

(No Model.)

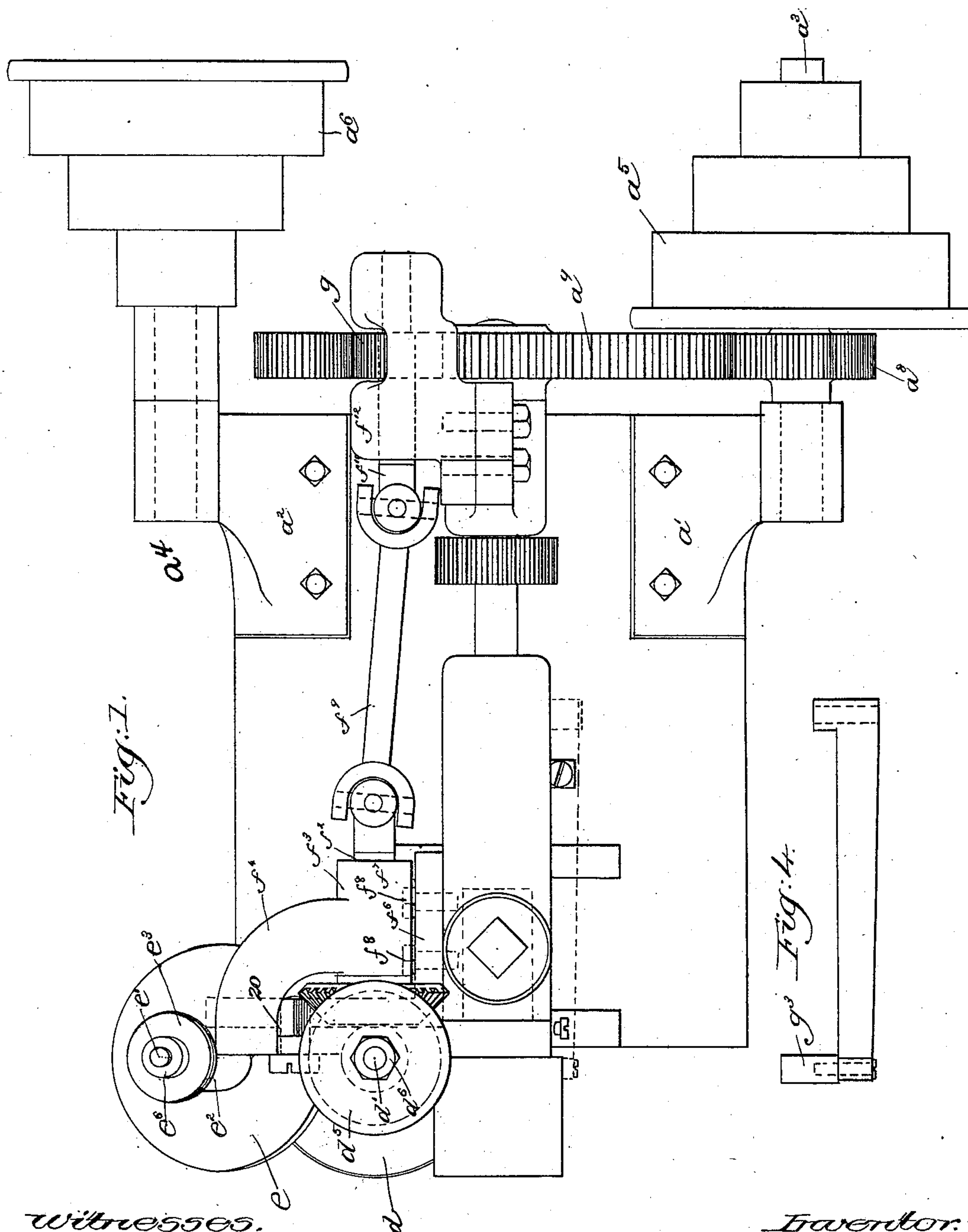
3 Sheets—Sheet 1.

W. S. FITZGERALD.

SKIVING MACHINE.

No. 370,327.

Patented Sept. 20, 1887.



Witnesses.

Howard F. Eaton.

Fred L. Emery.

Inventor.

Walter S. Fitzgerald.

by Leroy Gregory attys.

