

(No Model.)

G. C. KEENE.

COMBINED CORNICE BRAKE AND SHEARING MACHINE.

No. 374,306.

Patented Dec. 6, 1887.

Fig. 1.

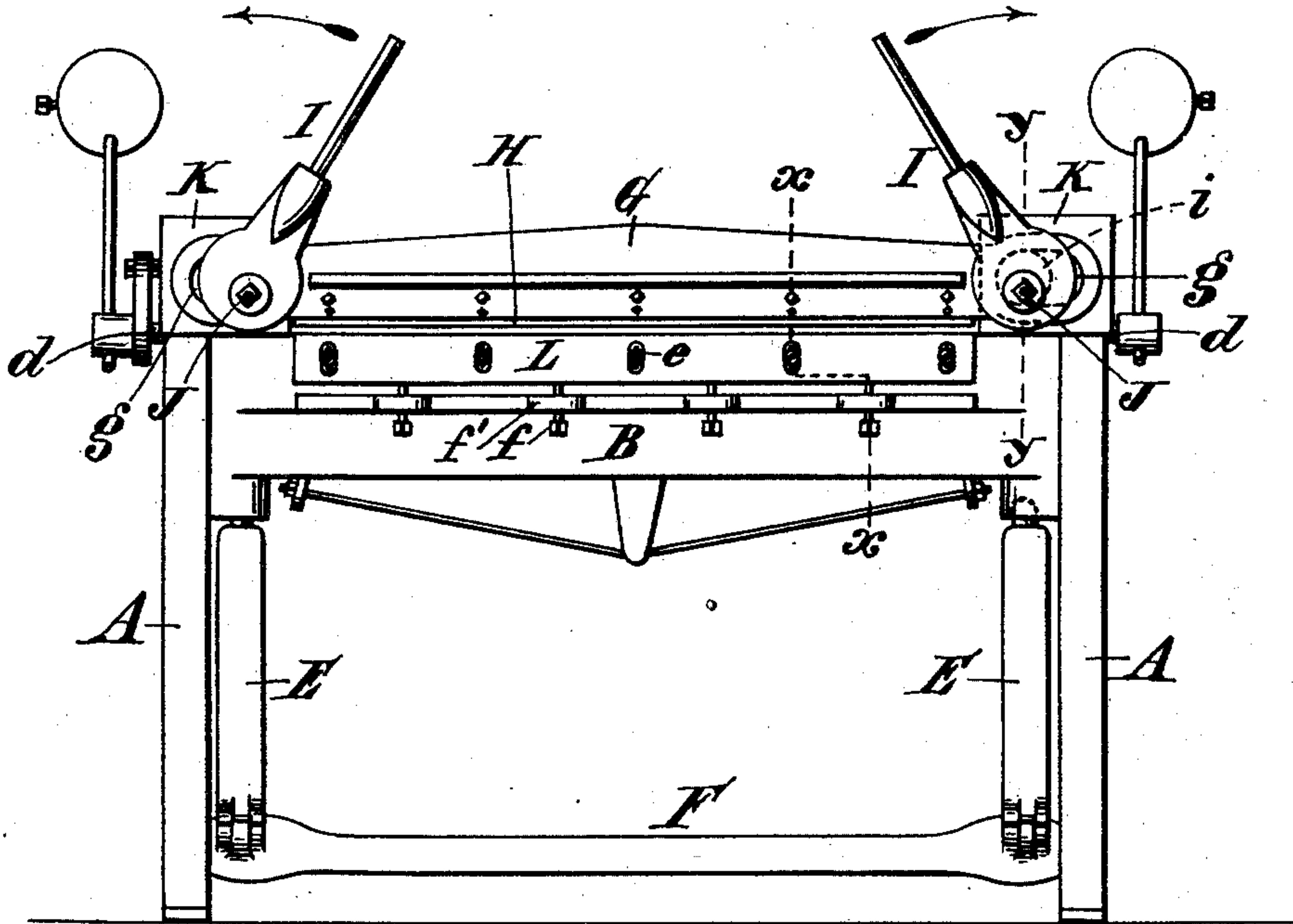


Fig. 2.

