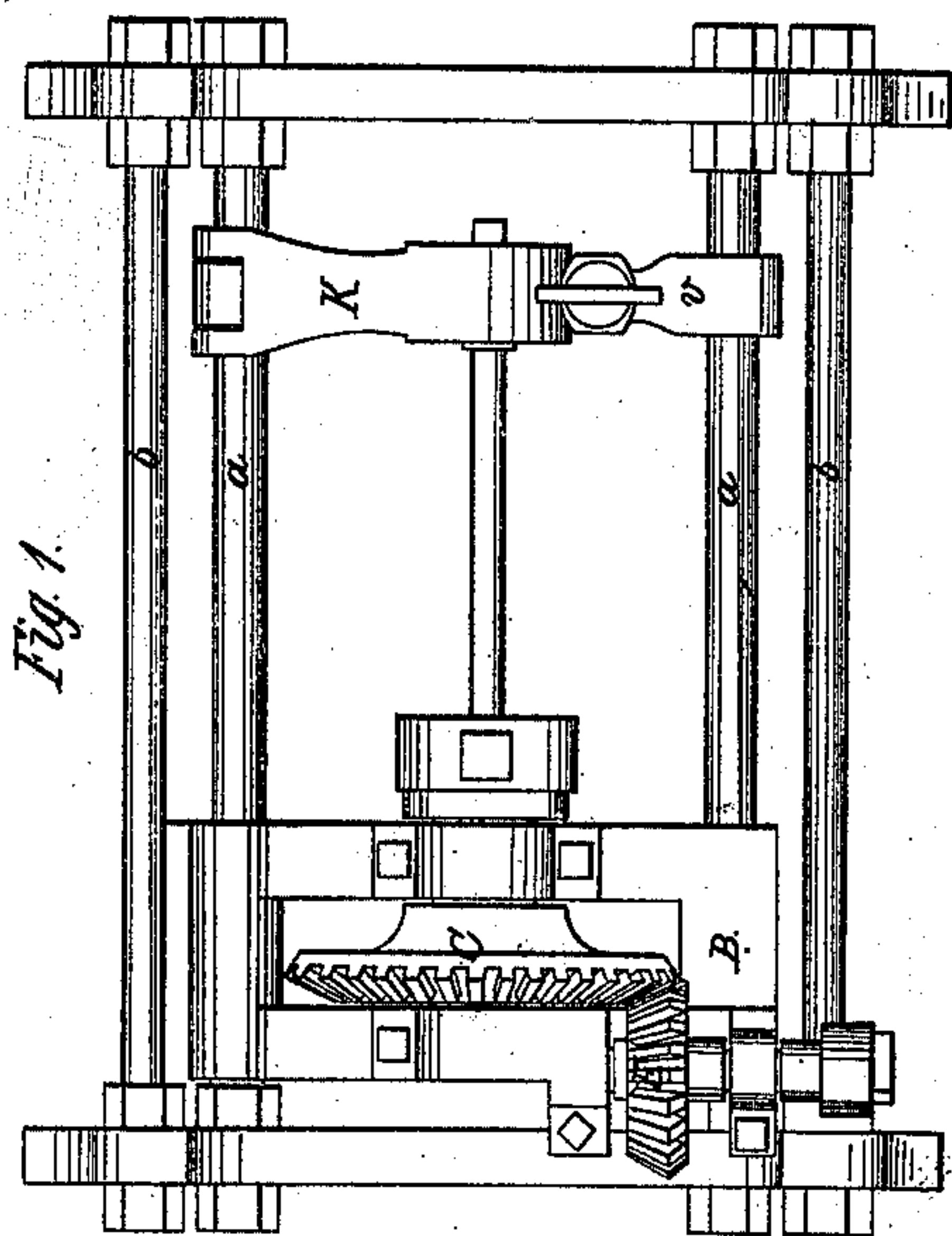