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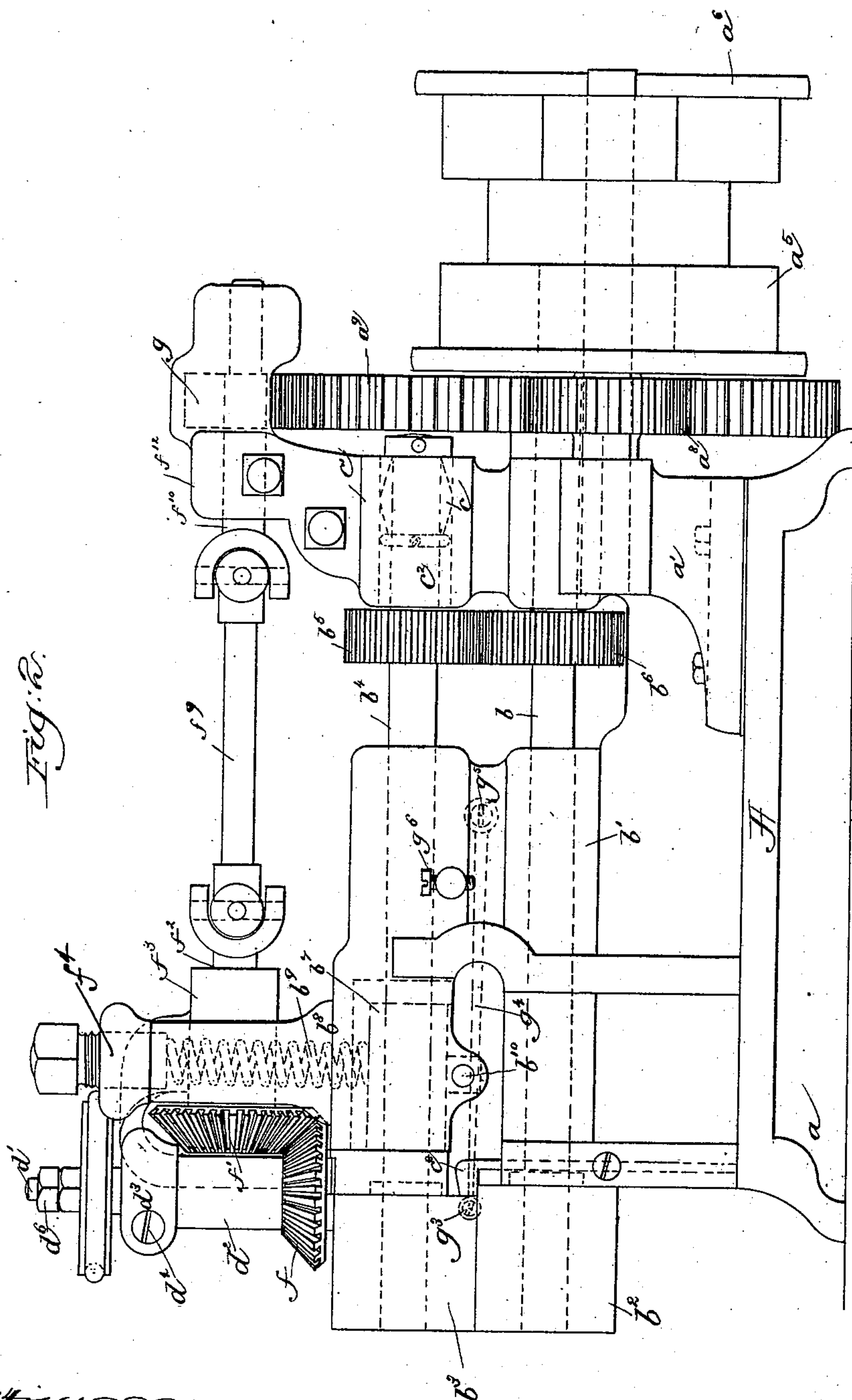
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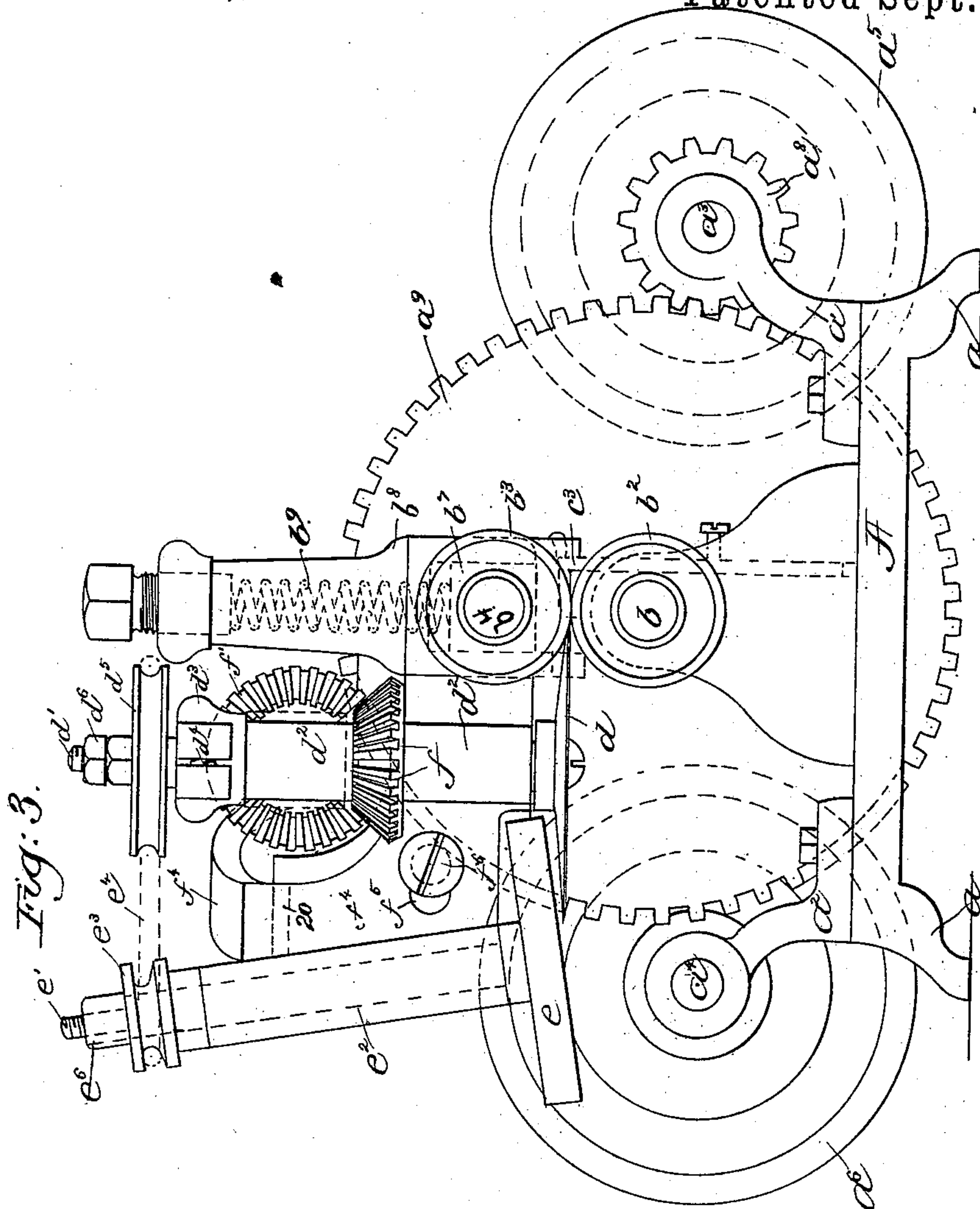
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Howard F. Eaton.
Fred L. Emery.

