

(No Model.)

F. H. CONNER.

PIPE CUTTER.

No. 338,716.

Patented Mar. 30, 1886.

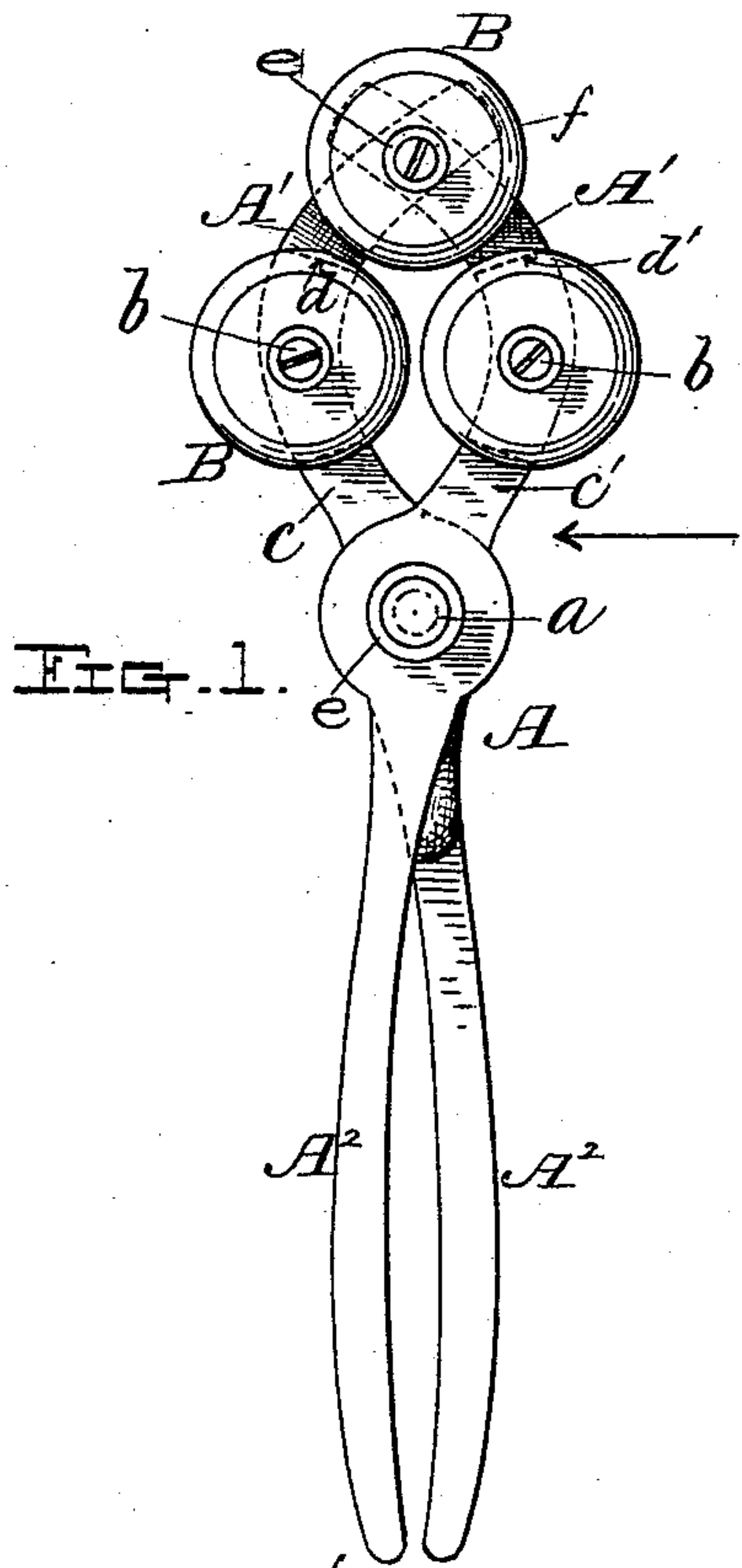


FIG. 1.

