

L. M. Berry,
Cutter Head,
No 15,365,
Patented July 22, 1856.

Fig. 3.

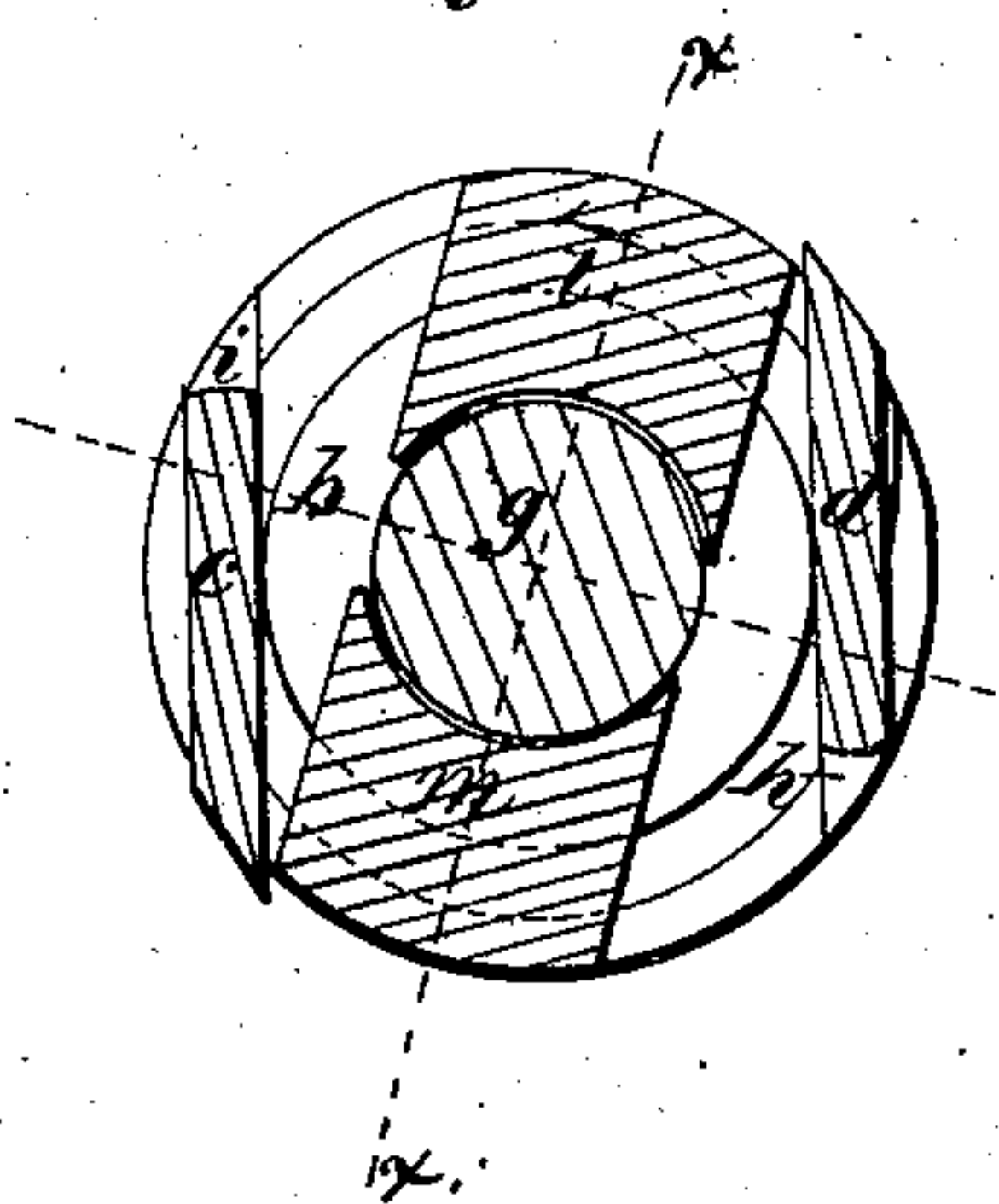


Fig. 2.

