

(No Model.)

T. E. KEAVY.

BUTTON LOCATING AND SHOE FLY CUTTING MACHINE.

No. 356,717.

Patented Jan. 25, 1887.

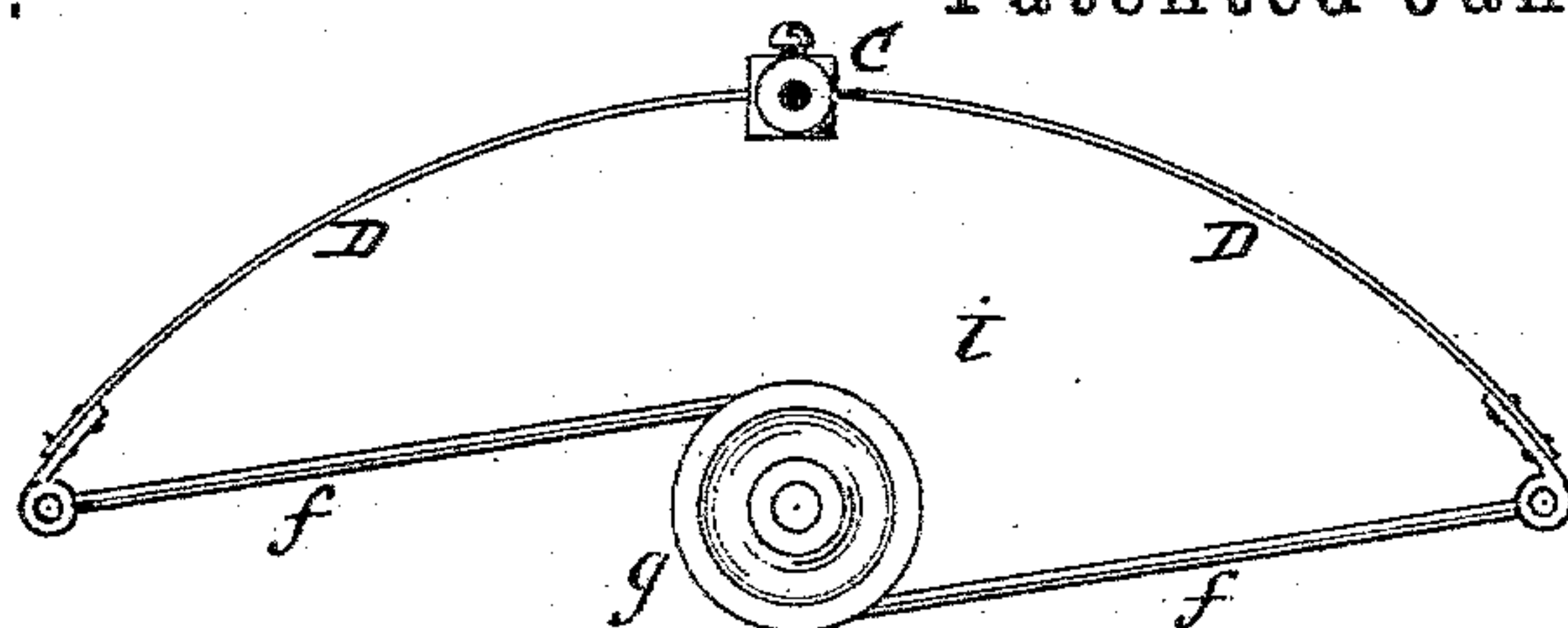


Fig. 3.