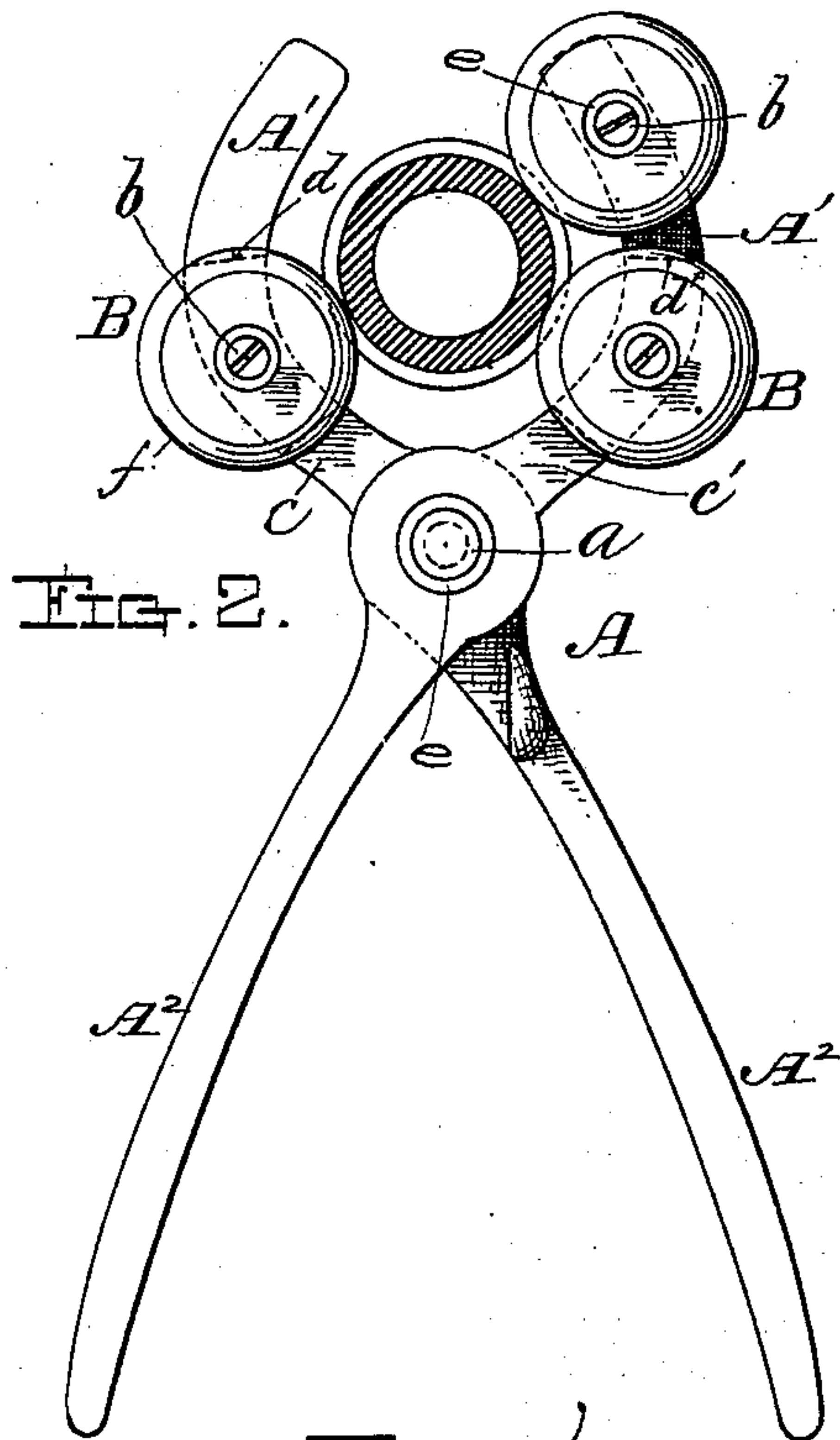


FIG. 2.

