

(No Model.)

3 Sheets—Sheet 1.

S. WHEELER.

MACHINERY FOR PERFORATING TOILET OR WRAPPING PAPER.

No. 390,327.

Patented Oct. 2, 1888.

Fig. 2.

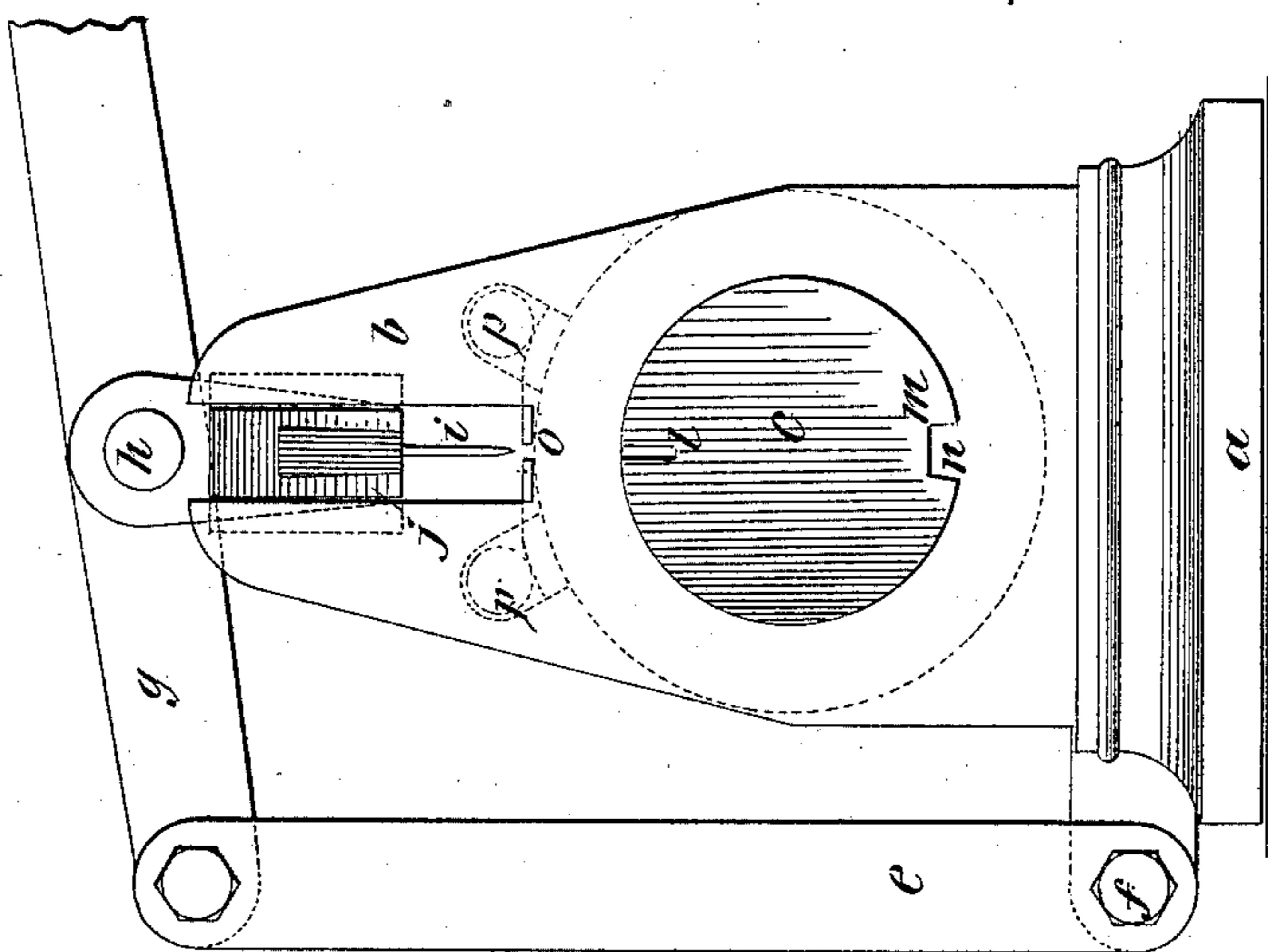
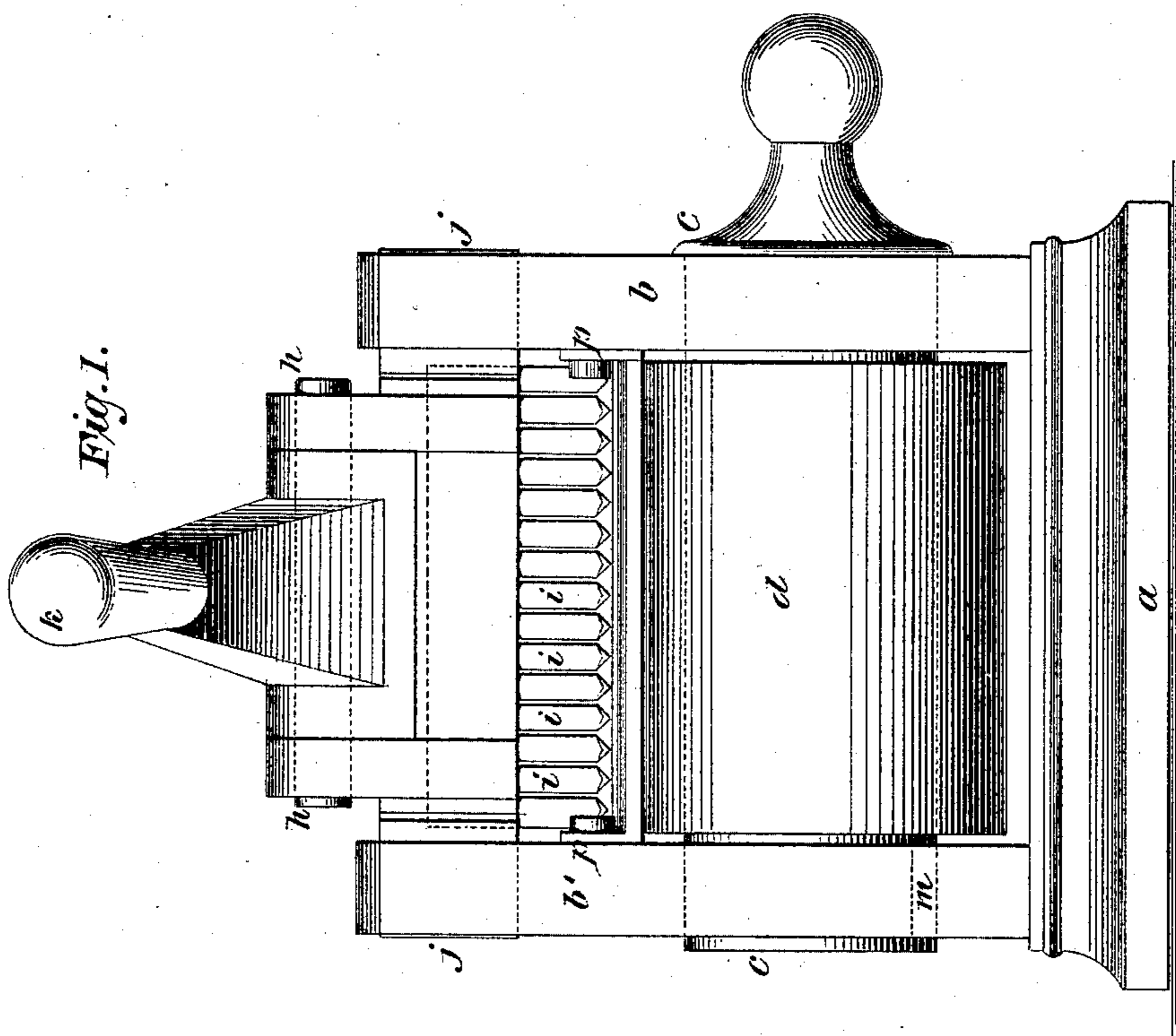


