

(No Model.)

G. F. SMITH.

GAGE FOR PIPE THREADING MACHINES.

No. 294,518.

Patented Mar. 4, 1884.

Fig. 1

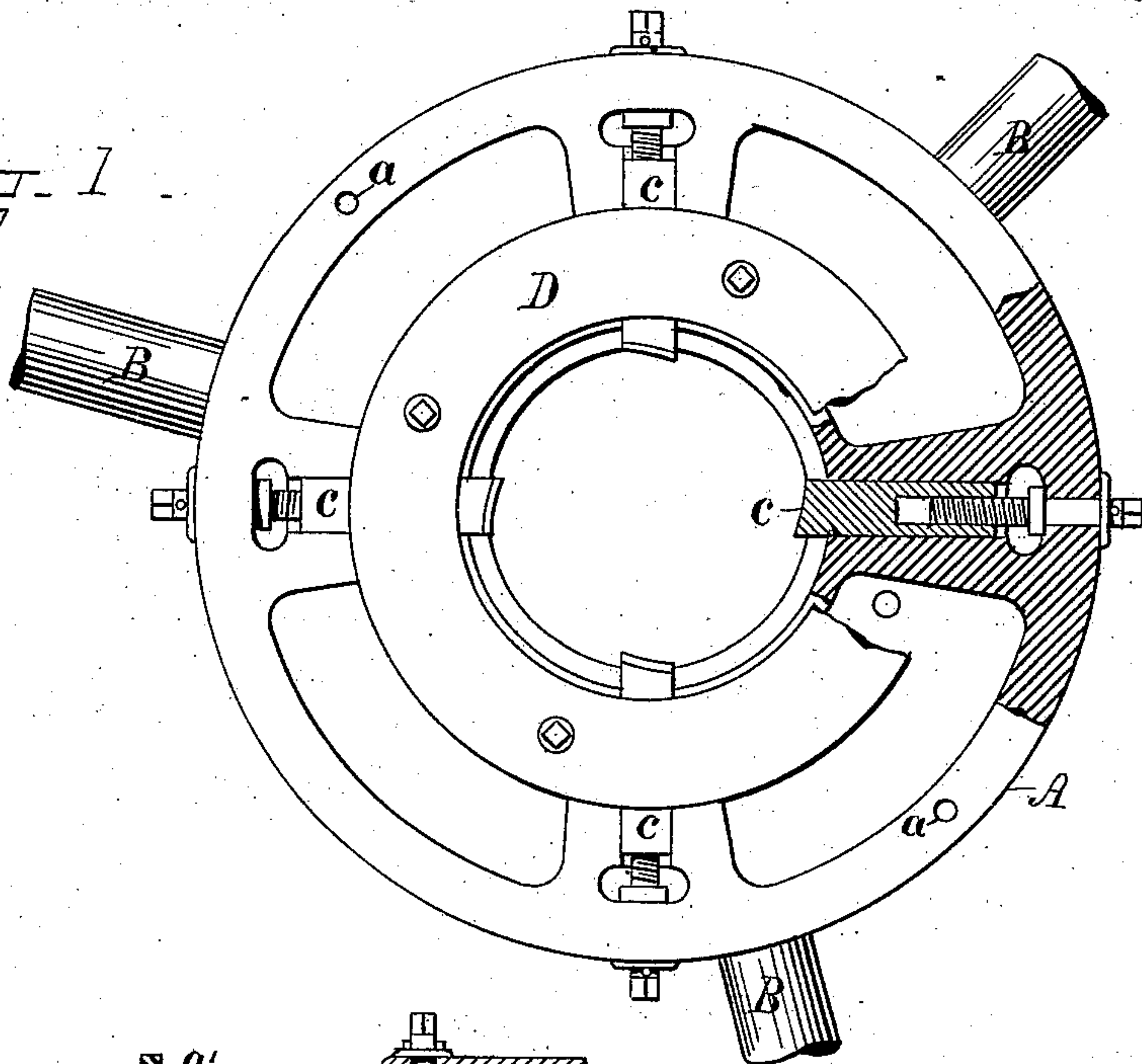


Fig. 3

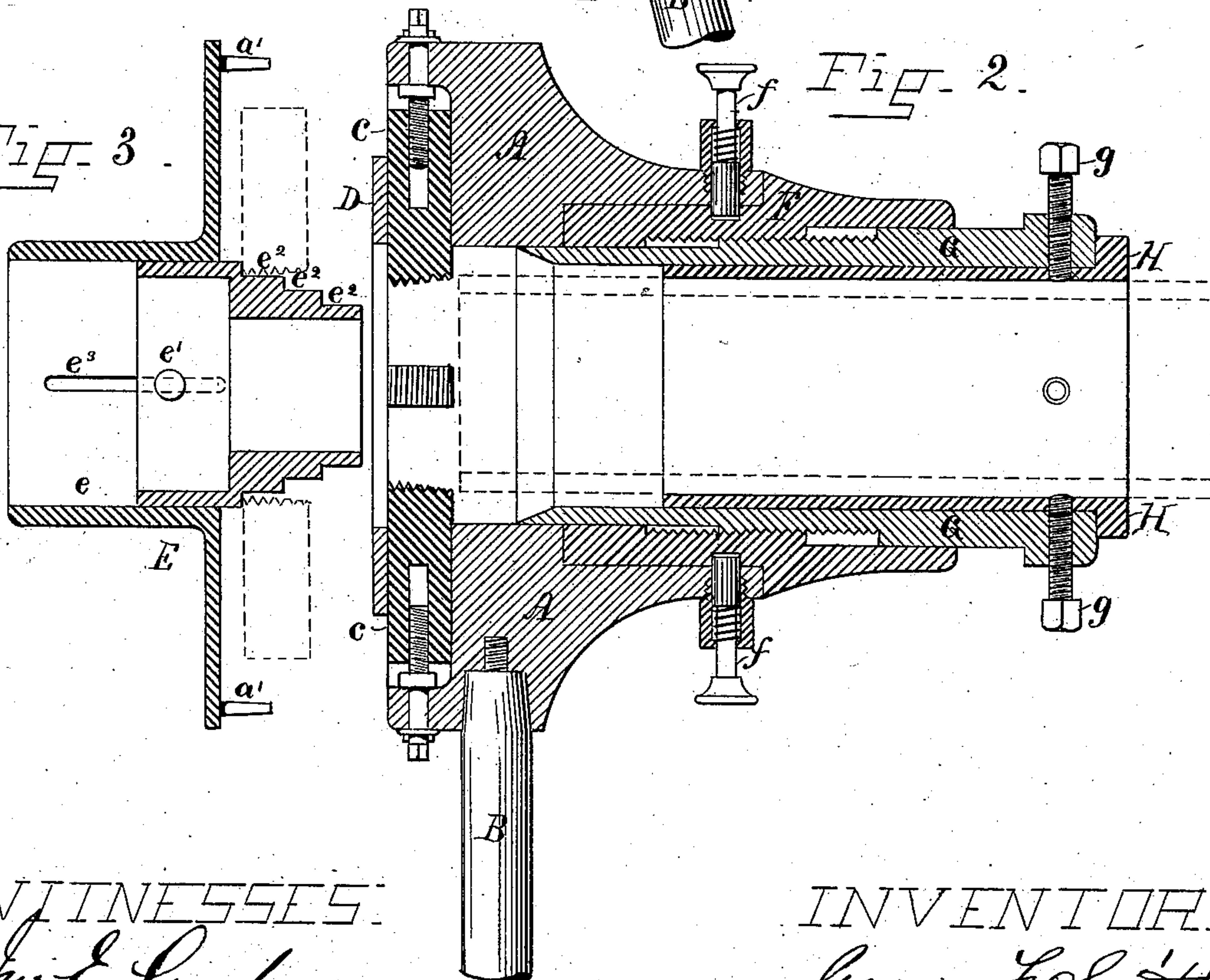


Fig. 2

WITNESSES:  
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# UNITED STATES PATENT OFFICE.

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## GAGE FOR PIPE-THREADING MACHINES.

SPECIFICATION forming part of Letters Patent No. 294,518, dated March 4, 1884.

Application filed February 21, 1883. (No model.)

*To all whom it may concern:*

Be it known that I, GEORGE F. SMITH, of Bridgeport, county of Fairfield, and State of Connecticut, have invented a new and useful  
5 Improvement in Gages for Pipe-Threading Machines; and I do hereby declare the following to be a full, clear, and exact description of the same, reference being had to the accompanying drawings, forming part of this specification.

10 This invention has reference to a gage for distancing the cutters of portable pipe-threading machines; and the invention consists in a gage having a series of steps of different diametrical distances, such steps being designed  
15 to be inserted between the cutters of a threading-machine, so that such cutters may be distanced in such manner as to operate upon pipes of different circumferences.

20 My invention further consists in the combination, with a pipe-threading machine provided at the front of its stock with a series of holes, of the gage provided with a series of pins arranged to enter said holes, so as to center the gage between the cutters, all as hereinafter set forth.