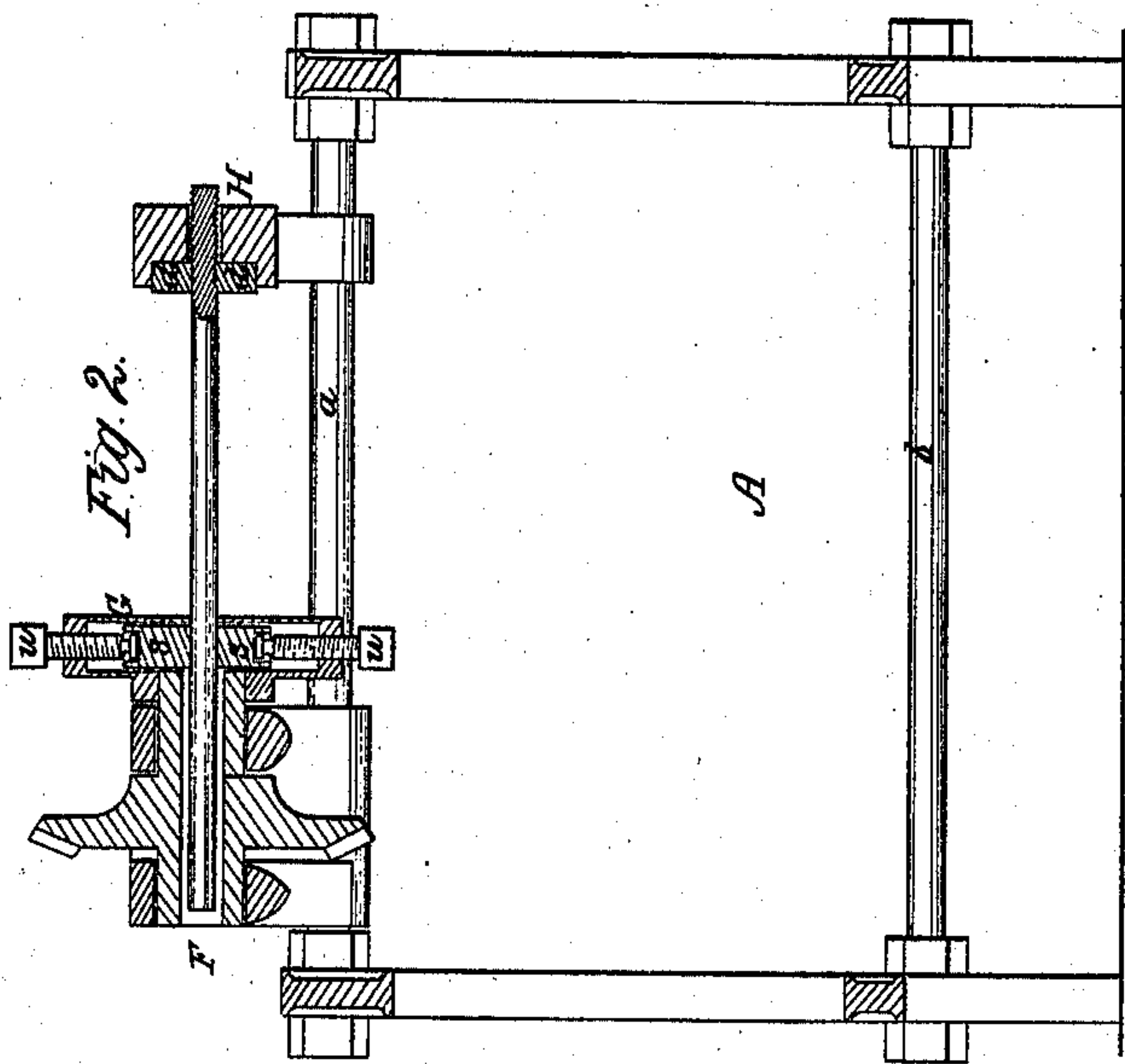