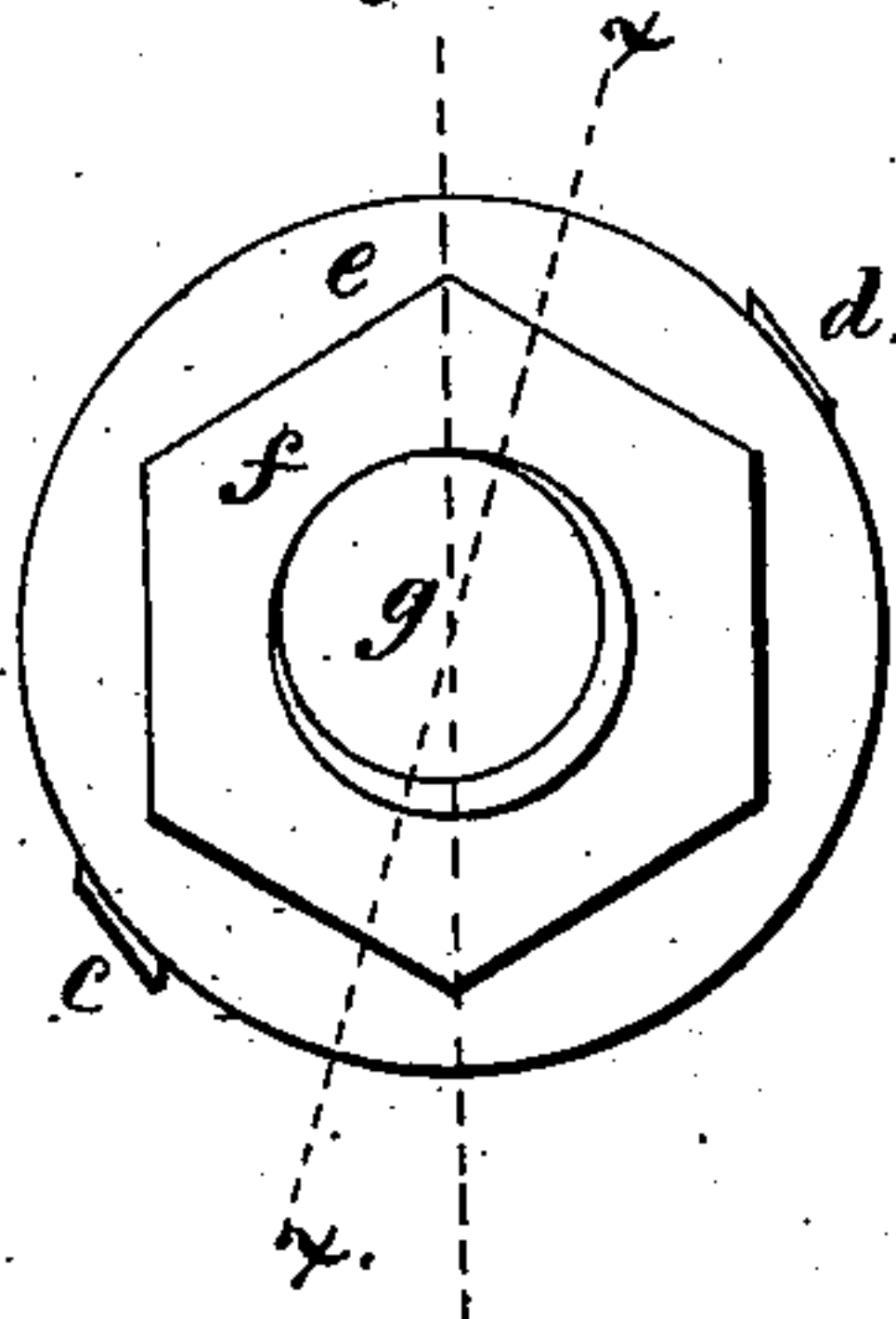


Fig. 1.

