

(No Model.)

J. J. ANTHONY.  
Connecting Rod.

No. 239,419.

Patented March 29, 1881.

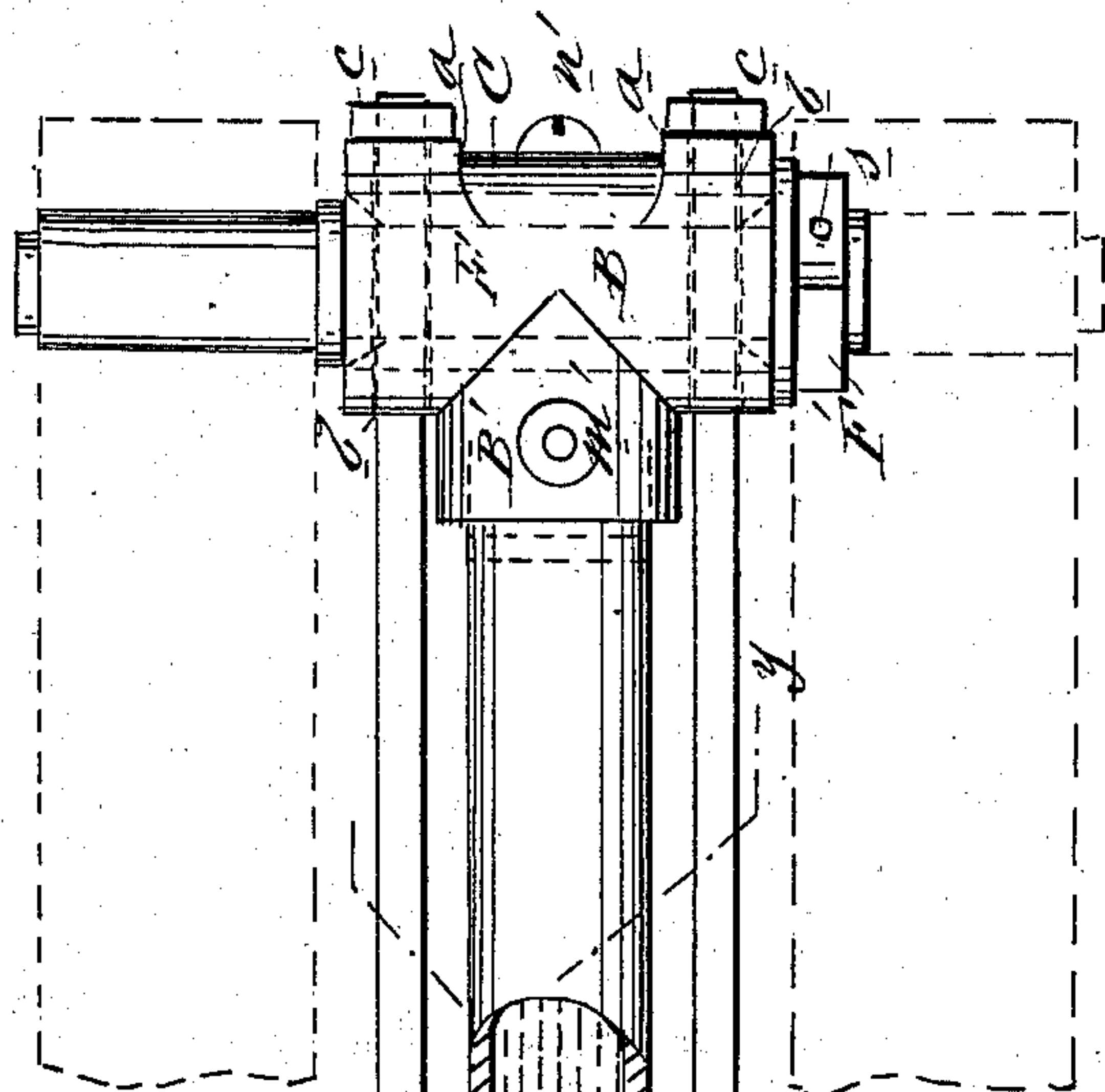


Fig. 1

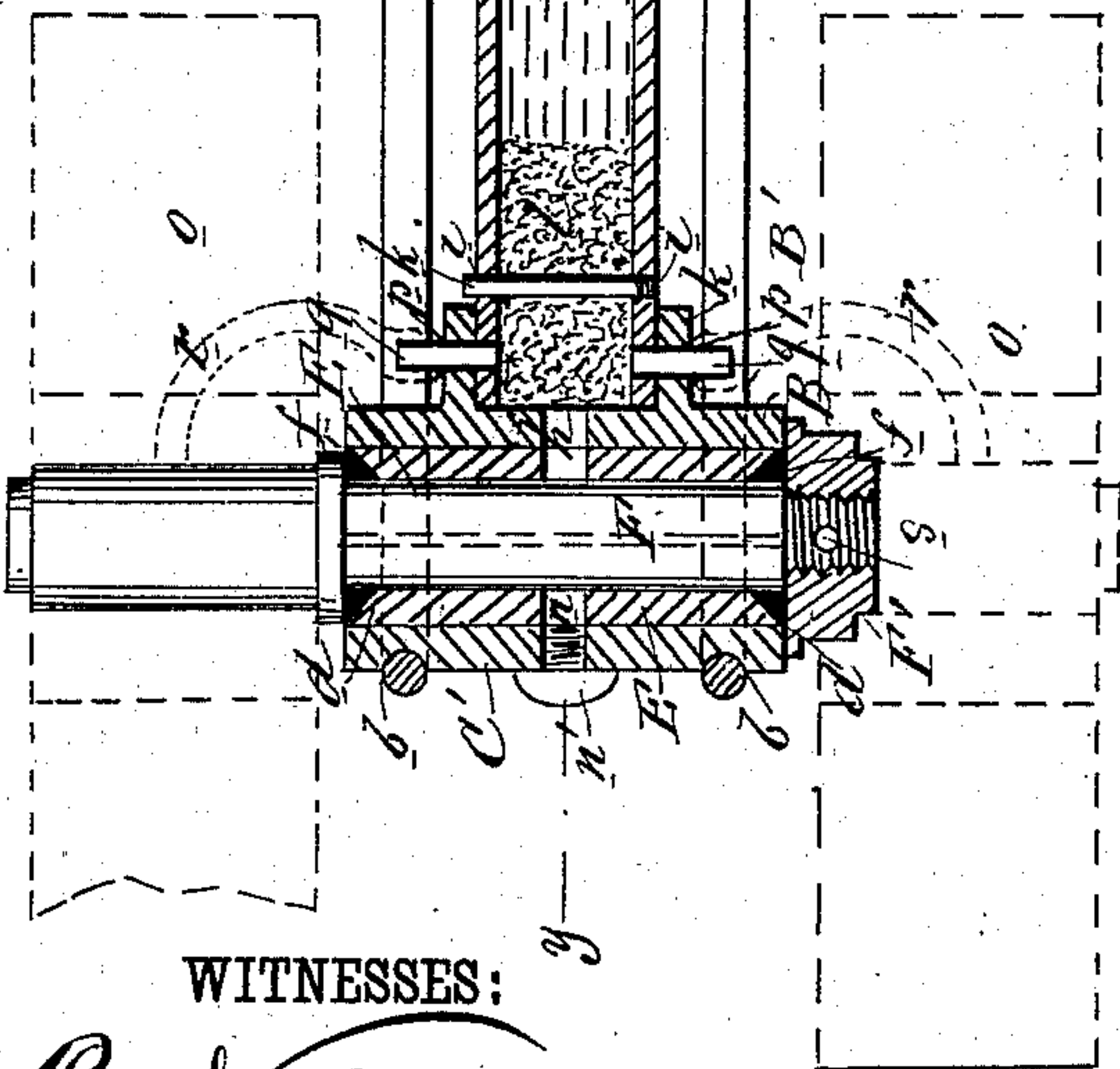
