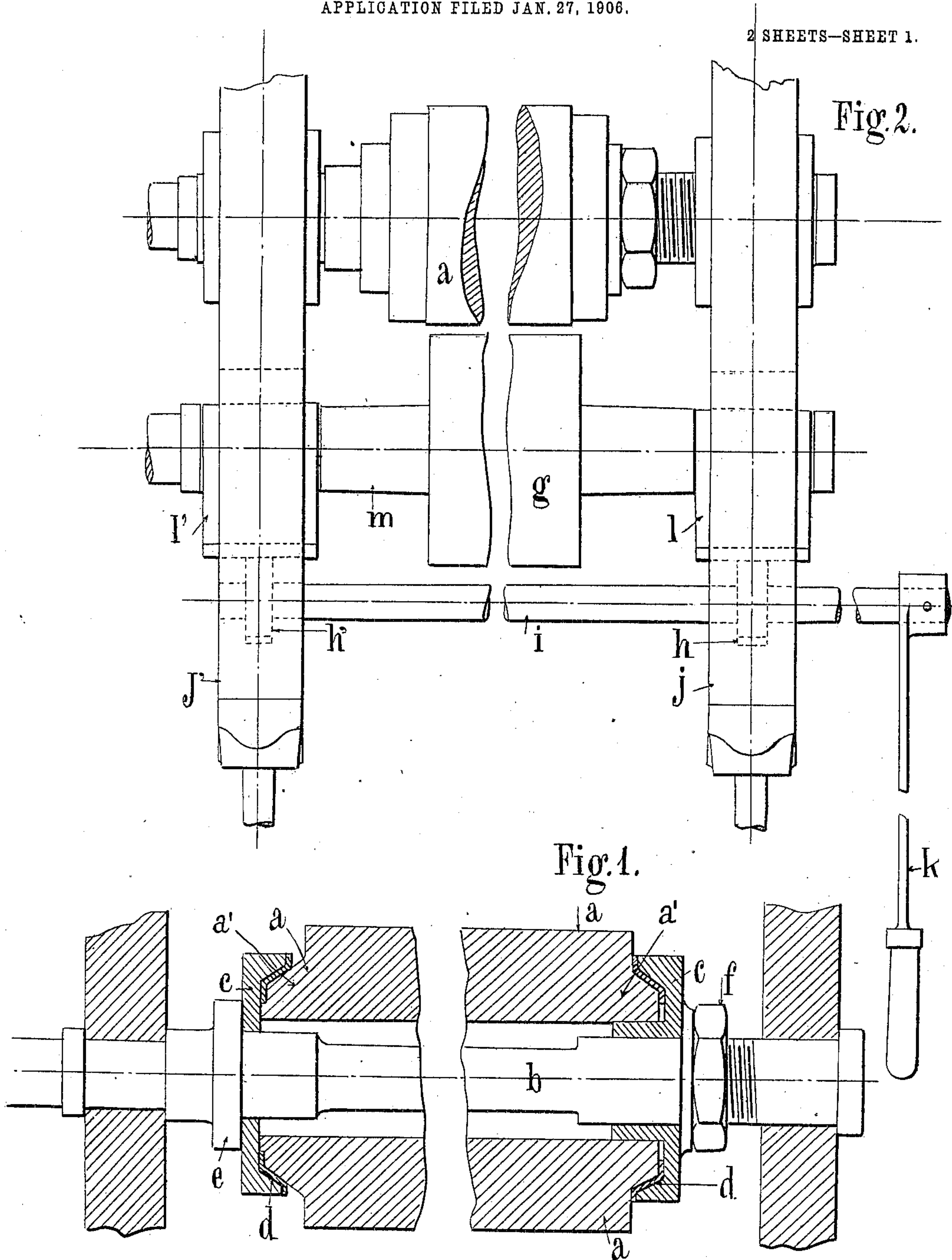


No. 837,029.

PATENTED NOV. 27, 1906.