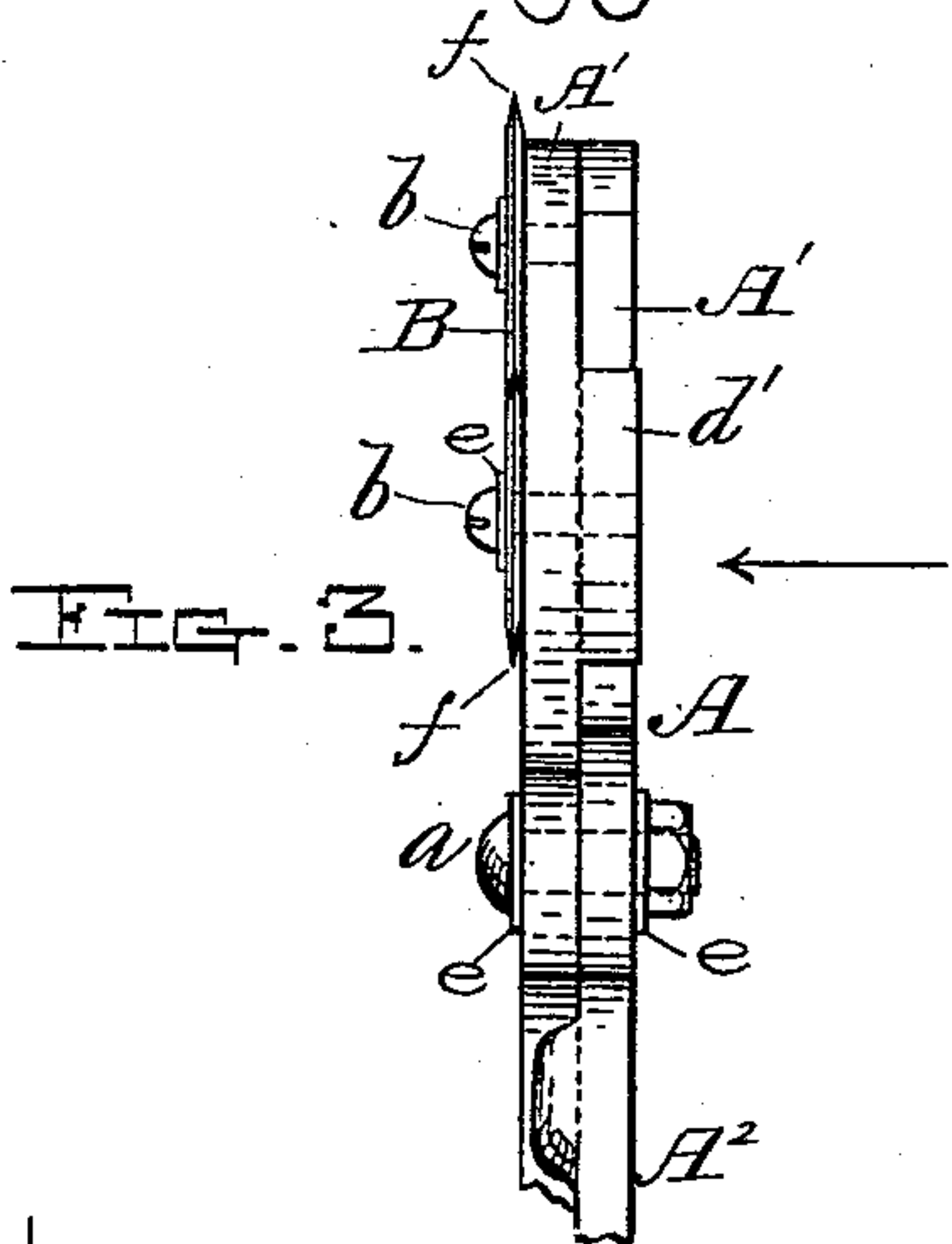


FIG. 3.