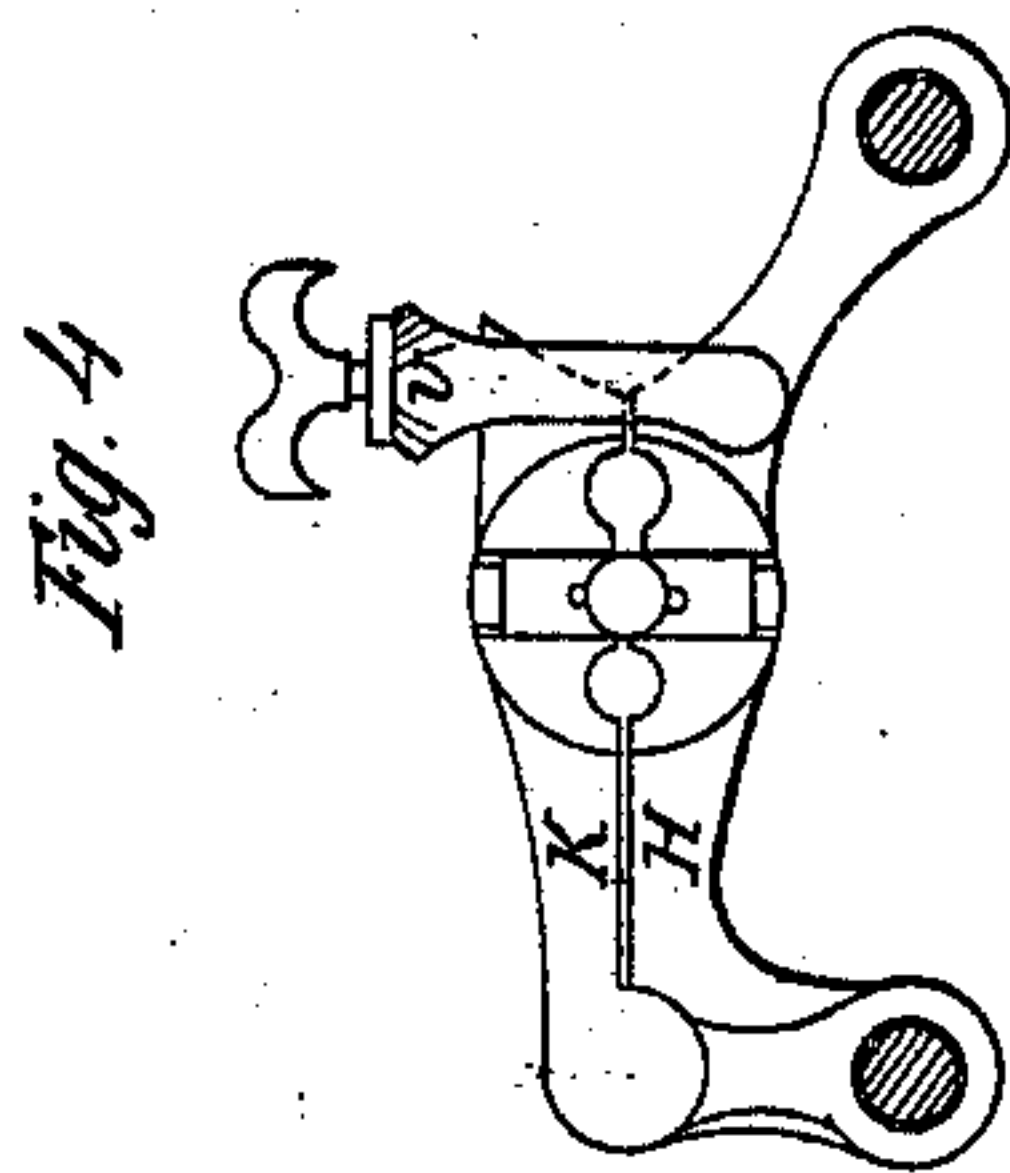
