(No Model.) 2 Sheets—Sheet 1.

D. H. CUNNINGHAM.

MACHINE FOR CUTTING CLOTH AND PATTERNS.

No. 406,821. Patented July 9, 1889.

Fig. 2.

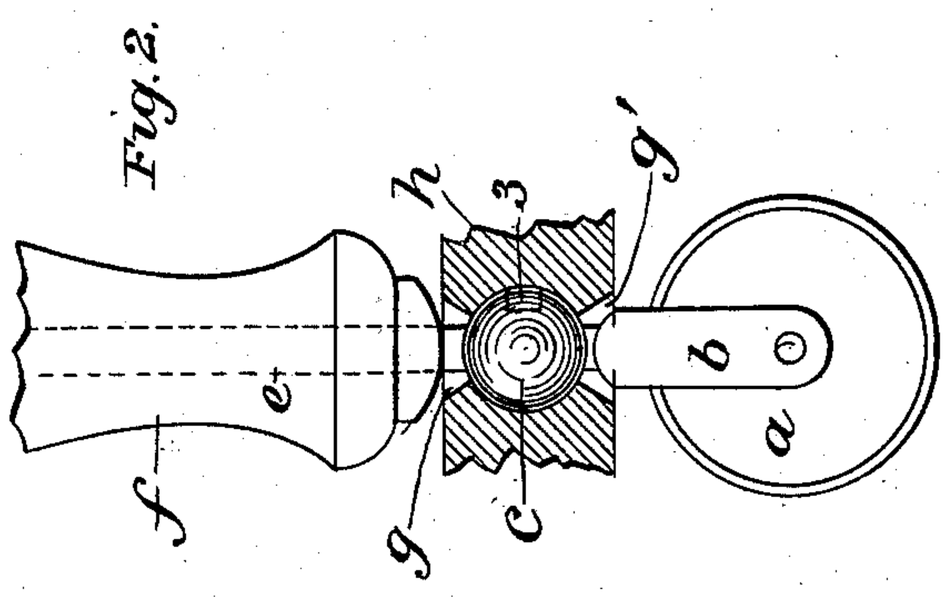
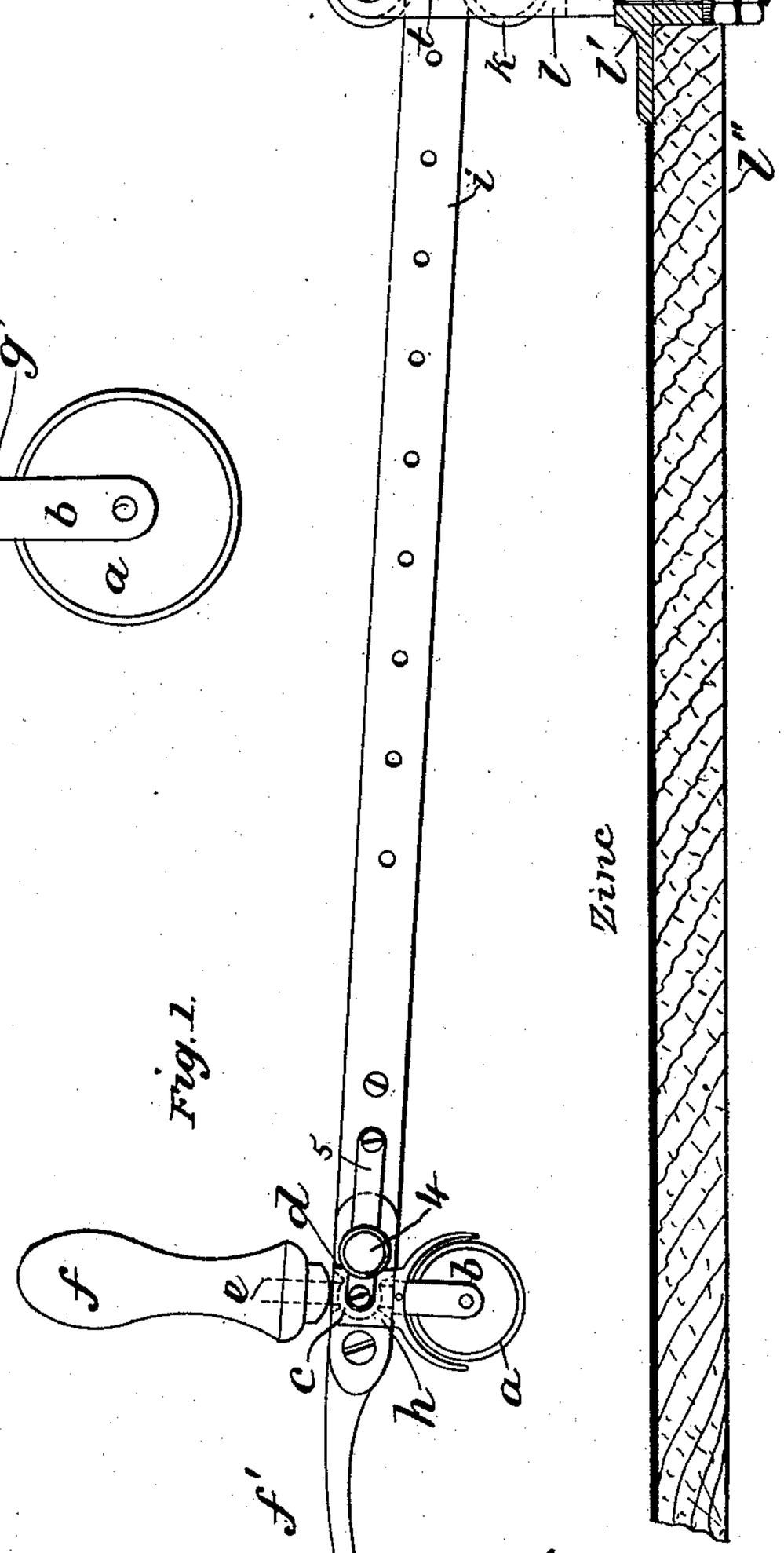


