

(No Model.)

T. C. ROBINSON.

TRIMMING ATTACHMENT FOR SEWING MACHINES.

No. 286,153.

Patented Oct. 2, 1883.

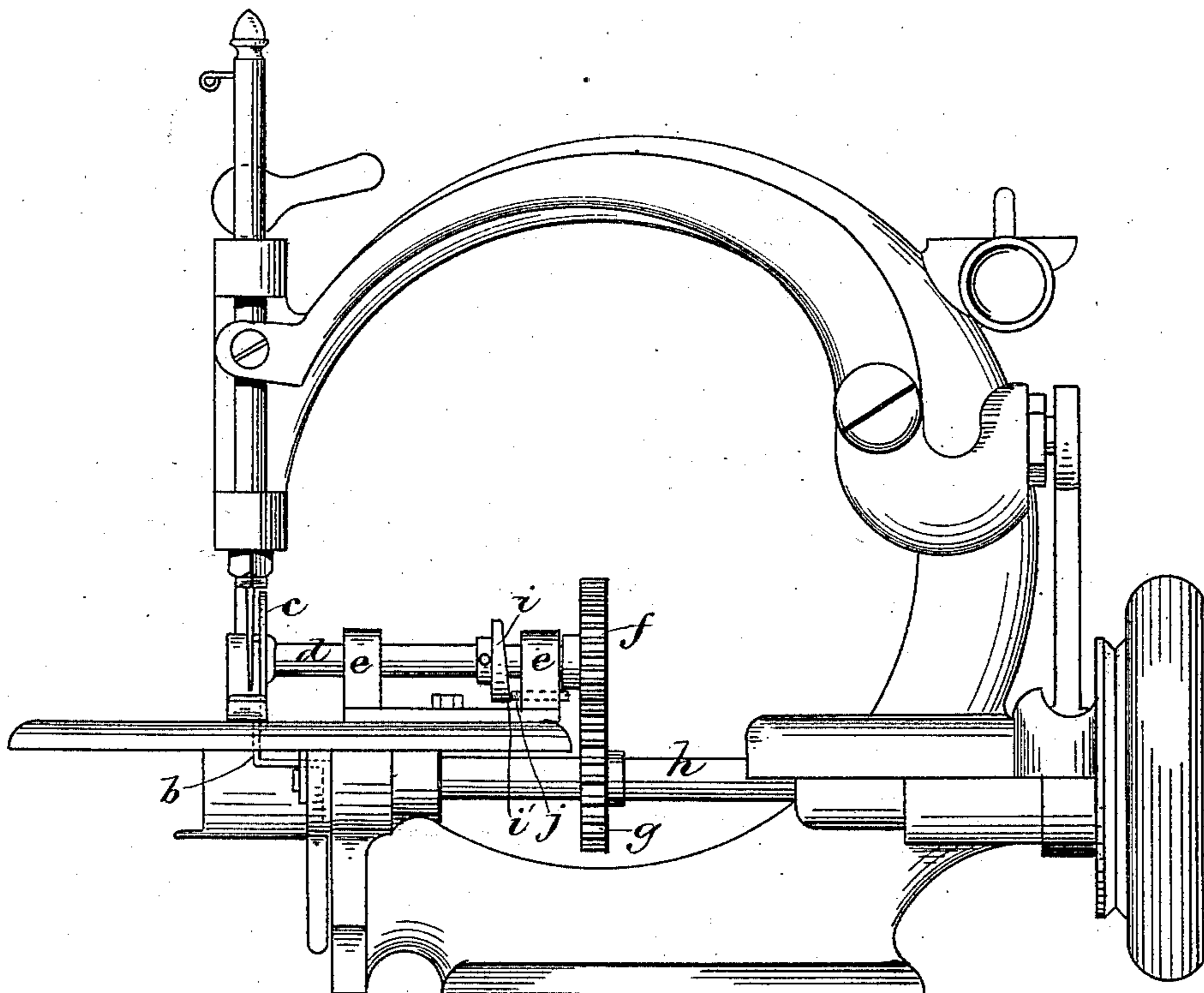


FIG. 1.