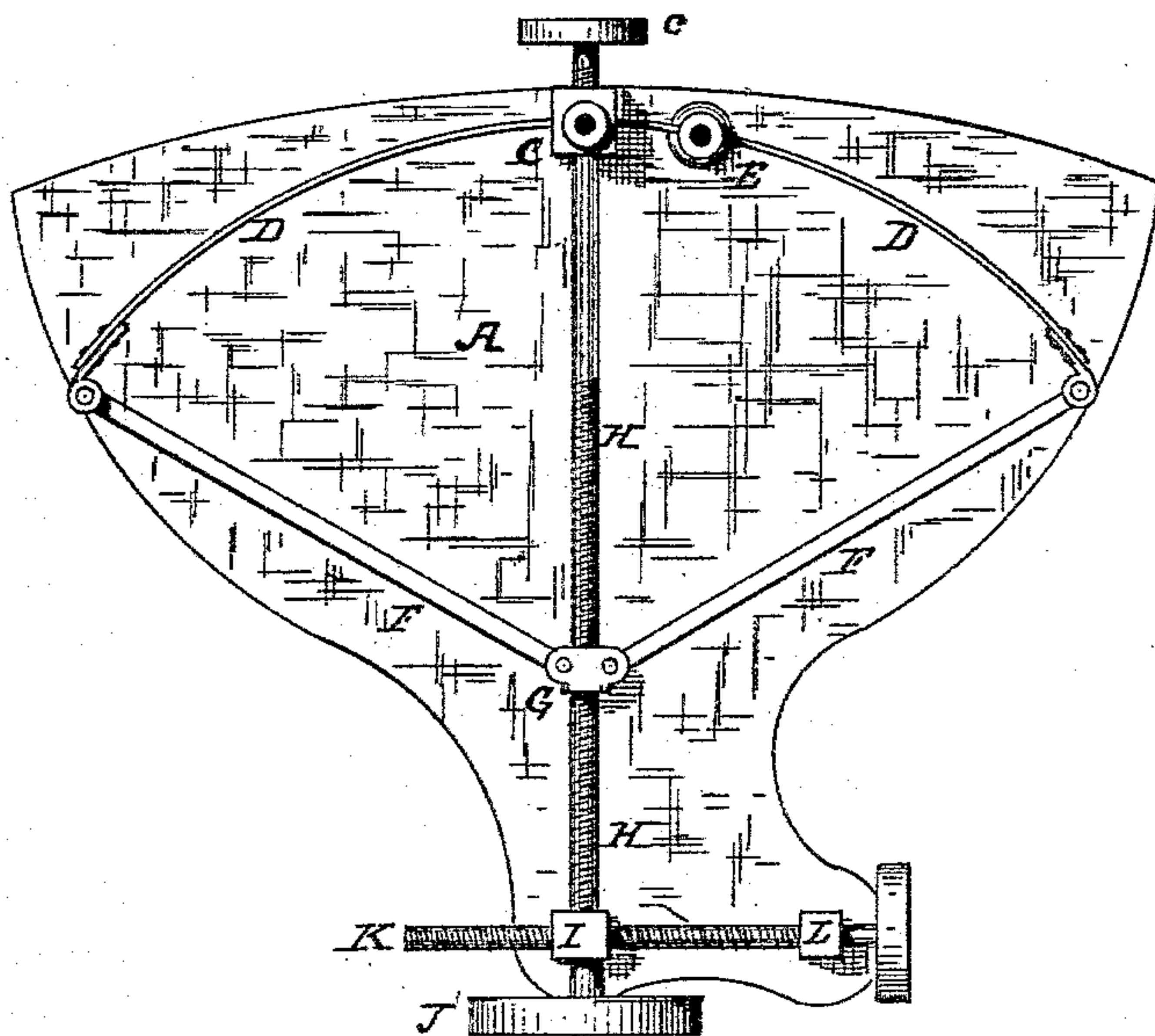


Fig. 1.