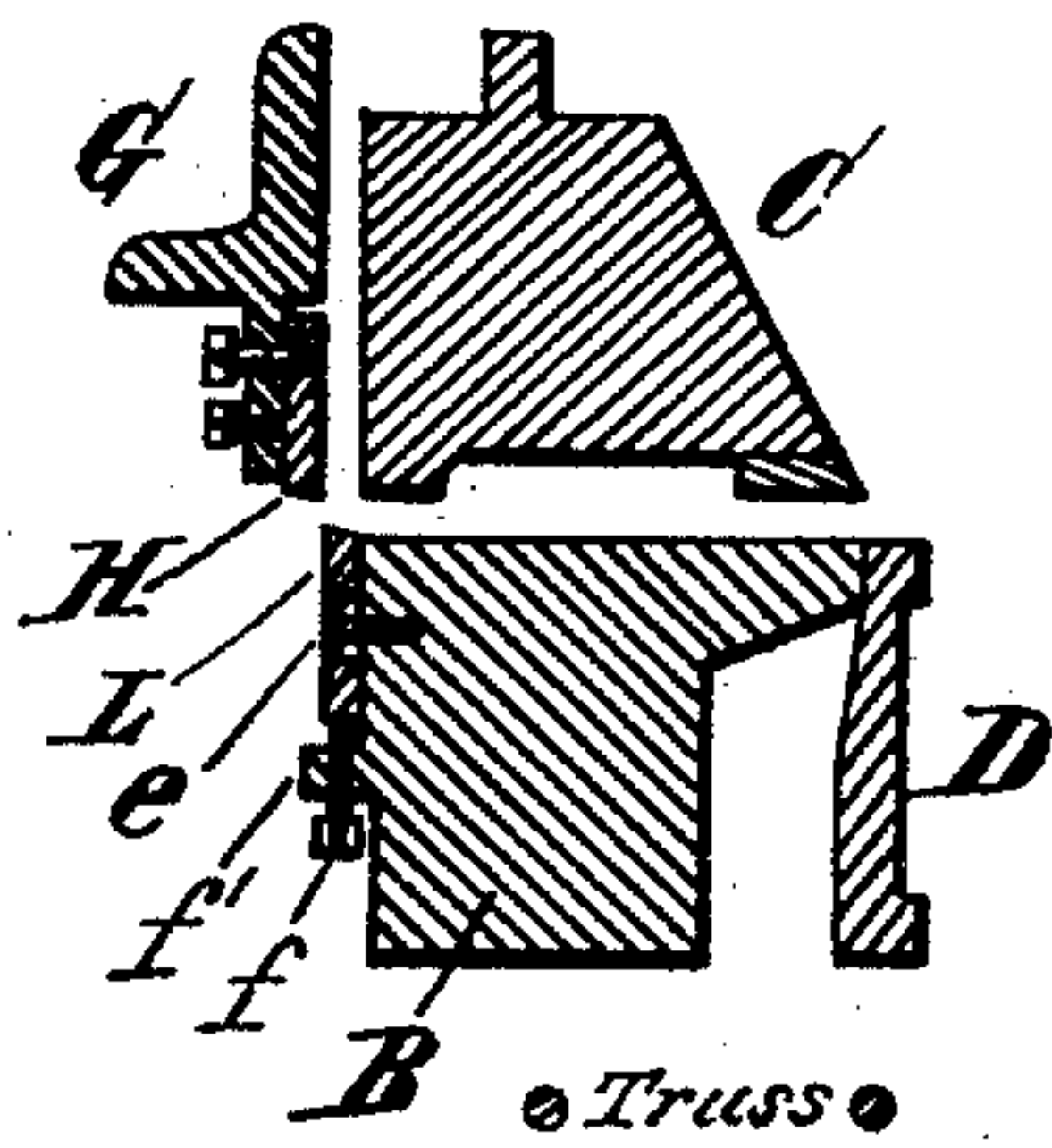


Fig. 3.