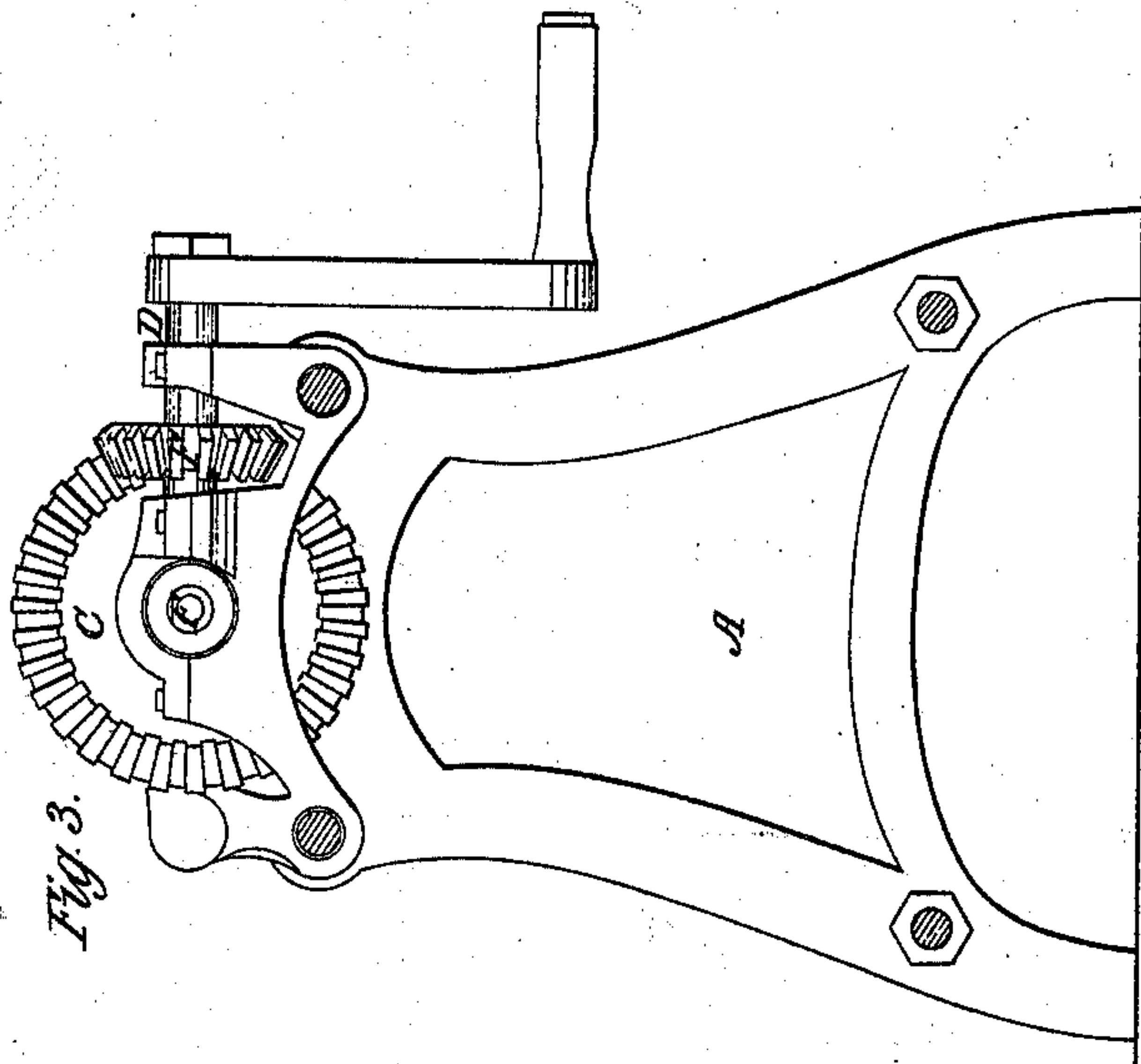