Fig. 1.



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Fig. 4.

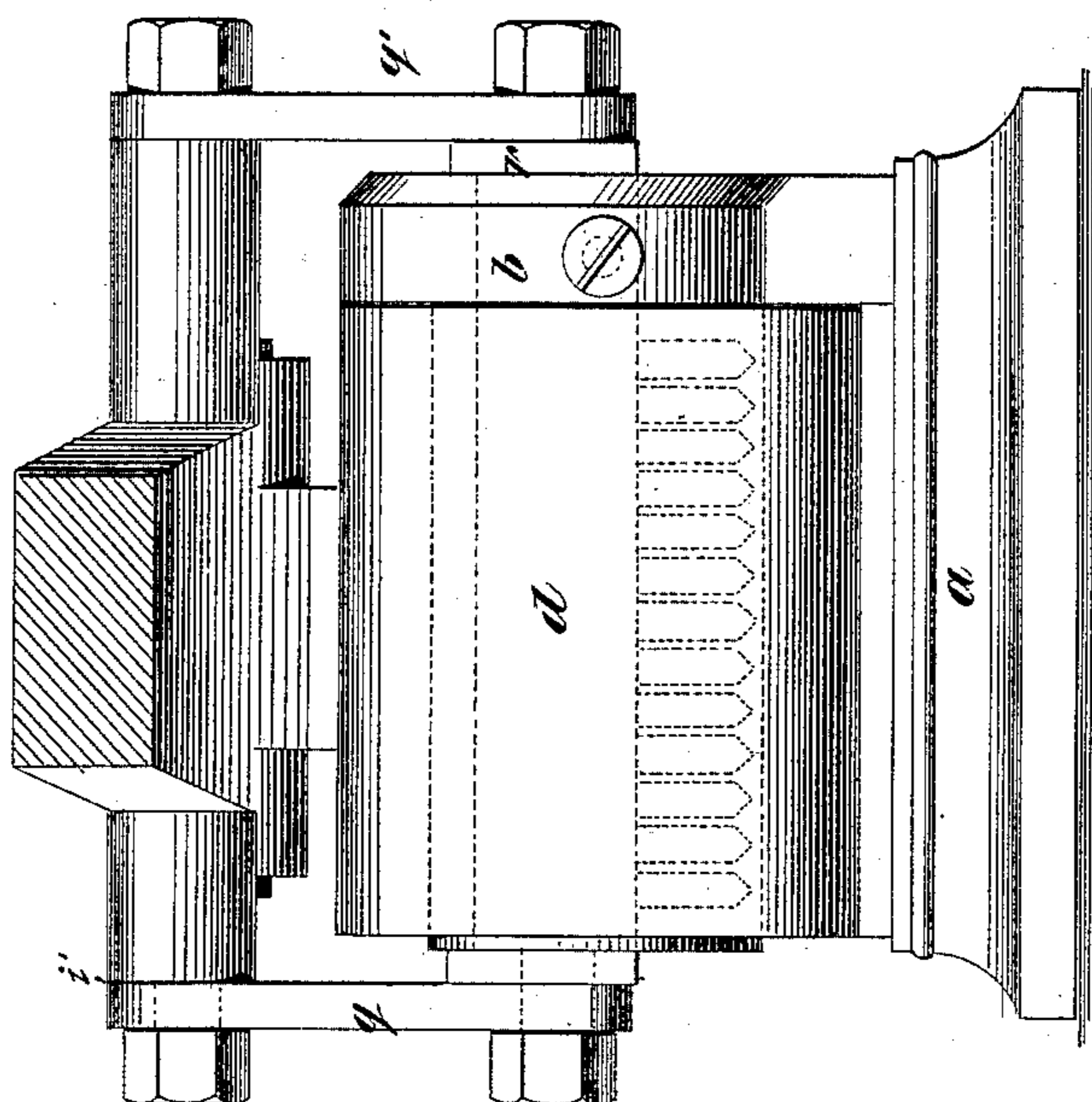


Fig. 6.

