(No Model.)

B. WESSELMANN.

METAL SHEARING MACHINE.

No. 600,465. Patented Mar. 8, 1898.

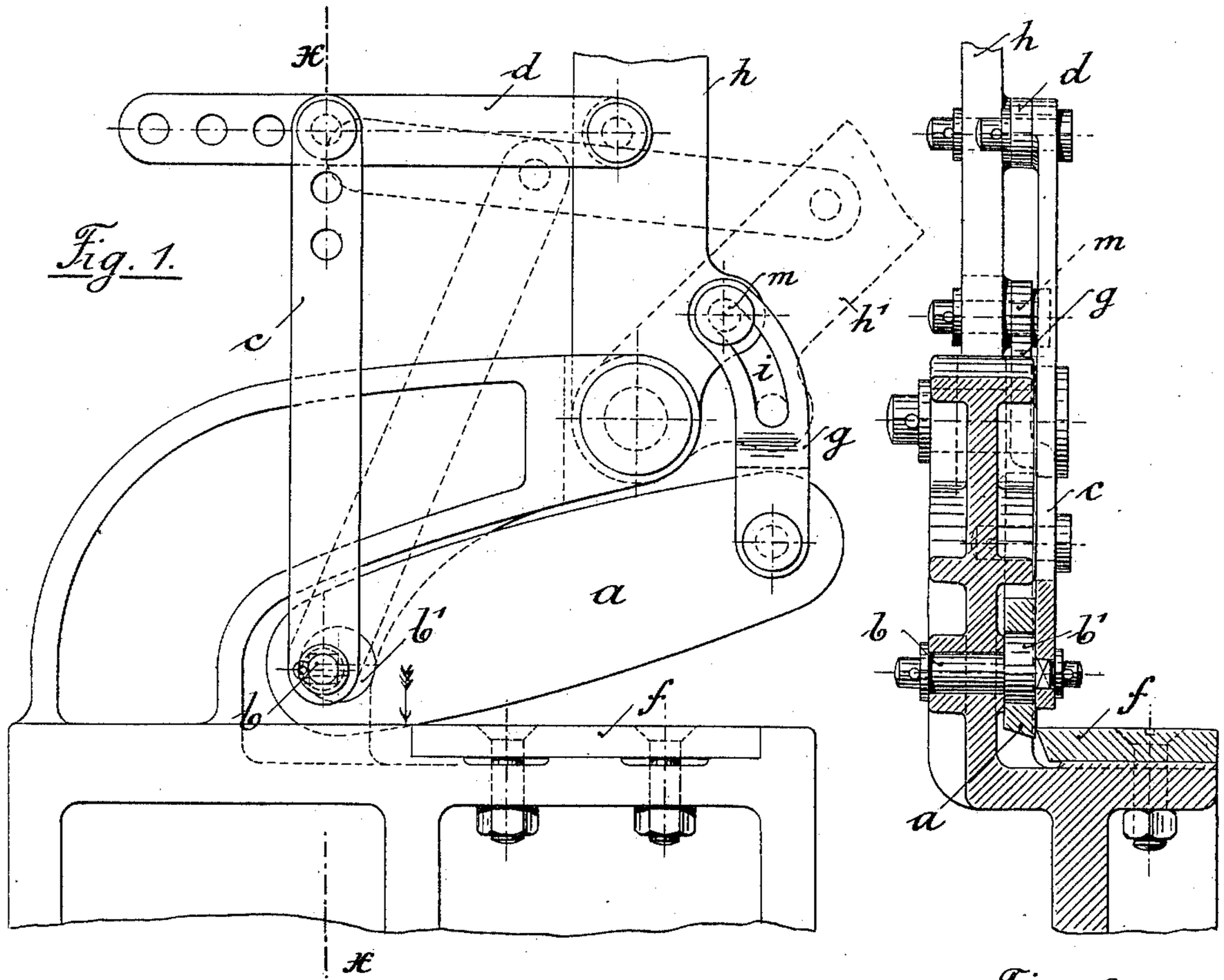

Fig. 1.

Fig. 3.