Fig. 1.



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Inventor:
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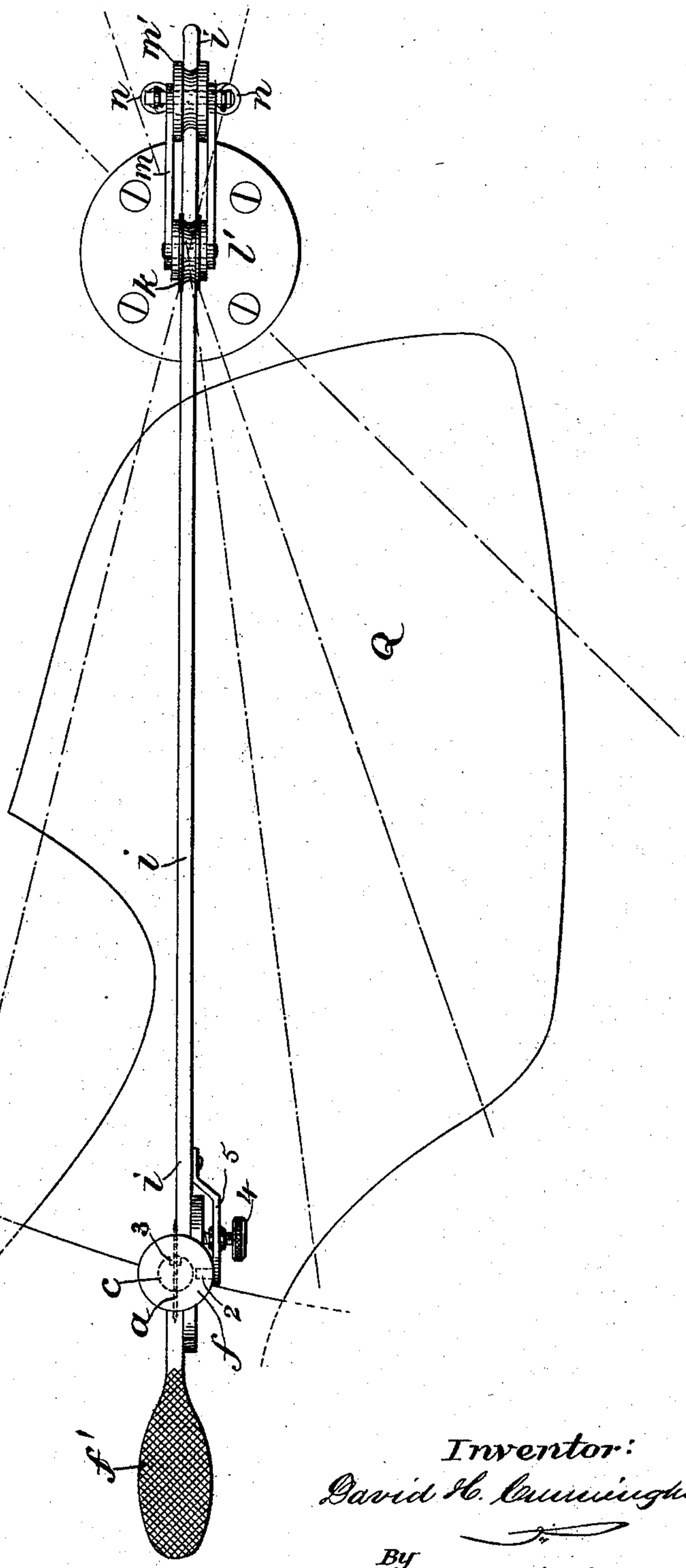

Fig. 3.

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UNITED STATES PATENT OFFICE.

DAVID H. CUNNINGHAM, OF ELIZABETH, NEW JERSEY.

MACHINE FOR CUTTING CLOTH AND PATTERNS.

SPECIFICATION forming part of Letters Patent No. 406,821, dated July 9, 1889.

Application filed April 3, 1888. Serial No. 269,511. (No model.)