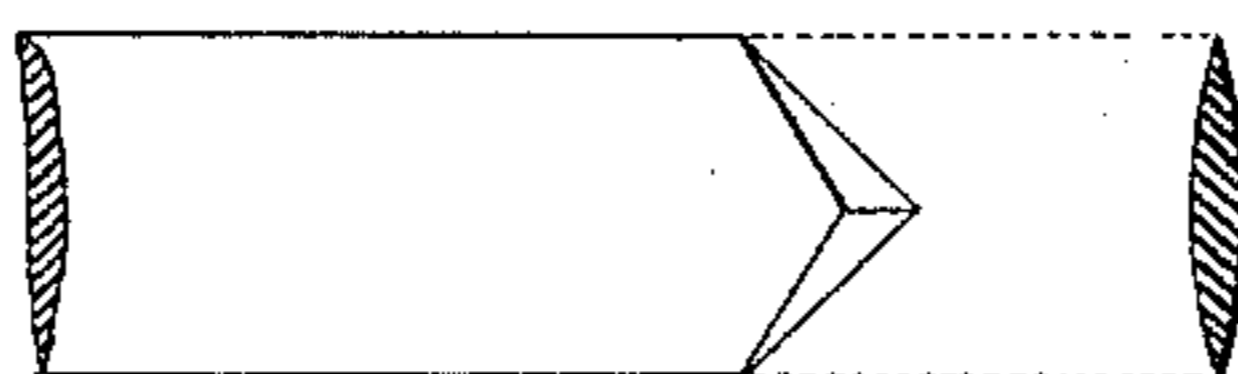
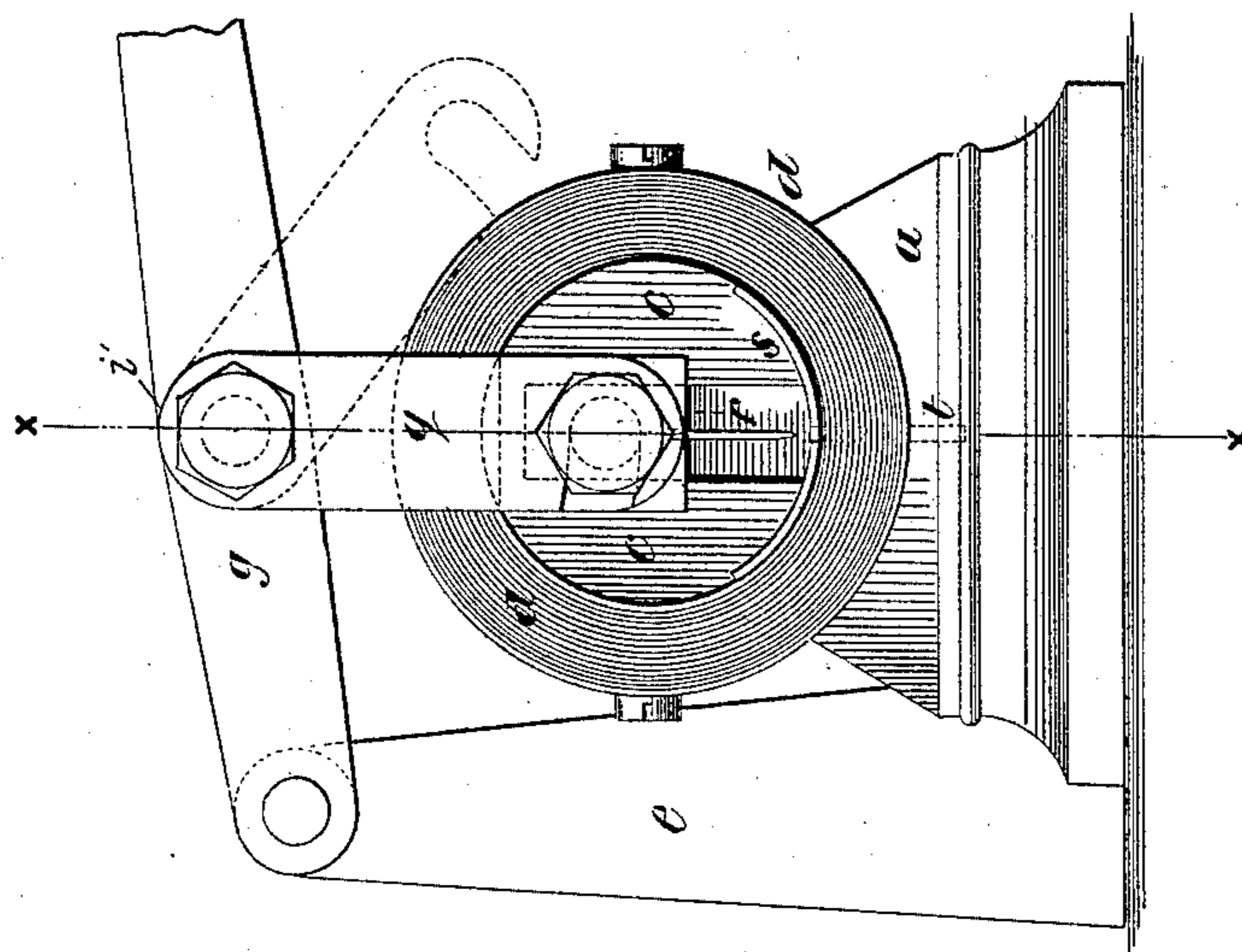