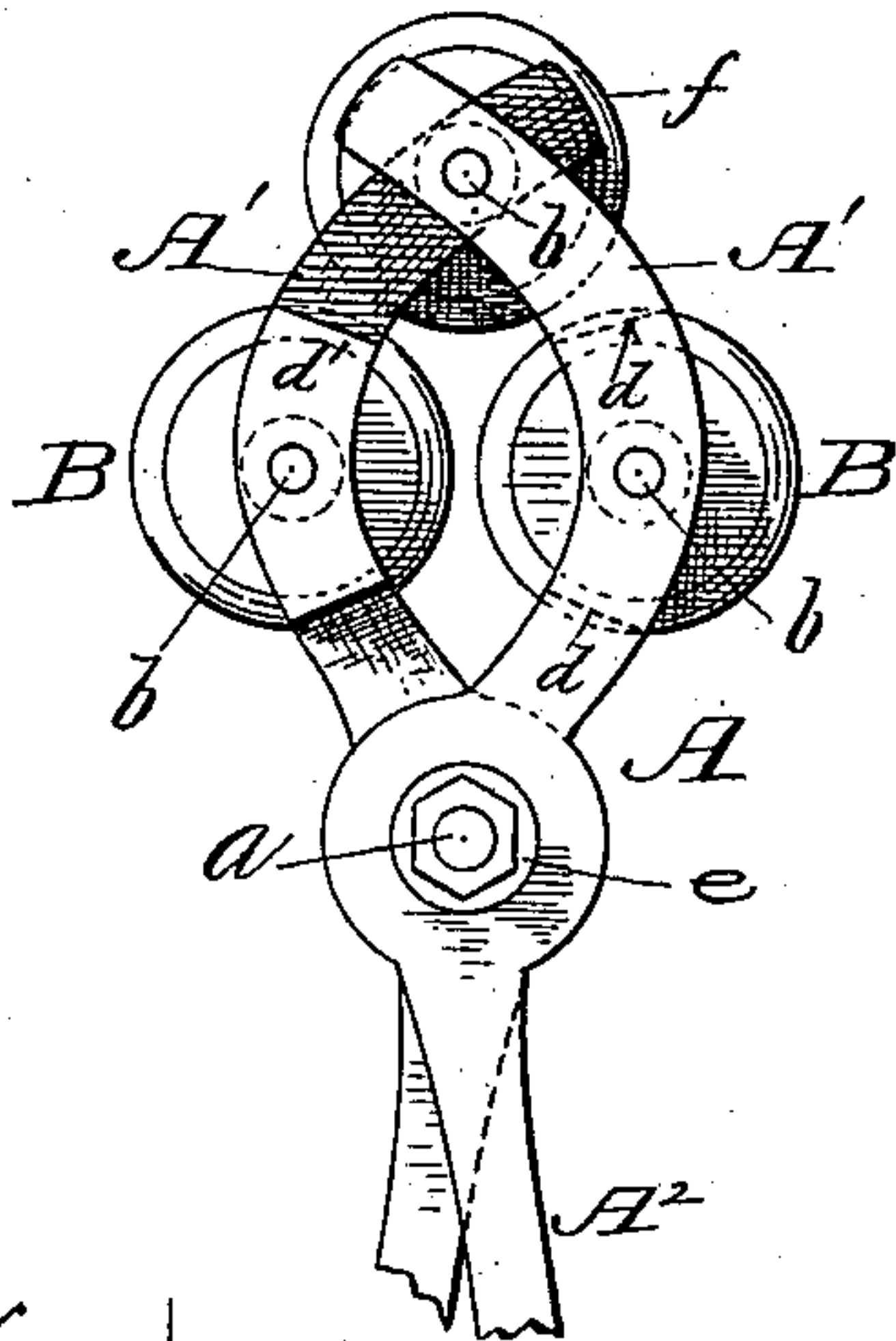


FIG. 4.

Witnesses;

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UNITED STATES PATENT OFFICE.

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PIPE-CUTTER.

SPECIFICATION forming part of Letters Patent No. 338,716, dated March 30, 1886.

Application filed December 30, 1885. Serial No. 187,095. (No model.)

To all whom it may concern:

Be it known that I, FREDERICK H. CONNER, of Worcester, in the county of Worcester and State of Massachusetts, have invented certain
5 new and useful Improvements in Pipe-Cutters; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawings, forming a part of this specification, and
10 in which—

Figure 1 represents a front side view of my aforesaid improved pipe-cutter when closed. Fig. 2 represents a front side view of the cutter when open, also showing the manner of
15 applying the same to practice, as hereinafter more fully explained. Fig. 3 represents an edge view of the cutter, looking in the direction of the arrow, Fig. 1; and Fig. 4 represents a back side view of said cutter when
20 closed, looking in the direction of the arrow, Fig. 3.