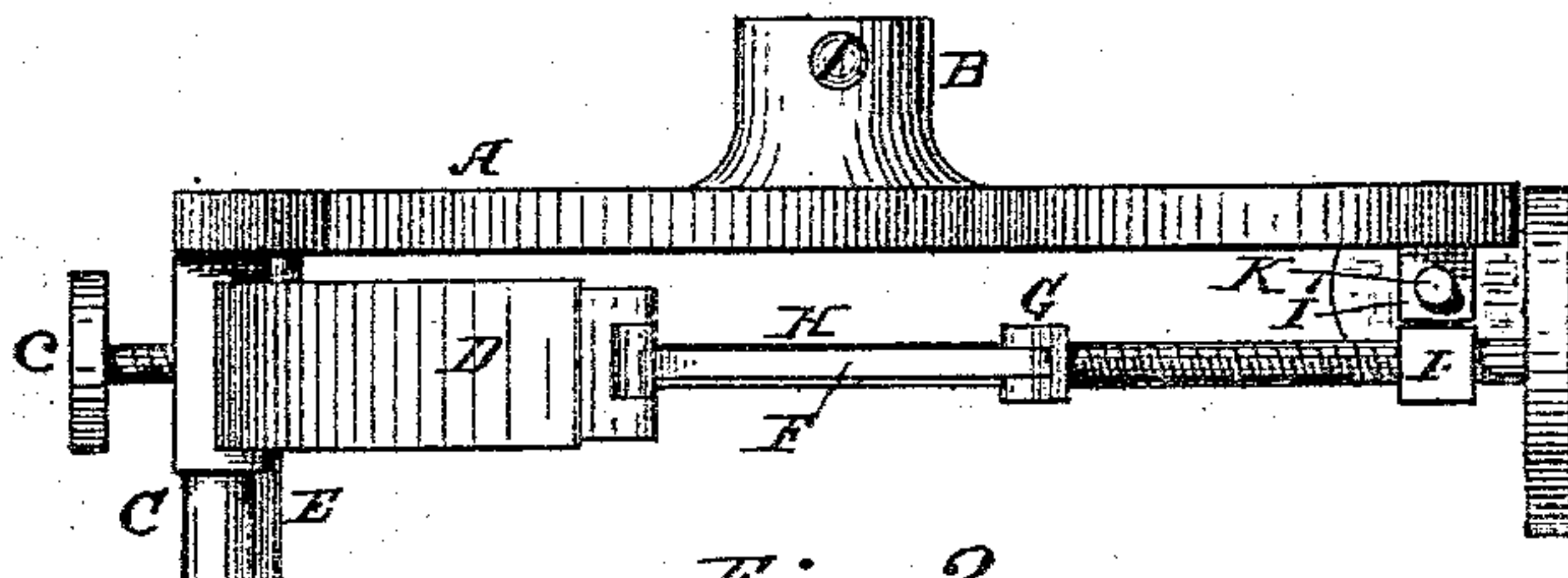


Fig. 2.

Witnesses:

Summer Nash

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Inventor:

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by C. P. Humphrey

Attys.

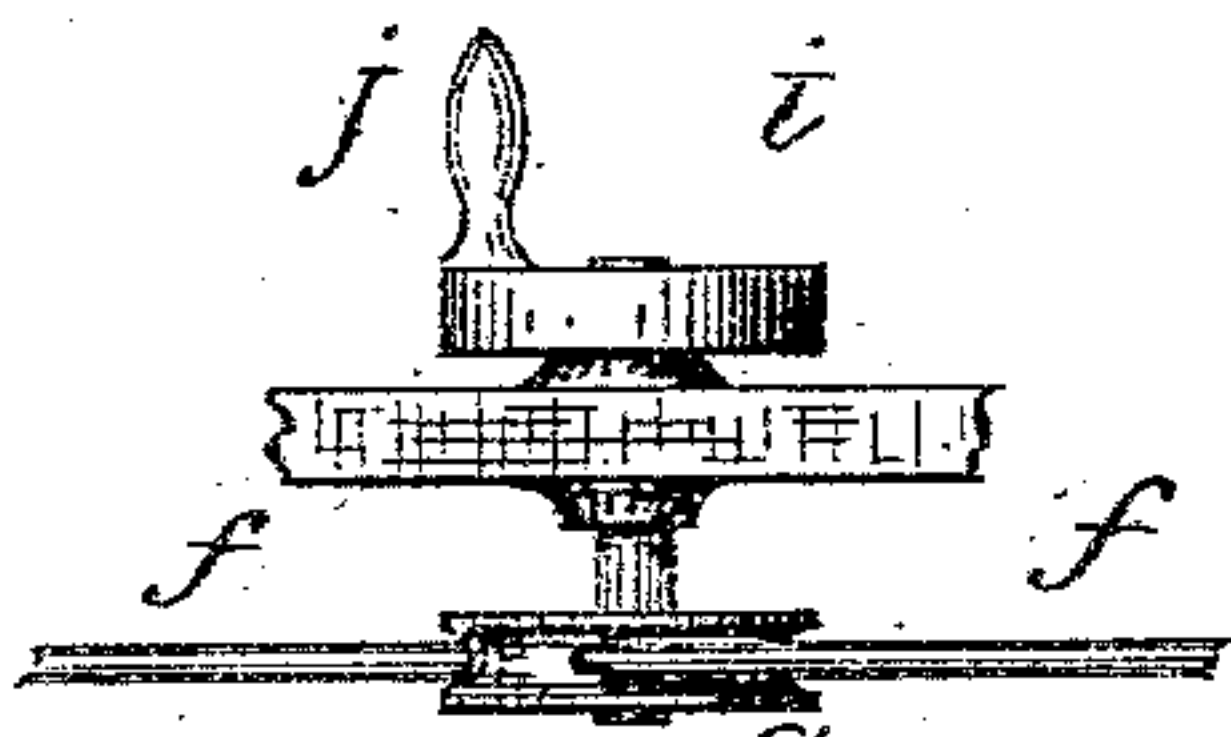


Fig. 4.