Fig. 3.



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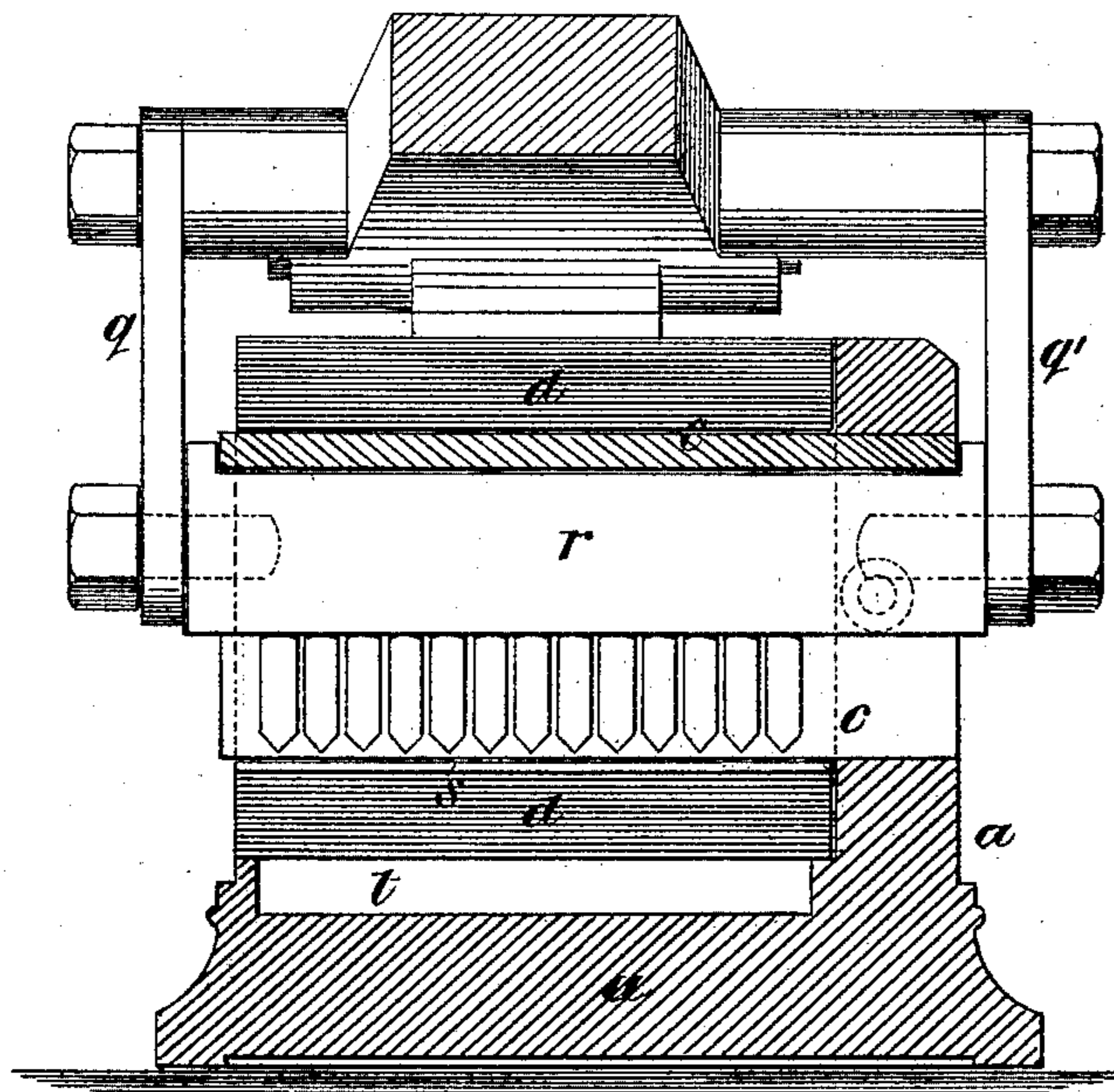
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Fig. 5.