To all whom it may concern:

Be it known that I, DAVID H. CUNNINGHAM, a citizen of the United States, and a resident of Elizabeth, in the county of Union and State of New Jersey, have invented certain new and useful Improvements in Cloth and Pattern Cutters, of which the following is a specification.

This invention relates to certain new and useful improvements in cloth and pattern cutters; and the invention consists in the peculiar combinations and construction of parts, all as more fully hereinafter described and claimed.

In the drawings, Figure 1 represents a side elevation, partly in section, of my improvement. Fig. 2 is a detail section and elevation of the ball-and-socket joint detached. Fig. 3 is a plan view of the device, showing the manner in which the same may be swung around either to the right or left.

Referring to the drawings by letter, *a* designates a rotary cutter mounted on the yoke *b*, integral with the ball *c*, said ball forming the male portion of the ball-and-socket joint. This ball is provided with an upwardly-extending stem *e*, upon which is mounted the handle *f*. The socket *h*, in which the ball is seated, is hollowed out at its upper and lower portion, as shown at *g g'* in Fig. 2, the object of which is to enable the handle carrying the rotary cutter to be oscillated or vibrated in either direction desired. The socket *h* is formed in the bar *i*, and one side of said socket is made removable, in order to provide for the insertion of the ball. This bar *i* passes through friction guide-rollers K, the axes of two of which pass through the vertical rotary standard *l*, the lower portion of which passes through the sleeved disk *l'*, secured to the table *l''*, preferably covered with zinc, and the lower end of said standard *l* is held thereto by means of screw-nuts l^3. Mounted upon the axis of the upper roller of the standard *l* are the vibrating arms *m*, the outer ends of which support the axis of the friction guide-roller *m'* and one end of the tension or retracting springs *n*, the lower ends of which are also connected with the vibrating arm *n'*, journaled to the bracket *o*, the end of which is provided with the vertical adjusting-screw *p*.

The bar *i* is provided with a plurality of apertures *t*, and the standards with an aperture through which a pin may be inserted to engage one of the apertures in said bar, for a purpose hereinafter described.

The ball *c* is provided at one side with a depression 3, and on the side of the bar *i* is a spring-plate 5, carrying at its free end a pin 2, regulated by the adjusting-screw 4, the function of which will be hereinafter set forth.

The operation is as follows: After several thicknesses of cloth have been spread upon the table and the lines of the pattern made thereon, the operator will then grasp the handle *f* with one hand and the handle *f'* with the other. A pressure is then brought to bear on the handle *f'*, which forces the rotary cutter through the cloth, while the position of the cutter is governed by the hand grasping the handle *f*. It will be obvious that the sliding bar *i* is free to be swung around at any degree, in fact, inscribe a true and complete circle. It can also move to and fro horizontally, which I deem one of the most important features of the invention. The moment the pressure is released from both handles the whole of the forward end of the device will leave the table by reason of the retracting-springs *n* assuming their normal position. It will be observed in Fig. 3 that the sliding rod will have moved to and fro several times, as well as having formed the arc of a circle. In this figure Q represents a pattern having been cut by the rotary cutter of the device; but when a long and true arc of a circle is required I insert a pin in the aperture *t*, which will prevent the bar *i* from moving forward, and I also turn the cutter horizontally until the pin 2, regulated by the adjusting-screw 4, shall have been pressed into the depression 3 of the ball, which locks it firmly. Thus I am able to inscribe an arc of any radius desired within the reach of the device. It will also be observed that when the operator shall have finished cutting his patterns the entire device may be swung around diametrically opposite to the former position and again go through the operation of cutting the cloth while the first-cut patterns are being removed by an assistant.

Having thus described my invention, what

I claim as new, and desire to secure by Letters Patent, is—

1. The combination, in a cloth and pattern cutter, of the yoke, the rotary cutter having its axis in the sides of the yoke, the ball forming a part of the stem of said yoke, the socket containing said ball, the handle projecting from the latter, and the sliding bar and a suitable support therefor, substantially as shown and described.

2. In a cloth-cutting machine, the combination, with a bar and a pivotal support for the same, of a rotary cutter supported by a yoke, a ball on the stem thereof, and a socket in the said bar in which the ball is mounted, the ball having a depression and the bar carrying a spring-controlled pin engaging said depression, substantially as described.

3. In a cloth-cutting machine, the combination of the sliding bar with the vertical rotary slotted standard journaled in the table, the friction-rollers having axes in said standard, the vibrating arms pivoted to the upper part of the standard, the guide-rollers mounted on said arms, the retracting-springs each having one of their ends connected with one of said arms, the vibrating arm fulcrumed near the bottom of the said standard and with which the lower ends of the retracting-springs are connected, the bracket, and the adjusting-screw at the end thereof, as set forth.

Signed at New York, in the county of New York and State of New York, this 8th day of March, A. D. 1888.

DAVID H. CUNNINGHAM.

Witnesses:

CHAS. E. FOULDS,

J. F. HURDLE.