My invention relates to pipe-cutters for cutting lead pipe.

Its object is to facilitate the cutting of lead
25 pipe without waste of stock; and it consists in combining with the forward end of a pair of tongs especially adapted for the purpose two or more circular rotary knives, which, when
30 applied to the lead pipe, as hereinafter described, sever the same in an easy and expeditious manner.

To enable those skilled in the art to which my invention appertains to make and use the same, I will now proceed to describe it more
35 in detail.

In the drawings, A represents a pair of tongs, having the jaws A' A' and operating-handles A² A², hinged together, as usual, by means of a pivot-bolt, *a*. Upon one side of
40 the jaws A' A' are arranged the circular pipe-cutters B, hereinbefore alluded to, the same being fitted to turn upon suitable screw-studs, *b*, fastened in said jaws. The tongs being made of the same thickness in the ordinary
45 way brings the inner surface, *c*, of one jaw below the outer surface, *c'*, of the other jaw. Therefore, in order to bring the circular knives all upon the same plane, as shown in the drawings, I form a hub or projection, *d*, upon said
50 inner surface, *c*. (See dotted lines in the various figures.) Said hub or projection also

serves to form a better bearing for the screw-stud fastened in the same. A similar projection, *d'*, is also made upon the opposite side of the other jaw for the latter purpose, thus
55 firmly holding the two inner knives where the greatest pressure is applied in cutting a pipe, as hereinafter described. The outer knife is held with sufficient firmness without enlarging the bearing of its stud. In this instance
60 I have shown three circular knives, B, and so arrange them that when the device is closed, as shown in Figs. 1, 3, and 4, if a line were extended from the center of one to another, an equilateral triangle would thus be formed.
65 I do not, however, limit myself to the above number and arrangement of said knives, as the same may be varied under different circumstances without departing from the principle of my invention.

In practice I find that in cutting pipe from
70 one-half to two inches in diameter, or thereabout, and for which my device is more especially intended, three knives arranged as above described do the work more satisfactorily
75 than any other number or arrangement which I have thus far tried; hence my adoption of the same.

In order to lessen the friction of the operating parts, I arrange suitable washers, *e*, under
80 the heads of the screw-studs *b* and the head and nut of the pivot-bolt *a*, as shown in the drawings. Said washers may be used or not, as desired.

The operation of cutting apart a piece of
85 lead pipe is performed as follows: The operator takes hold of the lead pipe in one hand near the point at which it is to be severed, if not otherwise held, and, grasping the device by the handles A² in the other hand, opens the
90 jaws A', and places the same over the pipe with the knives in contact with its surface, taking care that the device is held at right angles to said pipe, so as to form a square clean cut. He now compresses the handles A², and
95 at the same time gives the device a swinging motion forward and back for about a third of a revolution around the pipe, thus by said operation producing a shearing motion, owing to the position of the knives, and also a slight
100 rotation of said knives, which causes the pipe to be severed in a very short time, and with

but little expenditure of force upon the handles of the device. The cut thus produced is clean and sharp, and no stock whatever is wasted in the operation, as is the case by the
5 present method of sawing or cutting the same by means of an ordinary knife. The circular knives B are beveled upon both sides of their edges, and ground to a sharp edge, *f*, as shown in Fig. 3, and, being made of hardened steel,
10 will last an indefinite length of time without sharpening, even though in constant use.

Having described my improved pipe-cutter, what I claim therein as new and of my inven-

tion, and desire to secure by Letters Patent, is—

15 A pipe-cutter, the same consisting of the tongs A, having the jaws A' A' and operating-handles A² A², hinged at *a* and provided with the hubs or projections *d d'*, in combination with the circular pipe-cutting knives B 20 and their holding-studs *b*, substantially as shown and described.

FREDERICK H. CONNER.

Witnesses:

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