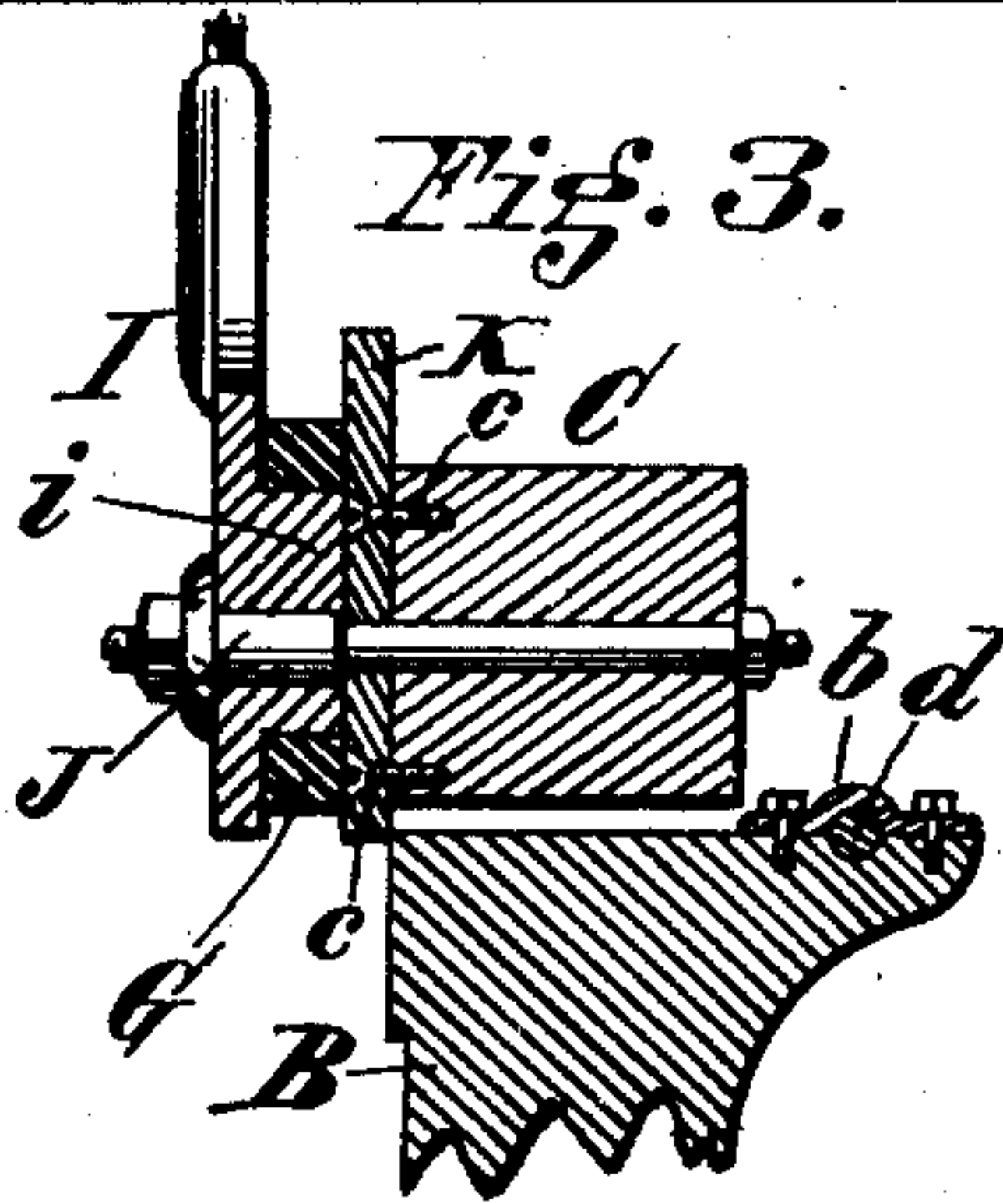


Fig. 4.

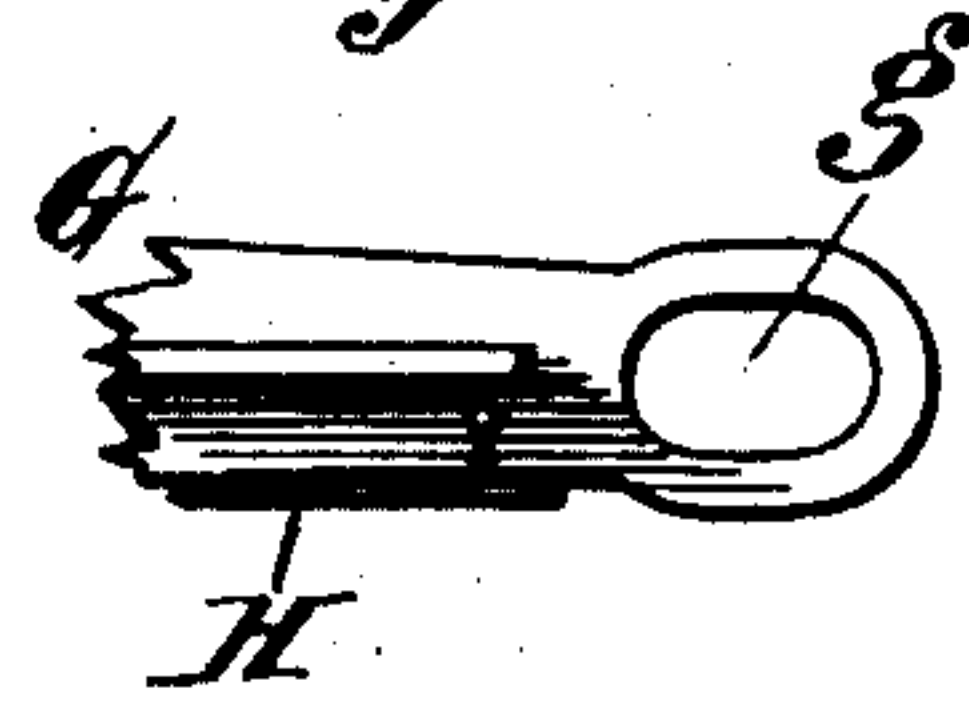


Fig. 5.