Inventor.
Walter S. Fitzgerald.
by Crosby & Gregory attys

UNITED STATES PATENT OFFICE.

WALTER S. FITZGERALD, OF BOSTON, MASSACHUSETTS, ASSIGNOR OF ONE-HALF TO ALFRED S. DINSMORE, OF SAME PLACE.

SKIVING-MACHINE.

SPECIFICATION forming part of Letters Patent No. 370,327, dated September 20, 1887.

Application filed July 8, 1887. Serial No. 243,722. (No model.)

To all whom it may concern:

Be it known that I, WALTER S. FITZGERALD, of Boston, county of Suffolk, and State of Massachusetts, have invented an Improvement in Skiving-Machines, of which the following description, in connection with the accompanying drawings, is a specification, like letters on the drawings representing like parts.

This invention relates to skiving-machines for skiving leather for boots and shoes, and is an improvement upon the skiving-machine shown and described in United States Letters Patent No. 228,183, granted to me June 1, 1880.

The particular features in which my invention consists will be pointed out in the claims at the end of this specification.

Figure 1 is a top or plan view of a skiving-machine constructed in accordance with my invention; Fig. 2, a side elevation; Fig. 3, a front or end view, and Fig. 4 a detail to be referred to.

The base A, provided with legs a , has secured to it, as herein shown, on opposite sides uprights a' a'' , forming bearings for shafts a^3 a^4 , upon which are mounted conical pulleys a^5 a^6 , the pulleys a^5 being shown as reversely mounted to the pulley a^6 .

The shaft a^3 has mounted on it a small gear, a^8 , in mesh with a large gear, a^9 , on a shaft, b , having bearings in the frame b' , secured to the base A.