H. BITTNER.  
ROTARY LITHOGRAPHIC MACHINE.  
APPLICATION FILED JAN. 27, 1906.

2 SHEETS—SHEET 1.



WITNESSES

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INVENTOR

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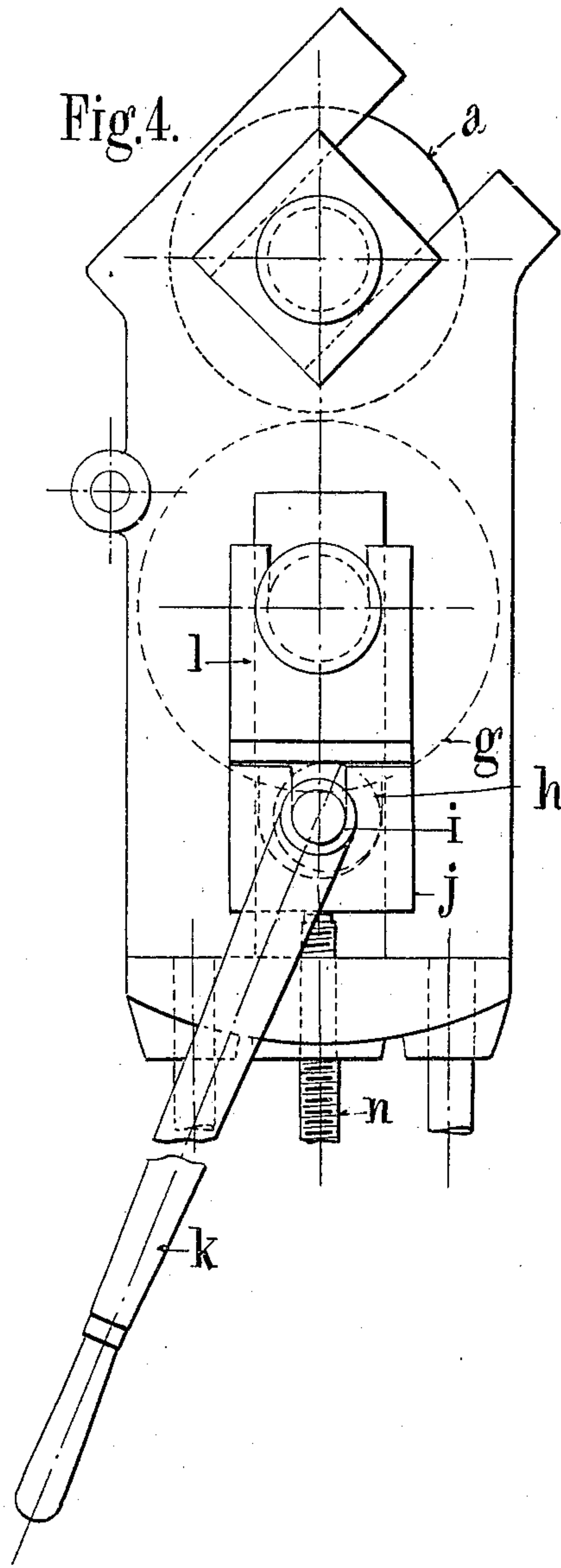
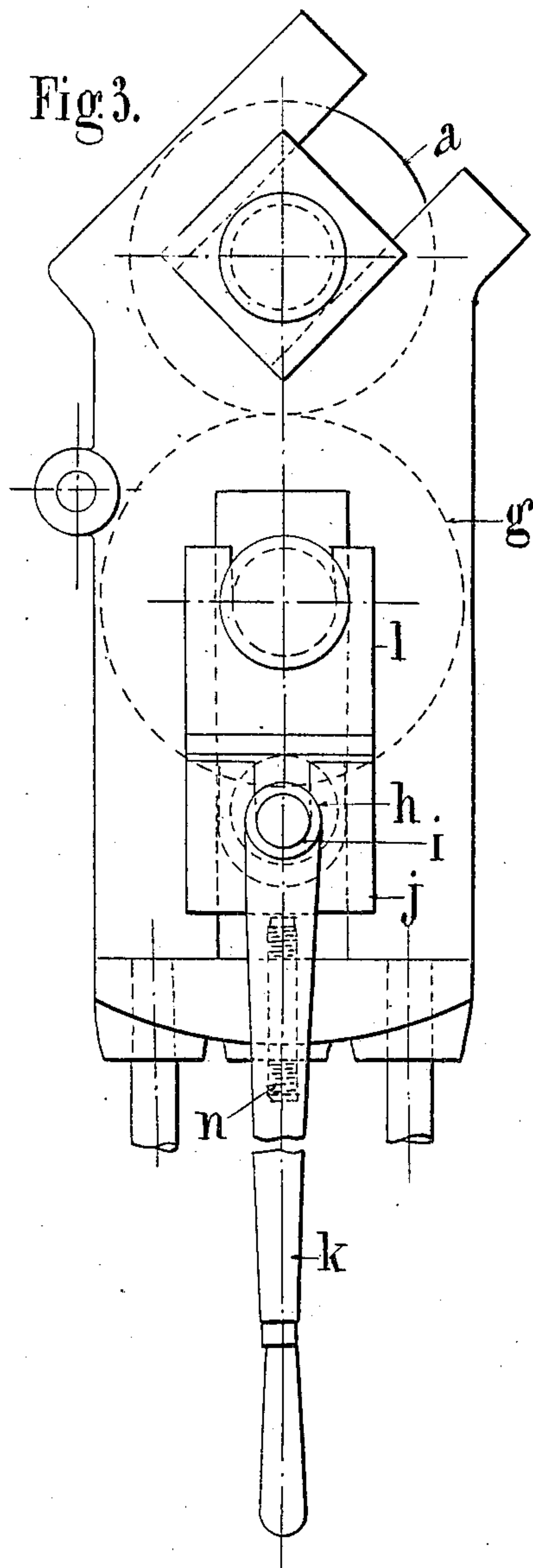
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2 SHEETS—SHEET 2.