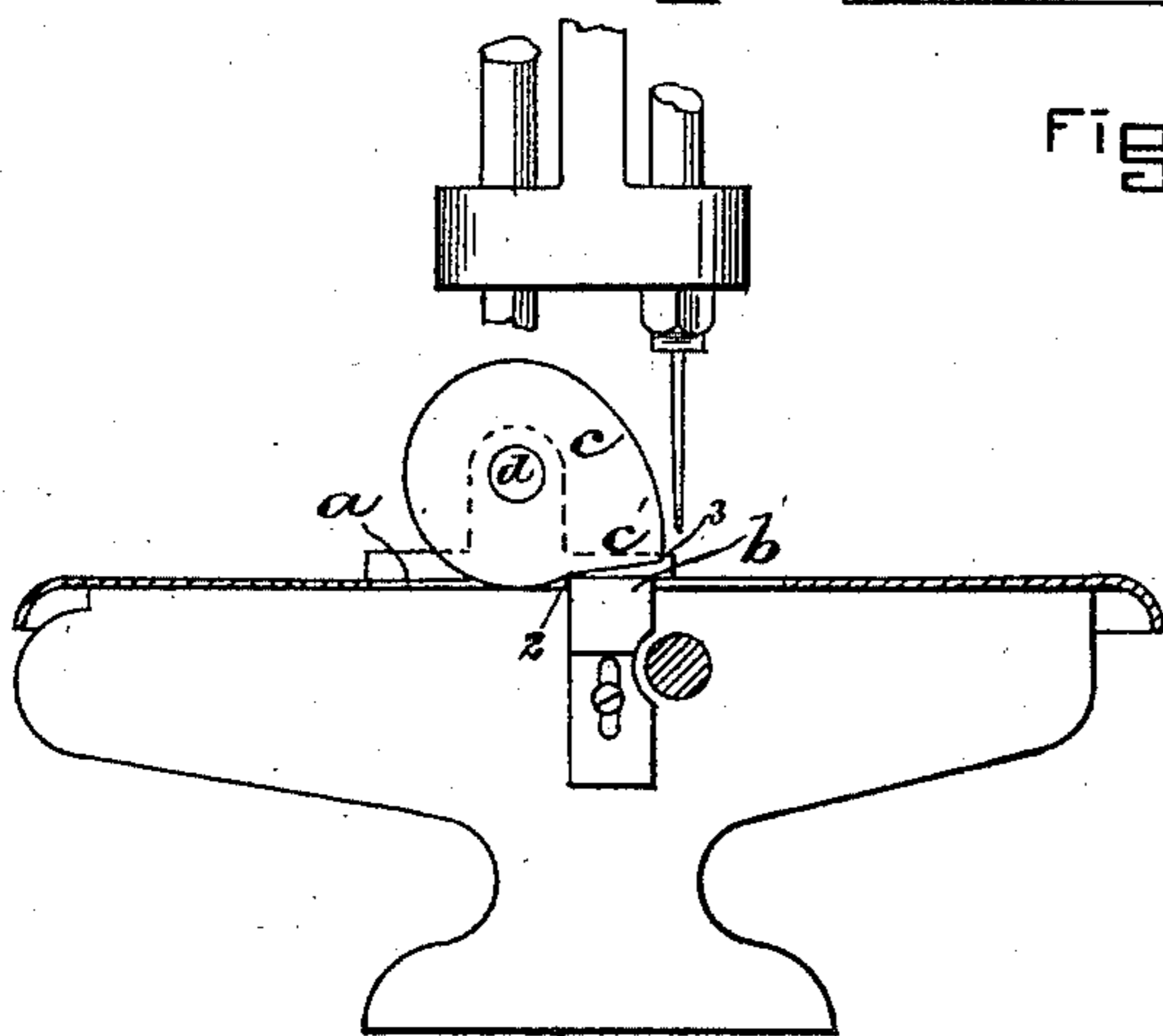


FIG. 2.