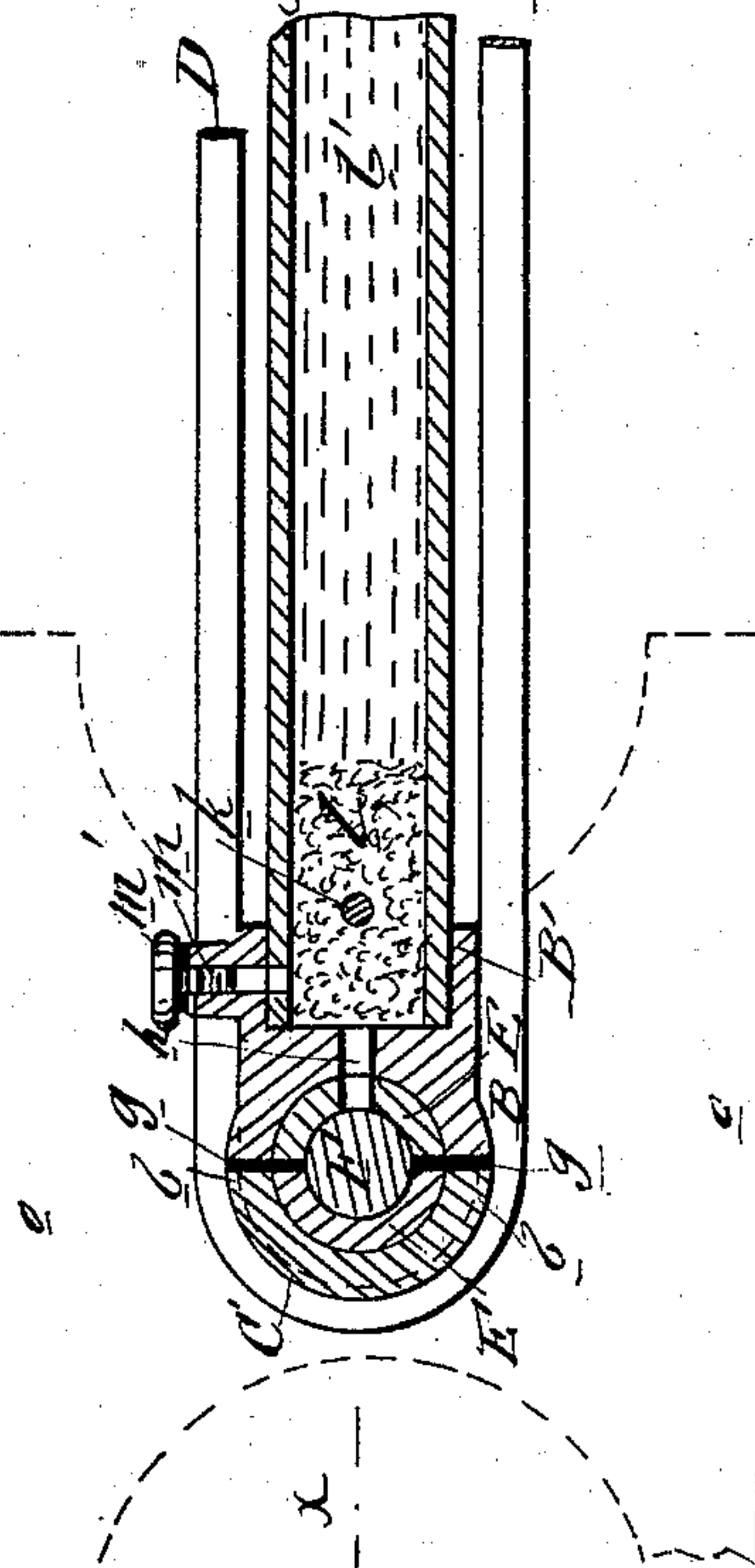
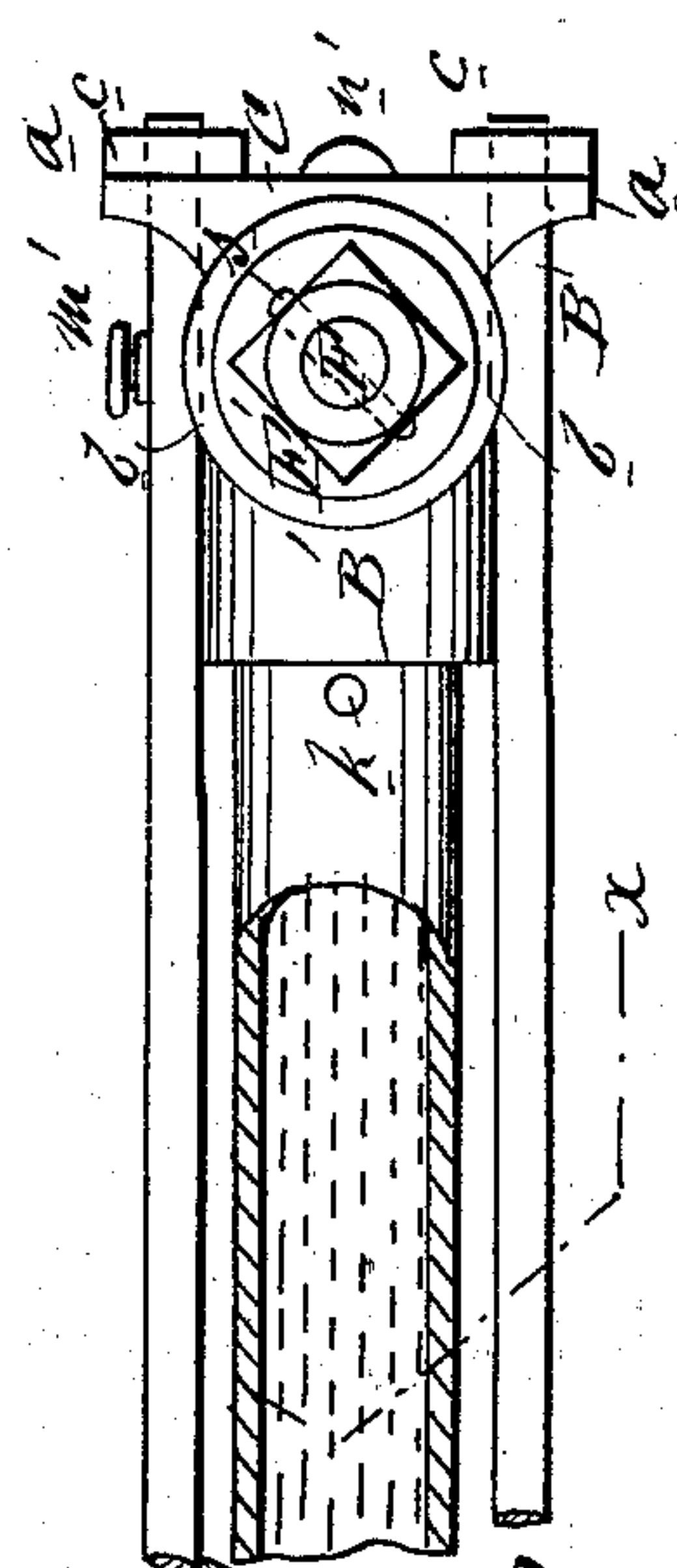