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MACHINERY FOR PERFORATING TOILET OR WRAPPING PAPER.

SPECIFICATION forming part of Letters Patent No. 390,327, dated October 2, 1888.

Application filed May 11, 1886. Serial No. 201,809. (No model.)

To all whom it may concern:

Be it known that I, SETH WHEELER, of the city and county of Albany, in the State of New York, have invented certain new and useful Improvements in Machinery for Perforating Toilet and Wrapping Paper, of which the following is a specification, reference being had to the accompanying drawings, forming part thereof.

10 This invention relates to means for perforating toilet-paper in the roll.

It consists in the use of perforators of a lancet-like form, by means of which the series of slits are punched into the roll of paper through its whole thickness. In connection with these means for perforating paper I use a solid former, on which the roll of paper is first placed before it is submitted to the operation of the perforating-lancets.

20 In the drawings, Figure 1 is a front elevation of a machine by means of which the roll of paper is perforated from its external periphery. Fig. 2 is an end view of such a machine. Fig. 3 is an end view of a machine by means of which the paper is perforated from its internal periphery. Fig. 4 is a front view of this last-mentioned machine. Fig. 5 is a longitudinal vertical section taken in the line *x x* of Fig. 3. Fig. 6 is a view of one of the lancets.

30 In Figs. 1 and 2, *a* is the base of the machine. *b b'* are two standards, into which are inserted a core, *c*, containing the roll of paper *d* to be perforated. *e* is a link connected at its lower end, *f*, to the bed-plate or base *a*, and having attached at its upper end a lever, *g*. This lever carries at the point *h* a gang of lancets, *i i*, &c., which move in ways *j j*, &c., of the standards *b b'*. This being a hand-machine, the pressing down of the lever *g* by the handle *k* will force the gang of lancets *i i*, &c., down through the body of the roll of paper *d*. *l* is a longitudinal groove in the core *c*, through which the lancets pass after having perforated the paper. The position of this groove *l* relatively to the gang of lancets is determined by the slot *m*, passing over a pro-

jection, *n*, of the standard *b'*, which keeps the groove *l* perfectly vertical and in a line with the gang of lancets. *o* is a stripper bolted at *p p* to the standards *b b'* and containing openings through which the lancets pass.

In the machine shown in Figs. 3, 4, and 5 the base *a* is solid. The roll of paper *d* is inserted in the machine with its core *c* by removing the link *q*, which is one of two links, *q* and *q'*, attached to the lever *g* at *i' i'*, &c., the link *q* being hooked onto the cross-head *r* after the paper has been so inserted through the standard *b*. The core *c* is constructed with a long vertical slot, in which the cross-head is permitted to move up and down, thus carrying the gang of lancets *i i* down through the perforations of a stripping-plate, *s*, into the body of the roll of paper *d*. A long groove, *t*, is made in the bed of the machine, upon which the paper rests, and into which the points of the lancets pass after having completely perforated or slitted the body of the paper.

The operation of both these machines is evident from this description of their parts, and need not here be detailed. It will be perceived that these are hand-machines; but with the proper gearing power can be applied thereto.

I claim—

1. In toilet or wrapping paper perforating machinery, the combination of a gang of lancets with a central core, for the purpose of perforating the several concentric layers of a roll of paper at one and the same operation, substantially as set forth.

2. In toilet and wrapping paper perforating machinery, the combination of a reciprocating gang of lancets with a core centrally supporting a roll of paper and having in its side facing the lancets a longitudinal groove receiving the points of the lancets when they have passed through the roll, substantially as described.

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Witnesses:

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ROBT. H. MARSHALL.