# UNITED STATES PATENT OFFICE.

THOMAS E. KEAVY, OF KENT, ASSIGNOR TO THE AKRON LOCATING MACHINE COMPANY, OF AKRON, OHIO.

## BUTTON-LOCATING AND SHOE-FLY-CUTTING MACHINE.

SPECIFICATION forming part of Letters Patent No. 356,717, dated January 25, 1887.

Application filed September 13, 1886. Serial No. 213,401. (No model.)

*To all whom it may concern:*

Be it known that I, THOMAS E. KEAVY, a citizen of the United States, residing at Kent, in the county of Portage and State of Ohio, have invented a new and useful Improvement in Button-Locating and Shoe-Fly-Cutting Machines, of which the following is a specification.

My invention has relation to improvements in that class of button-locating and shoe-fly-cutting machines wherein tool-carrying posts are mounted upon a spring band attached to a movable head and arranged to be thereby moved and held in lines of different curvature.

It consists in the devices illustrated in the accompanying drawings, as hereinafter described and claimed.

In the accompanying drawings, Figure 1 is a bottom plan of the movable head and connected parts; Fig. 2, a side elevation of the same; Fig. 3, a modification of the device for curving the band-spring, and Fig. 4 an elevation of the same with a portion of the movable head.

The head A, of the form shown, has a plane under face, and from the top projects a collar, B, by which it is connected with a press.

The apparatus is adapted to be used with any suitable press which has a vertically-reciprocating shaft, to which it can be attached, and by which it can be forced upon and withdrawn from a table which holds the material to be cut or marked; and, as its operation is obvious, no press is shown.

Attached to the front lower face of the head A is a slotted post, C, in which rests the center of a longitudinal spring, D, secured by a thumb-screw, c. Upon this spring D are mounted the tool-carrying posts, (only one of which, E, is shown,) of any desired number and distance apart, held in place by friction with the spring or by any suitable fastening device, and each, as well as the post C, provided with a socket for the reception of a marking or cutting tool.

To each end of the spring D is hinged a bar, F, the other ends of said bars being hinged to a nut, G, on the screw H. The front end of the screw H rests against the post C, where it can be retained by any suitable device. The other end, passing through a bearing, I, terminates in a thumb-screw, J, by turning which the spring D is bent into different curves. The bearing I holds the screw H laterally, and is attached to a nut, I', by a vertical pivot.

The nut I' is mounted on a screw, K, which runs in a bearing, L, attached to the head A. By this arrangement the screw K retains the screw H in the central position shown in Fig. 1, or moves it to one side, and enables it to bend the spring D into curves other than circular.

In operation, each post being provided with a marking or cutting tool, the spring is bent to the desired curve, and the head A carries the tools against or through the material.

As the prominent feature of my invention is the spring connected between its ends with a movable head and having mounted thereon tool-carrying posts, and provided with devices connected with its ends by which it can be bent into different curves, I do not confine myself to any particular device for bending said spring; but any mechanical appliance which will accomplish the same end may be employed, one form whereof is shown in Figs. 3 and 4.

In Figs. 3 and 4, in the former of which no movable head is shown, C is the fixed post, and D the spring. Connected with either end of said spring D are flexible connections *f f*, which may be of cord, chain, or metallic ribbon, their other ends being attached to a pulley, *g*, upon a shaft, *i*, operated by a handle, *j*, by turning which the spring D can be bent to any desired curve.

It is obvious that with either device a system of gages for rapidly determining the proper curve for any particular form or size of shoe-fly may be employed.

Having thus described my invention, I claim—

In a button-locating and fly-cutting machine, in which the locating and cutting instruments are operated by a head arranged to carry them to and from a cutting-table, the combination, with a bow-spring connected at its center with said head and having tool-carrying posts mounted thereon, of devices, such substantially as shown, connected with the ends of said spring and arranged to bend the same into different curves, for the purpose specified.

In testimony that I claim the foregoing I have hereunto set my hand this 3d day of August, A. D. 1886.

THOMAS E. KEAVY.

Witnesses:

R. S. AVERY,

A. A. TILLOTSON.