The rotating shaft b , near one end of the machine, has mounted upon it a feed-wheel, shown as a roller, b^2 , with which preferably co-operates a roller, b^3 , on a second rotating shaft, b^4 , held in movable bearing and driven by the shaft b through gears b^5 b^6 .

The rotating shaft b^4 has bearings in a block, b^7 , vertically movable in a recess in the head b^8 of the frame, (see Fig. 3,) a spring, b^9 , within the chambered head b^8 acting to keep the said block in its lowest or normal position, the latter being determined by a stop-pin, b^{10} , in the sides of the frame below the block b^7 .

The bearing c in the portion c' of the frame through which the shaft b^4 passes is made externally like a double cone, (see dotted lines, Fig. 2,) and the said bearing, being supported at its central part only, is free to rock as the shaft b^4 is moved up and down, substantially

as in my patent referred to, a collar, c^2 , on the shaft preventing displacement of the bearing c .

The leather to be skived is fed between the rollers b^3 b^2 , the edge of the leather bearing against a guide, c^3 , secured, as shown, to the frame of the machine, the roller b^3 being moved up and down by leather of uneven thickness. The leather, after passing through the rollers b^3 b^2 , is acted upon by a circular knife, d , secured to a shaft, d' , extended through a box, d^2 , upon which rests, as shown, a split collar, d^3 , supported by the box d^2 , and clamped to the shaft d' by the screw d^4 , (see Figs. 2 and 3,) a pulley, d^5 , being secured to the shaft d' , the shaft d' being raised and lowered to adjust the position of the knife d by nuts d^6 .

The knife d is kept sharpened by an emery or other wheel, e , secured to a shaft, e' , extended through a box, e^2 , (see Fig. 2,) the said shaft being above the box, a pulley, e^3 , connected by a band, e^4 , (see dotted lines, Fig. 3,) with the pulley d^5 on the knife-shaft, the shaft e' being adjustable by means of a nut, e^6 , to bring the emery-wheel in contact with the knife d , and thereafter be removed from it as desired.

The shaft d' has secured to it a bevel-gear, f , in mesh with a bevel-gear, f' , on a shaft, f^2 , journaled in a box, f^3 , forming part of a casting, f^4 , connecting the boxes d^2 e^2 , the said casting being provided with a slot, f^5 , (see Fig. 3,) through which is extended a screw, f^6 , which secures the said casting to a bracket, f^7 , (see Fig. 1,) fastened, as shown, by screws f^8 to the frame of the machine, the said casting being adjustable in guides 20 (see dotted lines, Fig. 2) in the said bracket, to enable the knife to be moved toward the feed-wheels, to thus compensate for wear upon the knife.

The shaft f^2 is connected by a universal joint to a link, f^9 , joined at its other end by a universal joint to a shaft, f^{10} , journaled in a portion, f^{12} , of the frame. (See Fig. 1.)

The shafts f^{10} f^2 , connected by the link f^9 , are rotated by a gear, g , on the shaft f^{10} , the said gear being driven by the gear a^9 in mesh with the small gear a^8 on the driving-shaft a^3 .

Instead of the roller b^3 , I may employ a presser, g^3 , (see Figs. 2 and 4,) secured to one end of a spring, g^4 , mounted on a stud, g^5 , the

said spring being acted upon by a set-screw, g^6 , to keep the presser upon the leather between it and the feed-wheel b^2 .

The feed-wheels b^3 b^2 may be of any desired shape to secure the required shape of scarf desired, which may be tapering, concave, or convex, or of other form to supply the demand.

I claim—

1. In a machine for skiving leather, the combination, with a shaft, a knife, and a gear secured to said shaft, of shafts f^2 f^{10} and link f^9 , connected by universal joints, and a gear on the shaft f^2 to mesh with the gear on the knife-shaft, substantially as described.

2. In a machine for skiving leather, the combination, with a feed-wheel, of a presser, g^3 , the springs g , and set-screw g^6 to act on said spring, substantially as described.

3. In a machine for skiving leather, a knife

and an adjustable casting, f^4 , combined with the gear f^7 , shafts f^2 f^{10} , and link f^9 , connected by a universal joint, substantially as described.

4. In a machine for skiving leather, the shaft a^3 , provided with the pinion a^8 , and the shaft b , provided with a feed-wheel, b^2 , and having the gear a^9 in mesh with the pinion a^8 , combined with the shaft b^4 , mounted in a movable bearing, b^7 , and geared to the shaft b^7 , and provided with a feed-wheel, b^3 , to co-operate with the wheel b^2 , substantially as described.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

WALTER S. FITZGERALD.

Witnesses:

JAS. H. CHURCHILL,
F. L. EMERY.