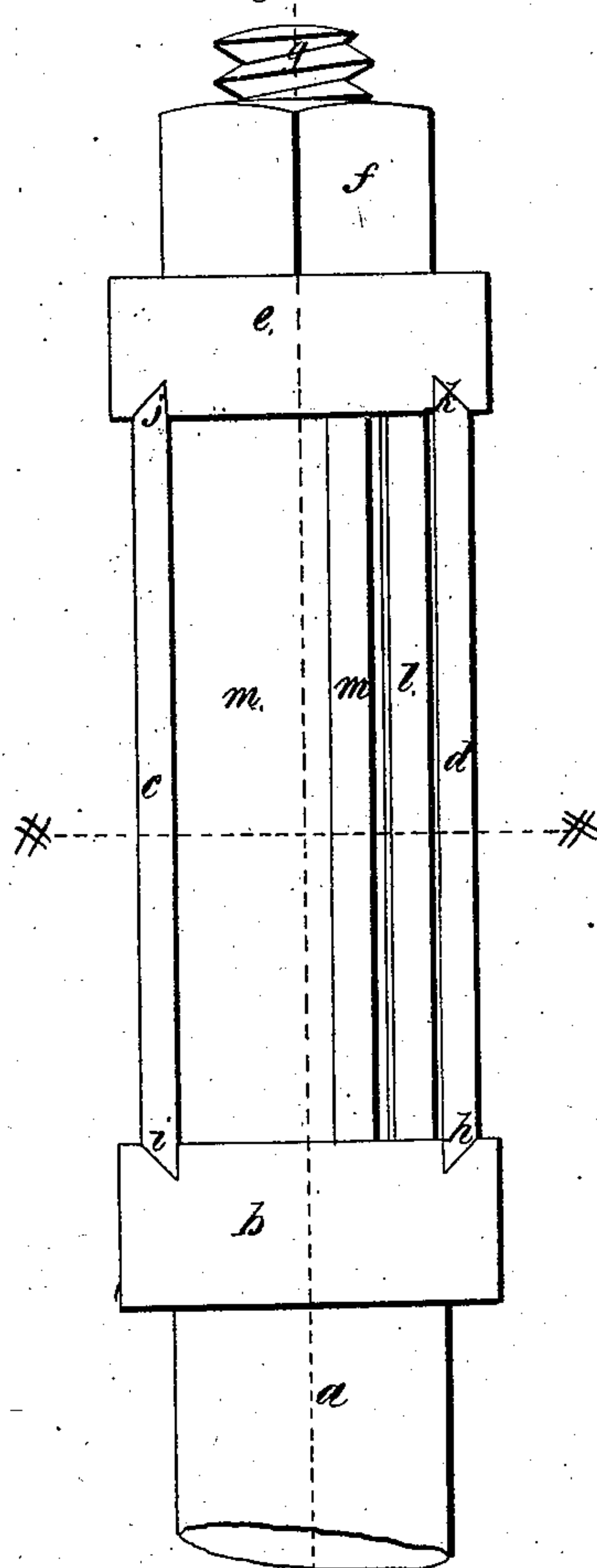
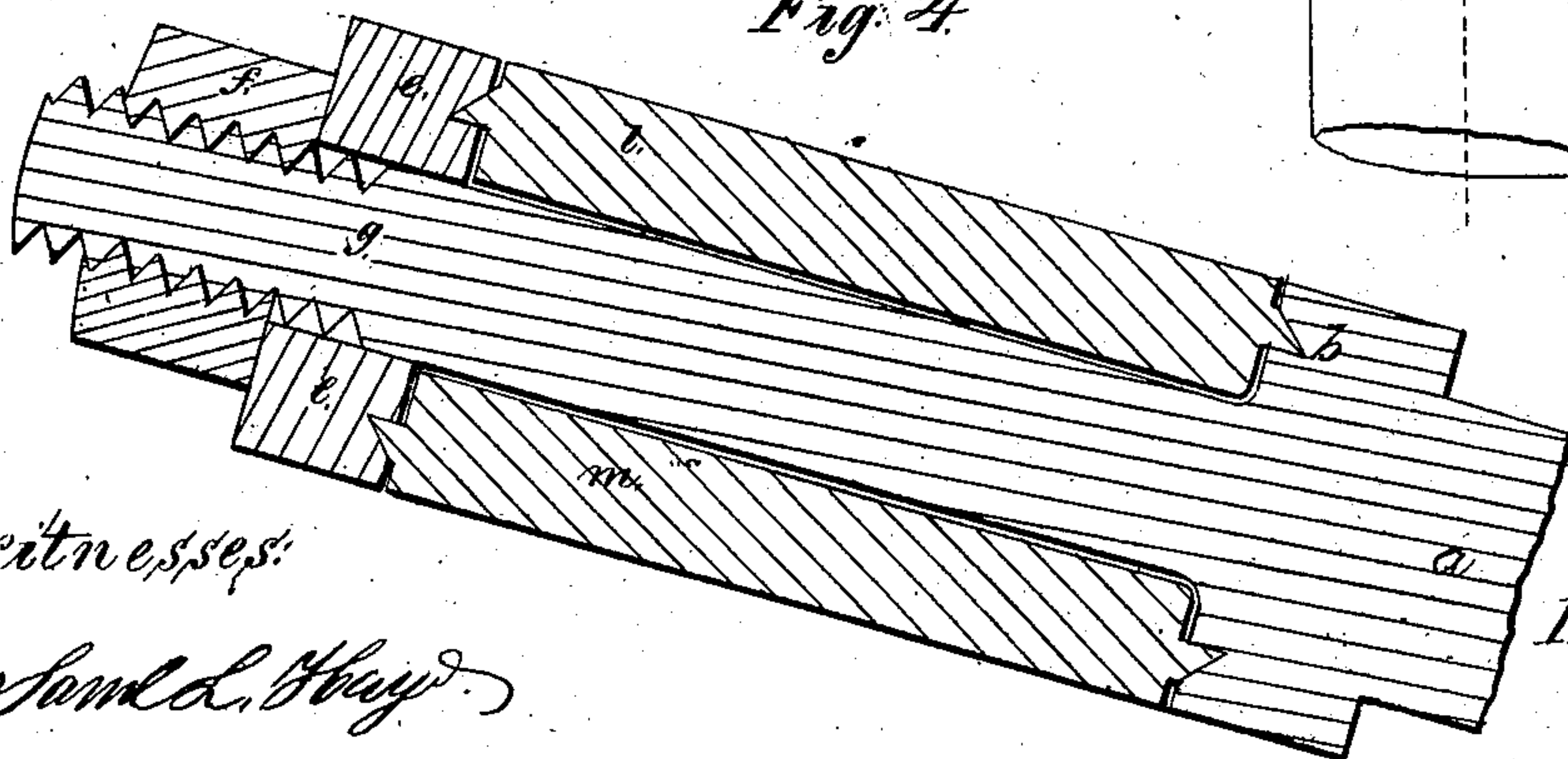