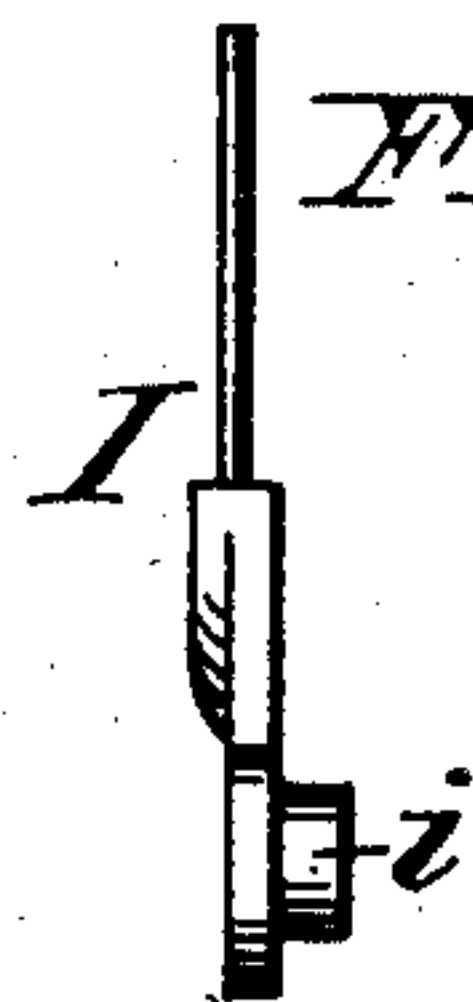
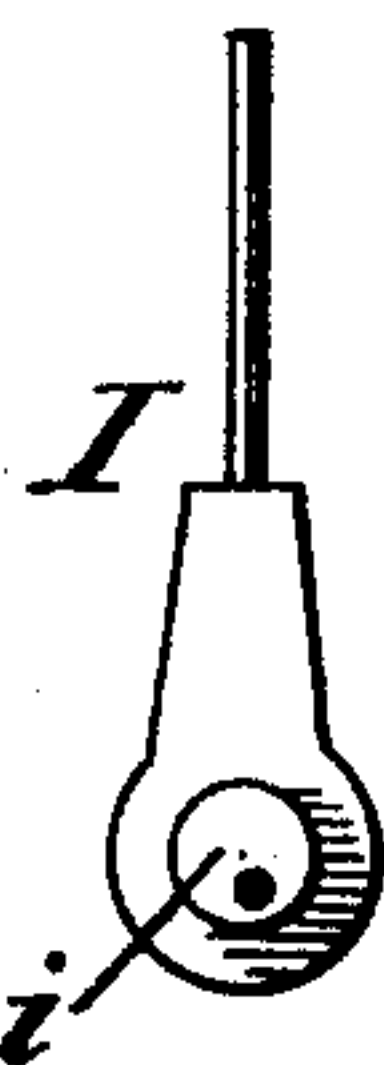


Fig. 6.



ATTEST

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UNITED STATES PATENT OFFICE.

GEORGE C. KEENE, OF CINCINNATI, OHIO.

COMBINED CORNICE-BRAKE AND SHEARING-MACHINE.

SPECIFICATION forming part of Letters Patent No. 374,306, dated December 6, 1887.

Application filed September 17, 1887. Serial No. 250,011. (No model.)

To all whom it may concern:

Be it known that I, GEORGE C. KEENE, a citizen of the United States, and a resident of Cincinnati, in the county of Hamilton and State of Ohio, have invented certain new and useful Improvements in Combined Squaring-Shears and Cornice-Brakes, of which the following is a specification.

My invention relates to a combined squaring-shear and cornice-brake, or, more particularly speaking, to a supplemental shear attachment for use in connection with and upon the cornice-brakes patented by me July 1, 1884, No. 301,128, and May 10, 1887, No. 362,749; or, in fact, any of the well-known cornice-brakes in general use, to square and trim the sheets before bending into the desired shape, or otherwise.