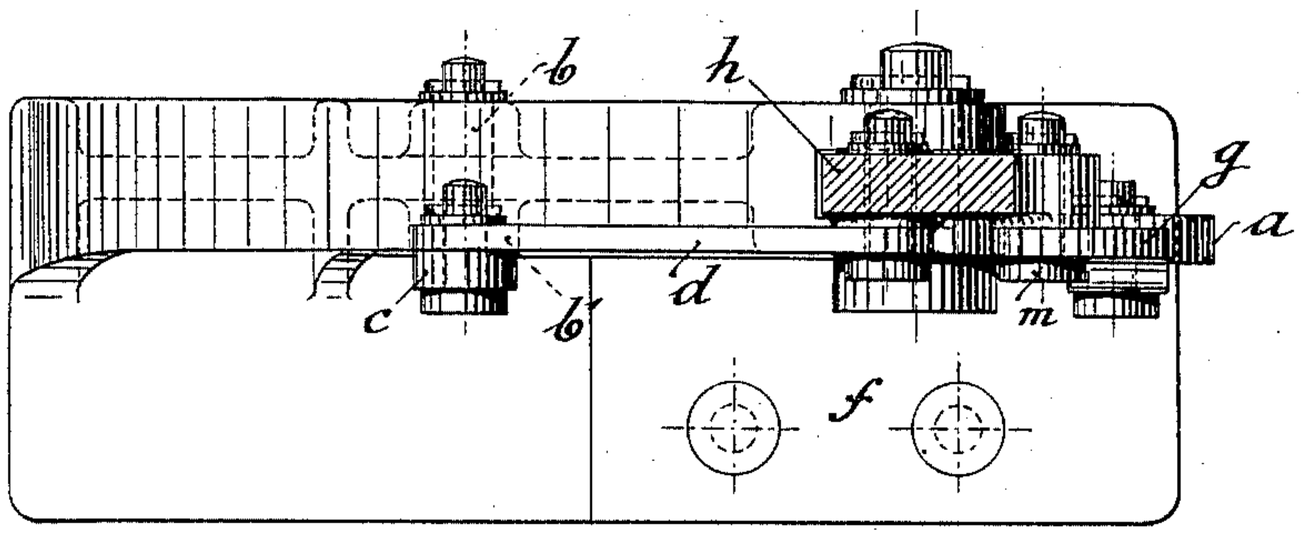

Fig. 2.

Witnesses:
Henry Harper.
Wolfram Hanpt

Inventor:
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UNITED STATES PATENT OFFICE.

BRUNO WESSELMANN, OF GÖTTINGEN, GERMANY.

METAL-SHEARING MACHINE.

SPECIFICATION forming part of Letters Patent No. 600,465, dated March 8, 1898.

Application filed October 7, 1897. Serial No. 654,445. (No model.)

To all whom it may concern:

Be it known that I, BRUNO WESSELMANN, a subject of the King of Prussia, Emperor of Germany, residing at Göttingen, 54 Friedländer Weg, in the Province of Hanover, Kingdom of Prussia, Germany, have invented new and useful Improvements in Metal-Shearing Machines with Eccentric Pivot for the Blade, of which the following is a specification.

In order to facilitate commencement of the cutting operation and prevent pushing aside of the material inserted between the shearing-limbs, the movable blade or limb, according to the present invention, turns on an eccentric pivot, which is turned by the hand-lever actuating the upper shearing-limb before said lever effects a downward motion of the front end of said limb. By reason of this partial rotation the rear end of the limb or blade moves vertically before the hand-lever actuates the blade itself, so that the shearing can be commenced with more facility, and forward displacement of the work cannot take place.

On the accompanying drawings, Figure 1 shows a side view of the new metal-shearing machine. Fig. 2 is a plan view of same; Fig. 3, a vertical section on the line $x\,x$, Fig. 1.

The upper blade a turns on an eccentric pivot b' and is connected with the hand-lever h by the link g. In order to give the upper blade or limb a at the commencement of the shearing operation a vertically-downward movement at the rear end first, there is in the link g, which forms the connection between lever h and limb a, a slot i, in which slides the pin or bolt m of the lever, thus affording free play for the latter when it is brought from the raised position into the dotted-line position h', Fig. 1. The pivot b of the upper limb is further connected to the hand-lever by means of a joint mechanism $c\,d$, which gives the pivot b during the movement of the lever from the position shown in full lines to that shown in dotted lines a certain advance, whereby the eccentric b' of the pivot on which the shearing-limb turns effects a downward movement of the rear end of the latter. Since this movement in the direction of the arrow, Fig. 1, acts nearly vertically on the material to be cut, inserted between the stationary shearing-limb f and the upper shearing-limb a, a forward displacement of the said material cannot take place. Furthermore, the motion of the blade obtained is the most advantageous for commencing shearing, and by means of the lever mechanism and the action of the eccentric is effected with much greater force than in the case of direct-acting shears.

Having now fully described my invention, what I claim, and desire to secure by Letters Patent, is—

1. In a metal-shearing machine, the combination with a stationary blade, of an eccentric rotating pivot, a movable blade fulcrumed at its rear end on said pivot and adapted to turn thereon as a center, a lever for oscillating said blade about its pivot to make a shear cut, and means operated by the lever during the commencement of the shearing operation for rotating the eccentric pivot in its bearings to shift the fulcrum of the movable blade and give to the rear end an approximately vertical movement, substantially as described.

2. In a metal-shearing machine, the combination with a stationary blade, of a movable blade journaled at one end on an eccentric pivot, a lever provided with a pin, a slotted link pivoted at one end to the movable blade and engaging the pin on said lever thereby permitting a limited amount of lost motion between the lever and blade, and connections between the eccentric pivot and lever for rotating said eccentric in the blade to give the latter an approximately vertical movement during the initial part of the shearing operation, substantially as described.

3. In a metal-shearing machine, the combination with a stationary blade, of a movable blade journaled at one end on an eccentric pivot, a lever provided with a pin, a slotted link pivoted at one end to the movable blade and engaging the pin on said lever thereby permitting a limited amount of lost motion between the lever and blade, and adjustable link mechanism connecting the eccentric pivot with said lever, substantially as described and for the purpose specified.

In testimony whereof I have hereunto set my hand in the presence of two subscribing witnesses.

BRUNO WESSELMANN.

Witnesses:

WALDEMAR HAUPT,

HENRY HASPER.