Fig. 4.



Witnesses:

Saml. L. Hay

John. S. Willmuth

Inventor:

Lewis. H. Berry

UNITED STATES PATENT OFFICE.

LEWIS M. BERRY, OF BOSTON, MASSACHUSETTS.

CUTTER-HEAD FOR PLANING-MACHINES.

Specification of Letters Patent No. 15,365, dated July 22, 1856.

To all whom it may concern:

Be it known that I, LEWIS M. BERRY, of Boston, in the county of Suffolk and State of Massachusetts, have invented a new and
5 useful Improvement in Cutter-Heads for Machines for Cutting Irregular and other Forms; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the
10 accompanying drawing, and to the letters of reference marked thereon, said drawing forming a part of this specification, and in which—

Figure 1, is an elevation of a cutter head
15 to which my improvement is applied. Fig. 2, is a plan of the same. Fig. 3 is a section at line $\#$, $\#$, and plan of parts below. Fig. 4, is a section at line x x .

Like letters indicate the same part in all
20 the figures.

The head here represented is such as is used in Nathl. Gear's machines with the exception of the addition of my improvement.

25 (a) is the arbor; (b), the collar which supports the lower end of the cutter; (c) and (d), the cutters; (e) the loose collar fitted to (g) and holding the upper end of the cutters, and (f) is the nut screwed to
30 the upper end of the part (g). The ends of the cutters are held in the grooves at (h) (i) (j) (k).

Now without my improvement, there being a strong tendency whenever any considerable depth of cut is taken for the cutters to draw the stuff being worked toward the axis of the head, there is great danger from the liability of the stuff being loosened from the pattern which guides it and from
40 other similar causes of its being thus drawn inward and the cutters thereby suddenly taking a deeper hold spoiling the article being cut and throwing it with great violence (these machines usually being run
45 3000 to 4000 revolutions and upward per minute), thus endangering the limbs and lives even of the operator and others in the vicinity. A large number of serious accidents of this nature and of cutting or rather
50 tearing the hands and arms of operatives might be cited in evidence of the danger of operating the machines.

My improvement although it might not entirely prevent an operative from cutting his hands with the machine yet entirely counteracts the tendency to draw the hands or stuff inward to cut and tear them.

My improvement consists in the application of the part (l) and (m) in such a manner that they may be easily adjusted so
60 as to vary the proportions of the throats or openings between these pieces and the knives while these pieces (l) and (m) are at the same time kept concentric in their relation to the axis of the head. To accomplish this the collars (e) and (b) are provided with grooves similar to those in which the cutters are held but of an annular form concentric with the axis of the head, and the
65 ends of these pieces (l) and (m) are provided with ends corresponding in shape to these grooves, their faces being turned to correspond to the shape of moldings designed to be cut. In the drawing they are straight as they are applied to a plane
70 cutter head. These pieces are to be fitted of the same length as the cutters so that when the nut is screwed down upon the collar (e) these pieces (l) and (m) are held, together with, and in a manner similar, to the
75 cutters, so that whatever tendency there may be for the stuff to be drawn in by the cutters that tendency is counteracted by the contact of the stuff with the pieces (l) and (m), and these pieces being adjustable the
80 space between them and the knives may be made large or small according to the light or heavy cut which it may be desirable to take.

I am aware that in the common hand
90 plane and in the spoke shave and similar tools that part of the stock immediately forward of the cutter serves in some respects a similar purpose, such therefore I do not claim, but
95

What I claim as my invention and desire to secure by Letters Patent is—

The application and use of the pieces (l) and (m) substantially in the manner and for the purposes set forth.

LEWIS M. BERRY.

Witnesses:

SAML. L. HAYS,

JOHN T. WILLMARTH.