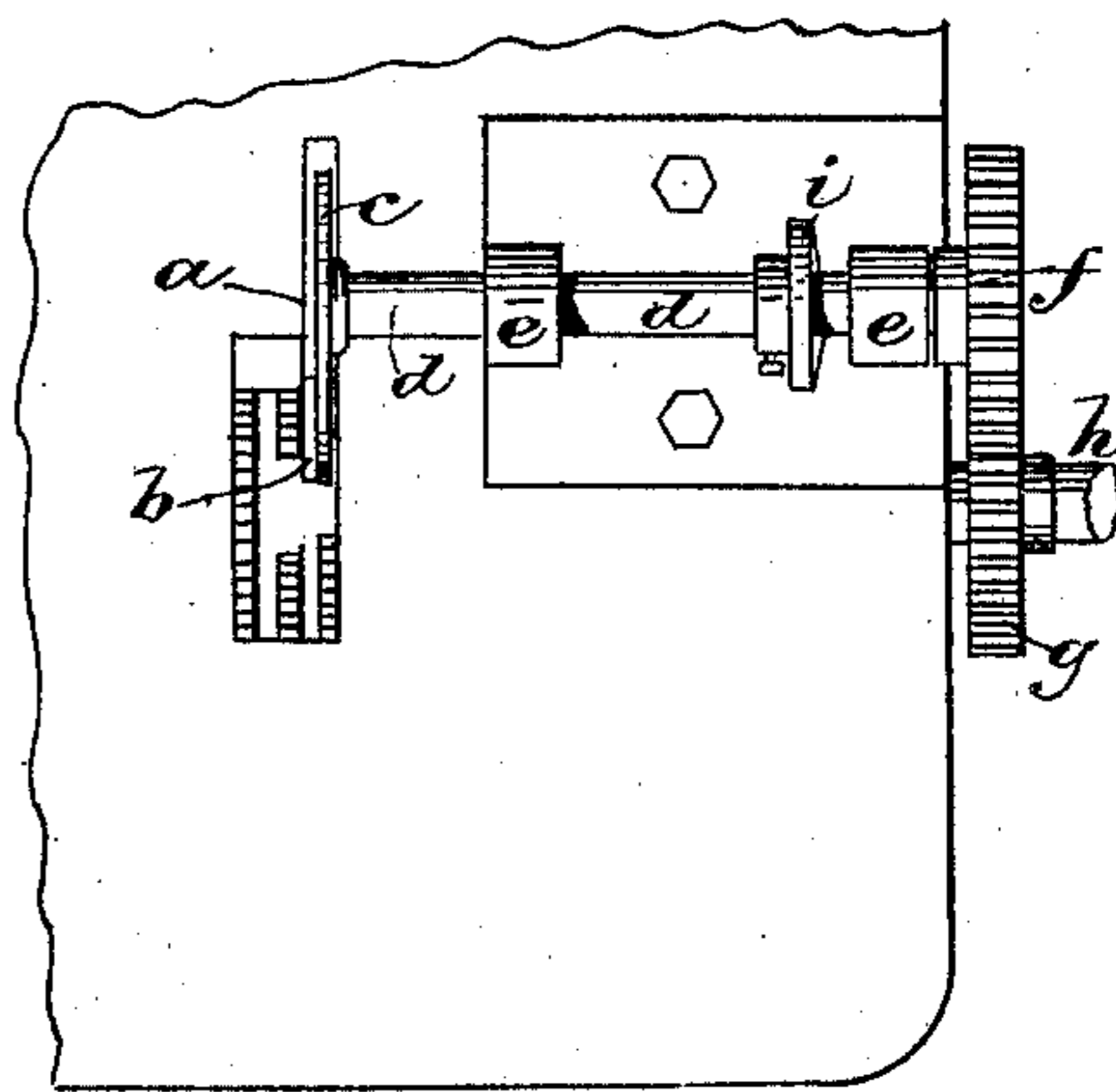


FIG. 3.

WITNESSES

*A. L. White*  
*Joseph Leeder*

INVENTOR

*J. C. Robinson*  
*by Myself or Brother*  
*Attys.*

# UNITED STATES PATENT OFFICE.

THOMAS C. ROBINSON, OF BOSTON, MASSACHUSETTS.

## TRIMMING ATTACHMENT FOR SEWING-MACHINES.

SPECIFICATION forming part of Letters Patent No. 286,153, dated October 2, 1883.

Application filed June 9, 1883. (No model.)

*To all whom it may concern:*

Be it known that I, THOMAS C. ROBINSON, of Boston, in the county of Suffolk and State of Massachusetts, have invented certain Improvements in Trimming Attachments for Sewing-Machines, of which the following is a specification.

This invention relates to sewing-machine trimming attachments employing rotary blades working in slots in the bed or throat-plate of the machine.

My invention has for its object to enable a blade of this class, while rotating on an arbor journaled in fixed bearings, to operate intermittently, and also to provide intermittently-acting pressure-regulating devices to press the cutting-edge of the rotating knife against a fixed co-operating blade only when said rotating cutting-edge is in position for operation.

To these ends my invention consists in the improvements which I will now proceed to describe and claim.