Figure 1 is an end view, partly in section, of the thread-cutting machine, showing the holes in the stock-front for centering the gage.  
30 Fig. 2 is a sectional view of the same; and Fig. 3 is a sectional view of the gage, by means of which the cutters are adjusted to the various diameters of pipe.

In the drawings, A is the stock, in which the  
35 hand-spikes B B are secured, and by which the stock is turned.

C C are the cutters, secured in radial slots and held by the ring D. The cutters C C are moved inward and outward by means of screws  
40 secured in the stock A and threaded in the cutters, so that by turning the screw-head in one direction the cutters are moved toward the center, and when turned in the opposite direction they are moved outward from the  
45 center, and thus the cutters may be adjusted to cut pipes of different diameters.

50 E is a flanged sleeve consisting of a circular plate or frame, on which projecting pins  $a'$   $a'$  are placed, which fit into the holes  $a$   $a$  in the face of the stock. The plate is provided with the sleeve  $e$ , in which the gage  $e'$  slides. This gage is provided with the steps  $e^2$   $e^2$  of diam-

eters sufficiently less than the pipes to be cut to allow the cutters, when brought in contact with the step or ring  $e^2$  designed for a pipe of  
55 the desired diameter, to cut a clean and sharp thread. The gage  $e'$  is provided with one or more screws, which pass through one or more slots,  $e^3$ , made in the sleeve  $e$ , so that the gage can be projected more or less, and (when set  
60 against the face of the stock) allow the cutters to be brought in contact with the step or ring  $e^2$  corresponding with the pipe which is to be threaded. When the cutters are adjusted, the gage is removed.

65 The stock A is mounted on the sleeve F, and can turn freely on the same. It can also be secured to the same by means of the screws  $f$ , and turn with the sleeve F. The sleeve F is provided with a screw-thread of the same pitch  
70 as the cutters, and is screwed on the threaded sleeve G, in which the bushing H is secured, which is of such internal diameter that the pipe to be cut will fit the interior of the bushing. Bushings fitting the pipes to be cut are  
75 entered into the sleeve G, and are exchanged when pipes of different diameters are to be cut. They serve to secure the proper position of the pipe with relation to the cutters.  $g$   $g$  are clamp-screws by which the pipe, when inserted  
80 close up to the cutters C C, is secured.

The operation of the machine is as follows: A pipe of any of the diameters for which the machine is constructed having to be threaded, the gage  $e'$  is first adjusted, so that when placed  
85 on the face of the stock into the holes  $a$   $a$  the cutters C C are adjusted to cut the thread of this pipe by being brought in contact with the step  $e^2$  corresponding with such pipe. The proper bushing H corresponding with such  
90 pipe is now inserted and secured by entering the screws  $g$   $g$  into corresponding holes in the bushing. The pipe is now inserted so as to nearly touch the cutters C C, as is shown in broken lines in Fig. 2. The stock A is now  
95 secured to the threaded sleeve F by the screws  $f$   $f$ , and the machine is ready to cut the thread on the pipe. For this purpose it is turned from left to right by means of the hand-spikes B B. The cutters are drawn over the end of  
100 the pipe by the sleeve F turning on the thread of the sleeve G, and thereby feeding the pipe to the cutters, or, more properly speaking, drawing the cutters over the pipe, assisted by



the inclination of the cutters themselves, for usually the pipe is firmly held in a vise. After part of the thread has been cut, the pipe may be released by unscrewing the screws *g g*, and the stock made to rotate independent of the sleeve *F* by releasing the screws *f f*. By this arrangement the threading of the pipes is much facilitated, a sharper, better, and cleaner thread is cut, and the labor and difficulty of fairly and squarely starting the thread on the pipe is avoided.

It is to be understood that my improved gage may be applied to any threading-machine of similar form to that here shown and described.

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

1. An improved device for use in connection with pipe-threading machines, consisting of a gage having a series of steps of different diametrical distances, arranged to be inserted between the thread-cutters and to distance the same for operation upon pipes of different circumferences, substantially as described.

2. The combination, with a thread-cutting machine constructed and operating substantially as herein described, and having its stock-front provided with a series of holes, of a gage consisting of a cylinder provided with a series of steps of different diameters, and a supporting-cylinder for said gage provided with a series of pins or projections arranged to enter the holes of the stock-front, substantially as described.

3. The combination, with the threading-machine herein described and its stock *A*, provided with the holes *a*, of the gage *e'*, provided with the steps *e''*, and the supporting-cylinder *E*, provided with the pins *a'* and slots *e'''*, and a series of adjusting-pins passing through said slots and into the said gage, as set forth.

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Witnesses:

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