Fig. 2

WITNESSES:

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# UNITED STATES PATENT OFFICE.

JACOB J. ANTHONY, OF SHARON SPRINGS, NEW YORK.

## CONNECTING-ROD.

SPECIFICATION forming part of Letters Patent No. 239,419, dated March 29, 1881.

Application filed February 16, 1881. (No model.)

*To all whom it may concern:*

Be it known that I, JACOB J. ANTHONY, of Sharon Springs, in the county of Schoharie and State of New York, have invented a new and Improved Connecting-Rod, of which the following is a full, clear, and exact description.

The object of this invention is to provide a lubricating connecting-rod for cranks, crank-pins, slides, or other parts of mechanism where connecting-rods are used.

The invention consists of a connecting-rod composed of a straight tube forming an oil-chamber, having a journal-box secured on each end and communicating interiorly therewith, the caps of said journal-boxes being held in position by straps extending parallel with said tube, and on either side thereof. The said tube is designed as a reservoir to contain the lubricating-oil for the journal-boxes, or for the slides, cranks, &c., and the said boxes are formed with concave ends for holding suitable packing to prevent the escape of the lubricant.

Figure 1 is a plan of the connecting-rod, partly in section, on line *x x*, Fig. 2. Fig. 2 is a side elevation of the same, partly in section, on line *y y*, Fig. 1.

Similar letters of reference indicate corresponding parts.