Of the accompanying drawings, forming a part of this specification, Figure 1 represents a side elevation of a Willcox & Gibbs sewing-machine provided with my improved attachment. Fig. 2 represents a section through the bed of the machine, showing a side view of the rotary knife. Fig. 3 represents a top view of my attachment.

The same letters of reference indicate the same parts in all the figures.

In the drawings, *a* represents a slot in the throat-plate of the machine, and *b* represents a fixed shear-blade secured to a fixed part of the machine, and forming a part of one side of said slot.

*c* represents a rotary blade affixed to an arbor, *d*, which is journaled in fixed bearings *e*, and has at its rear end a pinion, *f*, meshing with a pinion, *g*, on the driving-shaft *h* of the machine. The blade *c* is substantially disk-shaped, with an offset, *c'*, at one side. One edge of said offset is sharpened, and forms a cutting-edge extending from 2 to 3, Fig. 2, said cutting-edge extending outside of the periphery of the body of the blade, and being formed to assume substantially the same relation to the fixed blade *b*, in passing the latter, that the edge of an ordinary vertically-reciprocating trimming-knife assumes to the fixed blade with which it co-operates. It will be

seen, therefore, that the cutting-edge of the rotary blade co-operates with the fixed blade, and cuts the material interposed between said blades intermittently, or once during each rotation of the blade. A portion of the periphery of the blade *c* constantly projects sufficiently into the slot *a* to prevent the material being trimmed from passing under the blade beyond the point where it is cut by the co-operating cutting-edges.

The described devices constitute a cheap and efficient trimmer, easily applied to a machine of the kind shown, and entirely independent of the head or arm of the machine. Heretofore a rotary-disk trimmer has been made having a cutting-edge extending continuously around its perimeter and journaled in fixed bearings. Said cutter being always in contact with the work partially obstructs the feed movements of the same. A disk-trimmer has also been intermittently operated by alternately raising and lowering it while in operation; but such intermittent operation involves complication of mechanism and expense which are avoided by my improvement. I prefer to give the arbor *d* a slight freedom of longitudinal movement, and provide it with a cam, *i*, having a swelled or thickened portion, *i'*, corresponding in position to the cutting-edge of the blade *c*. Said thickened portion comes in contact once during each rotation of the arbor *d*, and while the cutting-edge of the blade *c* is co-operating with the fixed blade *b*, with a fixed projection, *j*, on the frame of the machine. Said projection is in the present instance an adjustable screw, and when it comes in contact with the thickened portion of the cam it exerts endwise pressure on the arbor *d* through said cam, and thus causes the cutting-edge of the rotary cutter to impinge against the fixed blade in the same manner that the movable cutting-edge is pressed against the fixed blade in the invention described in Letters Patent issued to me June 5, 1883, No. 278,825. As soon as the cutting-edge of the rotary blade has performed its work, the thickened portion of the cam passes away from the projection *j* and the endwise pressure ceases, so that there is no marked friction of the moving parts, excepting during the cutting operation.

I claim—

1. In a sewing-machine, the combination of the throat-plate having a slot and a fixed blade at one side thereof, a shaft or arbor rotated in fixed bearings above the bed of the machine, and a rotary blade affixed to said arbor, and having a perimeter projecting continually into said slot, and an offset cutting-edge, forming a part of said perimeter, co-operating once during each rotation of the shaft with said fixed blade, the projection of the perimeter of the rotary blade into the slot preventing the displacement of said blade from its operative position with relation to the fixed blade, as set forth.

2. A sewing-machine provided with a shaft or arbor rotated in fixed bearings, a rotary blade affixed to said arbor, and provided with an offset cutting-edge adapted to act intermittently, a slot in the throat-plate or bed, into which said blade projects, a fixed blade at one side of said slot, adapted to co-operate with

the rotary blade, and intermittently-acting devices for pressing the rotating cutting-edge against the fixed blade only when said blades are in co-operation, as set forth.

3. The combination, with a sewing-machine having a slot, *a*, in its throat-plate, and a fixed blade, *b*, at one side or edge of said slot, of the shaft *h*, journaled in fixed bearings, and adapted to be rotated by the driving-shaft of the machine, the blade *c*, affixed to the arbor, projecting into the slot *a*, and having the offset cutting-edge *c'*, the cam *i*, affixed to said shaft, and the adjustable bearing *j* for said cam, as set forth.

In testimony whereof I have signed my name to this specification, in the presence of two subscribing witnesses, this 7th day of June, 1883.

THOMAS C. ROBINSON.

Witnesses:

C. F. BROWN,  
A. L. WHITE.