My invention consists in the combination, with the stationary tie-beam and the movable platen forming part of the clamping apparatus in a cornice-brake, of a horizontal bar or beam provided along its inner lower edge with a shear-blade and at its opposite ends with oblong openings or slots, each adapted to accommodate an eccentric or cam mounted upon a stud or bolt projecting outwardly from the opposite ends of said stationary tie-beam, manipulating handles or levers on said eccentrics, and a lower shear-blade along the upper outer edge of said platen, whereby sheets of metal may be squared or trimmed previous to their being bent into shape for cornices and otherwise.

Other features of my invention will be fully set forth in the following description of the accompanying drawings, in which—

Figure 1 is a longitudinal elevation of the back of one of my cornice-brakes, showing my improved squaring-shear device attached in place thereon, the parts being shown ready to receive a sheet preparatory to clamping and shearing; Fig. 2, a vertical transverse section on line *x x*, Fig. 1, showing the movable clamping-platen, the stationary tie-beam vertically above it, and my improved squaring-shear attachment applied thereto; Fig. 3, a vertical transverse section on line *y y*, Fig. 1, (enlarged,) showing the eccentric or cam handle in elevation and broken off, and the lower part of said movable platen broken off; Fig. 4, an elevation showing one of the slotted ends of

the shear-beam, the same being broken off; Fig. 5, a vertical side elevation of one of the handled eccentrics or cam-levers; and Fig. 6, an elevation of the lever shown in Fig. 5, showing the inner face thereof.

A A represent the supporting-frame legs of the machine; B, the horizontal movable platen, forming part of the sheet-clamping apparatus; C, the stationary tie-beam lying vertically above said platen, and D the bending apron or brake pivoting on its ends or axes *d* in boxes *b* on said platen.

E E represent upright bars with their lower ends pivotally engaging the foot-shaft F at the base of the machine, and their upper ends also pivotally engaging the movable platen or table B, to form a part of and operate the clamping mechanism, as in said former Letters Patent.

G is a horizontal beam provided at its opposite ends with oblong openings or slots *g g*, and along its inner lower edge with a shear-blade, H, attached in any suitable manner.

I I represent cam or eccentric levers with their cams or eccentrics proper, *i*, lying within and engaging the slots *g g* in shear-beam G and pivotally mounted on studs or bolts J, projecting outwardly from the opposite ends of the stationary tie-beam C, as clearly shown in Figs. 1 and 3.

K K are friction and spacing plates, secured in place at the said opposite ends of the tie-beam C by means of countersunk screws *c c*, to permit the adjacent moving parts to pass over without obstruction, and at the same time properly arrange the shear-beam G for operation in connection with the lower shear-blade, L. Shear-blade L is mounted upon the upper outer edge of movable platen B, and adjustably secured in place by means of screws *e*, passed through countersunk slots in the blade, and vertical set-screws *f*, passed through lugs *f'* on the face of the said platen.

The operation of my improved squaring-shear attachment is as follows: The parts being open or at rest, as shown in Figs. 1, 2, and 3, a sheet is placed between them up to the desired point, and then firmly clamped, as in said former Letters Patent. Then either cam-lever is drawn down laterally, almost half a revolution, in the direction indicated by the arrows in Fig. 1, thereby lowering one-half, or

approximately so, of the shear-beam. Then the other cam-lever is similarly operated to lower the balance of said shear-beam, the cams traveling in the slots at the ends of the shear-beam to form both a vertical and draw cut of the blade. The levers are then raised by reversing their direction of movement, or, in other words, moving backward over the same path followed in their cutting operation, and the shear-beam placed in position ready for another cut.

It is obvious that instead of duplicating the cam-levers and the slots at both ends of the shear-beam, one cam-lever and slot at but one end thereof and an ordinary pivotal connection made of said beam at the other could be provided and the shearing operation accomplished; but such could not be done without a much greater movement of one end of said beam, thereby necessitating a larger slot, a larger cam, and a deeper lower shear-blade.

I claim—

1. A combined squaring-shear and cornice-brake composed of a platen or table, B, a tie-

beam, C, and raising mechanism E F, forming the clamping apparatus of the machine, and a shear-beam, G H, provided with slotted ends *g g*, to accommodate cam-levers I I, said platen being provided with a shear-blade, L, and all said parts being constructed, arranged, and operating substantially in the manner and for the purpose specified.

2. A shearing attachment composed of a movable shear-beam, G H, having one or both its ends slotted, and cam lever or levers I I engaging said slotted end or ends, in combination with studs J, shear-blade L, and the tie-beam, bed, or platen of a cornice-brake or other similar metal-working machine, the parts being arranged, mounted, and adapted to operate substantially as described.

In testimony whereof I have hereunto set my hand this 30th day of August, 1887.

GEORGE C. KEENE.

Witnesses:

JOHN E. JONES,
JOHN ADAMS.