In the drawings, A represents a straight tube designed for an oil-reservoir, having secured on each end, by screw-threads or otherwise, a journal-box, B, the lower halves of said boxes B being provided on the outside with central hollow bosses, B', communicating with the interior of said boxes, in which the ends of the said tube A are secured at right angles to the axes of the said boxes B.

C C' represent the journal-box caps, the cap C being provided with lateral perforated lugs *a*, through which pass the ends of the straps or clips D, that hold said caps C C' in position, said straps or clips D D being bent around the cap C' in grooves *b*, near the ends thereof, and extended parallel with the tube A and on either side thereof through the lugs *a* of the cap C, and being secured and drawn tight by nuts *c* on their ends. Grooves *b* are also formed on boxes B and cap C for the clips D to fit into, so that said clips D may hold more securely in place, and all lateral movement of said caps

C C' be thereby prevented. Hence it will be seen that said clips D D form a perfect stay in all directions, holding the parts of the journal-boxes so firmly together that they will not move upon each other and cut their journals or disarrange their interior packing. The journal-boxes B C are designed to be made longer than is usual, as it is found that long journal-boxes wear more evenly, cut the journals less, cause less friction, and consequently last longer. The linings E of these boxes B C are countersunk in each end, as shown at *d*, sufficiently to receive a suitable packing, *f*, around the journals F, and suitable packing, *g*, is also placed between the two parts B C, to prevent escape of oil. Communication between the tube A and the interior of the boxes B C is made by means of passages *h*.

Directly back of the bosses B' small transverse holes *i* are drilled through the tube A and pins *k* inserted therein, for the purpose of holding in position the fibrous packing (represented at *l*) that is inserted in each end of said tube A, to serve as a strainer for the lubricating-oil within said tube A, which oil is represented at *l'*. This fibrous packing *l* prevents the impurities in the said oil *l'* from entering the journal-boxes B C, while permitting said oil to pass through it. In the top of said bosses B it is designed to form holes *m*, communicating with the interior of the tube A, and in these holes *m* to insert screws *m'*, that can be turned down to force the fibrous packing *l* through said holes *m* into said tube A, and said hole or holes *m* serve also for the introduction of oil, *l'*, into said tube A.

In that end of the device which is designed to serve as the head when using it vertically an oil-passage, *n*, is formed, which is shown in the drawings as closed by a screw, *n'*. When the connecting-rod is used vertically this screw *n'* is to be removed and an oil-cup to be inserted in its place, through which the box to which it is attached may be lubricated.

When designing to apply this connecting-rod to cross-heads or to slides, as indicated at *o*, I drill a hole, *p*, through each side of the lower boss, B', and insert therein small tubes *q*, that communicate with the interior of the tube A, and on the outer ends of these tubes *q*, I attach



tubes *r*, through which the said slides *o* will be lubricated from the said tube A.

On the outer screw-threaded ends of the journals F are nuts F', that are designed to be  
5 turned down, when required, to tighten the packing *f* more effectually about the journals F. Said nuts F' may be locked in place by pins *s* passing through them and the journals F, or they may be secured from turning loose  
10 by any other suitable device.

In the operation of this improved connecting-rod the strain of the thrust is borne by the tube A, and that of the pull by the clips D D. The double clips D D impart great strength  
15 and durability to the said connecting-rod and hold the boxes B C firmly in position, the nuts *c* being tightened as required.

The device is cheap of construction, and lighter and stiffer than any other connecting-  
20 rods of equal weight.

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

1. A connecting-rod for machinery, con-

structed substantially as herein shown and de- 25 scribed, consisting of oil tube or reservoir A, communicating interiorly with its end journal-boxes B C, and clips D D, embracing and holding said journal-boxes, as set forth, said tube and boxes being provided with suitable oil- 30 passages and packing.

2. The combination, with the journal F, of the connecting-rod A D, provided with boxes B C, having countersunk ends *d*, and of nuts F', substantially as herein shown and de- 35 scribed, said nuts being designed for tightening the packing in said boxes about the journal, as set forth.

3. The combination, with the connecting-rod A D, of the lateral tubes *q*, substantially as 40 herein shown and described, whereby oil may be conducted from said rod, as set forth.

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Witnesses:

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