like adapted to be secured to a wooden disk or other backing and having curved surfaces for entering the concavities in the knife shoulders. Fig. 3 shows the strip secured to a disk. Fig. 4 is a view of part of the knife cleaning machine with the device in place. Fig. 5 is an end view showing the disk and the barrel of the knife cleaning machine. Fig. 6 is an enlarged view showing the slotted support for holding the point of the blade. Fig. 7 shows the same in section.

I employ in addition to the usual hand-wheel keyed on an extension of the machine shaft G, beyond the supporting frame I, on the side remote from the driving pulley, a wooden or other disk E (Figs. 1, 3, 4 and 5), preferably about twelve inches in diameter and three quarters of an inch thick in such a manner that it rotates centrally on the extension of the shaft G without wobbling. Around the cylindrical periphery of the disk E are secured two bands or cords D of leather, buff or other suitable material and of practically circular cross section, of curvature approximating the curvature of the concavities in the knife shoulder flanks B; the said bands D being fastened close together with their axes in parallel planes at right angles to the revolving shaft G, so as to form a surface of revolution which is maintained as the shaft revolves. Or I may use a single strip or band of leather F shaped into parallel convex ridges *f* with an acute angle between the same and with flanges *f*<sup>1</sup> at the sides as shown in Fig. 2 for securing the strip to the flat faces of the disk as shown in Fig. 3.

When the knife is held at right angles to the plane of the disk as shown in Figs. 1 and 4 with the shoulder against the moving leather and the metal ridge between the leather cords or between the convex ridges and the knife can be slowly turned round on its own longitu-

dinal axis while being pressed against the leather so as to effectually burnish the shoulders where they are not reached by the blade cleaners. I also provide a guide or holder to support the point of the blade A while the operator holds the handle C in his hand. The support consists of a sphere or the like J having slits M and fitted within a spherical or other envelop K so as to form a sort of universal joint.

The drawing shows two slits M intersecting each other at right angles but three or more slits may be provided. A part of the sphere J protrudes from the socket and is provided with a flange or collar L; the said collar L retaining the slotted sphere in position and preventing any lubricant from working into the slits and soiling the knives.

The envelop K may be screwed by nails N, Figs. 6 and 7, or otherwise fastened to the flat end of the usual barrel H for cleaning the knife blades, the center of the sphere J being nearly opposite the periphery of the disk E and preferably opposite the highest point of the disk as shown in Fig. 4.

Very long knives such as carving knives, whose length is greater than the distance of the disk E from the flat surface of the barrel H may be held in both hands with the blade in the direction away from the machine H in which case one large holder J, K will be sufficient or there may be different holders at different distances from the disk, or the holders or the disk E may be movable along the shaft D. If the disk E be larger in diameter than the barrel of the machine H the disk and holder may be fitted as hereinafter described with reference to the hand driven type.

For hand power a comparatively small velocity of rubbing will in general be sufficient for the strength of the operator. Sufficient speed will in general be obtained by having the shoulder cleaning disk E which is keyed or otherwise secured to the shaft G either inside or outside the supporting frame I, on the side of the barrel H remote from the handle, a little larger in diameter than the barrel so that the knife blades A project over the top of the nearer flat side of the barrel H into the holder J, K which may be secured to the top of the cylindrical surface of the barrel H.

The envelop K may be fixed to any fixed part of the machine or to a separate stand or bracket. The flanged sphere J may be turned out of boxwood or it may be of any other material, and the slits M may be lined with any suitable material.

Having now described my invention what I claim and desire to secure by Letters Patent of the United States is:—

1. In a knife cleaning machine the combination with a rotating disk, of a polishing band secured to said disk and presenting convex surfaces corresponding to the concavities in the knife shoulders, and means for supporting the points of the knife blades.

2. In a knife cleaning machine the combination with the barrel and the shaft, of a disk secured to said shaft, a polishing band secured to said disk and presenting convex surfaces corresponding to the concavities in the knife shoulders, and a support attached to said barrel for holding the points of the knife blades.

3. In a knife cleaning machine, in combination, a rotating disk, a polishing band secured to said disk and presenting convex surfaces corresponding to the concavities in the knife shoulders, and a support, including a rotatable member formed with slits for holding the points of the knife blades.

4. In a knife cleaning machine, in combination with the

barrel and rotating shaft, a disk secured to said shaft, a polishing band secured to said disk and presenting convex surfaces corresponding to the concavities in the knife shoulders, a block secured to said barrel, and a spherical member mounted in said block and having slits to receive the points of the knife blades.

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

ADAM LAWSON JOHNSTON.

Witnesses:

WALLACE FAIRWEATHER,  
JNO. ARMSTRONG, Junr.