WITNESSES

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# UNITED STATES PATENT OFFICE.

HUGO BITTNER, OF PARIS, FRANCE, ASSIGNOR TO LA SOCIÉTÉ "L'ART INDUSTRIEL," OF PARIS, FRANCE.

## ROTARY LITHOGRAPHIC MACHINE.

No. 837,029.

Specification of Letters Patent.

Patented Nov. 27, 1906.

Application filed January 27, 1906. Serial No. 298,259.

*To all whom it may concern:*

Be it known that I, HUGO BITTNER, a citizen of the Empire of Austria-Hungary, residing in Paris, France, have invented certain new and useful Improvements in Rotary Lithographic Machines, of which the following is a specification.

This invention relates to improvements in rotary lithographic machines.

One of the objects of the invention is to provide an improved mounting for the stone cylinders embodied in such machines.

A further object of the invention is to furnish improved means for shifting the impression-cylinder with respect to the stone cylinder.

With these ends in view the invention consists in the novel features and combinations of parts to be hereinafter described and claimed.

In the accompanying drawings, in which the same reference characters denote the same parts throughout the several views, Figure 1 is a longitudinal section of a stone cylinder mounted in accordance with the invention. Fig. 2 is a front elevation showing a stone cylinder and impression-cylinder and mechanism according to this invention for shifting the latter toward and away from the former. Fig. 3 is a side elevation of Fig. 2, showing the parts in printing position; and Fig. 4 is a similar side elevation showing the impression-cylinder out of contact with the stone cylinder.

With the object of obviating the defects due to breakages caused by directly fixing the stone cylinder upon the shaft by means of cheeks pressed against the ends of the cylinder by means of screws and nuts the following arrangement is adopted: The stone cylinder *a* is centered on the shaft *b*, Fig. 1, and is tightly pressed between two disks *c*. The extremities of the stone *a* are turned conical. The conical portions *a'* fit into the disks, which are themselves conically hollowed. Between the disks and the stone there are in-

terposed layers *d* of vulcanized rubber. The disks are pressed toward the shoulder *e* of the shaft by means of a nut *f*. One of these disks abuts against said shoulder. The screw-threading of the shaft, which permits of screwing the nut *f*, is directed oppositely to the direction of rotation in such a manner that the operation of the machine may not tend to loosen the cylinder. The means for lifting the pressure-cylinder *g*, Figs. 2, 3, and 4, comprises, broadly, eccentrics *h h'*, Fig. 2, keyed upon a shaft *i*. This shaft rotates in supports or bearings *j j'*, adjustable vertically in the cheeks of the frame, the said eccentric acting upon the vertically-diplaceable bearings *l l'*, in which the shaft *m* of the pressure-cylinder *g* turns. A lever *k*, arranged at the end of the shaft *i*, serves to operate said eccentrics.

The cylinder *g* may be raised and applied against the stone, zinc, aluminium, or the like cylinder *a*, Fig. 3, or freed therefrom, Fig. 4.

The supports *i i'* may be adjusted in height by means of the screws *n*, which engage the same at their lower portions.

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

In a lithographic machine, in combination, a stone cylinder, an impression-cylinder parallel thereto, bearings for said impression-cylinder which are slidable toward and away from said stone cylinder, a shaft, eccentrics carried by said shaft at either end contacting with said impression-cylinder bearings, a lever for operating said shaft, and bearings for said shaft adjustable toward and away from said cylinders.

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

HUGO BITTNER.

Witnesses:

EMILE LEDRET,  
FREDERIC U. LAULDUCEE.