J. A. Cleaveland.
Screw Cutting Mach.

N^o 87,546.

Patented Mar. 9, 1869.



Witnesses,
J. P. Greaves
A. D. Brock

Inventor,
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United States Patent Office.

JUDSON A. CLEAVELAND, OF LOGANSPORT, INDIANA.

Letters Patent No. 87,546, dated March 9, 1869.

IMPROVEMENT IN MACHINES FOR THREADING SCREWS.

The Schedule referred to in these Letters Patent and making part of the same.

To all whom it may concern:

Be it known that I, JUDSON A. CLEAVELAND, of Logansport, in the county of Cass, and State of Indiana, have invented a new and valuable Improvement in Screw-Cutting Machines; and I do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the annexed drawings, making a part of this specification, and to the letters and figures of reference marked thereon.

Figure 1, of the drawings, is a plan view of my device;

Figure 2 is a longitudinal section;

Figure 3 is an end view; and

Figure 4 is a detail.

My invention relates to machines for cutting screws; and

It consists in providing more efficient means, than have heretofore been devised, for holding the bolt upon which a screw-thread is to be cut, and of introducing it to the cutter, by means of which a screw-thread, of any required length, may be cut without difficulty.

It also consists in the arrangement of more perfect gearing than has heretofore been applied to such machines.

The letter A, of the drawings, represents a frame, having four or more legs or standards, with top longitudinal bars, *a*.

This frame has also bottom longitudinal bars, *b*.

Both these top and bottom bars are adjusted in the frame by a bolt-head on one end, and a nut and screw on the other, in the manner shown, to the end that the frame may be lengthened or shortened at will, and also that the frame may be taken in pieces, to remove any defective or broken part, and supply the place thereof with a part that is perfect.

The bars *a* are made round, as shown in the drawings, for the reason hereinafter stated.

The letter B is a stationary cross-bar, affixed to the longitudinal bars *a*, in the manner represented. It is of iron or other metal, and is cast or hammered in the form shown, with two clasps or bearings on each side, upon the rods *a*, and leaving a space between such bearings for the operations of the bevelled pinion C, hereinafter mentioned, and as represented on the drawings.

The letter D is a shaft, adjusted in upright arms or shoulders of the cross-bar B, as shown; and

Letter E is a bevelled pinion, attached thereto, adapted to work with the pinion C.

The letter F is a shaft, adjusted, in suitable bearings, upon the two parts of the cross-bar B, as shown, and held in place by the removable caps *c*. The pinion C is attached firmly to this shaft. The shaft F is made hollow, for the purpose of holding and operating the bolt upon which a thread is to be cut.

The letter G is a block, with a set-screw, *u*, in its top and bottom, as shown, and its centre is of a quadrangular form, adapted to receive and hold the inner

end of shaft F, or it may be cast with said shaft in one piece.

The letters *s* are removable or adjustable blocks, operated by the set-screws *u* in the square centre of the block G, adapted to receive and hold the end of a bolt, upon which I desire to cut a thread. I prefer to cast the block G with the shaft and pinion with which it operates, and adjust the blocks *s* in its square centre, instead of constructing them separately.

The letter H is a sliding block, adjusted upon the bars *a*, in the manner shown. It is moved back and forth upon said bars, as hereinafter mentioned.

The letter K is a hinged jaw, attached to the upper side of block H, as represented, the office of which is, in connection with the sliding bar H, to hold the die by which the thread is cut.

The letter *v* is a hinged clamp, having a set-screw in its top, as shown, the office of which is to hold the jaw K securely in place, while the process of screw-cutting is being carried on.

My device is operated as follows:

I place the end of the bolt, upon which I desire to cut a screw-thread, next the die, inside the sliding block H, and adjust the opposite end between the blocks *s*, and secure it firmly by means of the set-screws *u*. The die is fixed in its appropriate place, between the jaw K and the sliding block H. The jaw K is secured in place by the clamp *v* and its set-screw. The operator now turns the crank of shaft D. The pinions, meshing and working with each other, give a rotary motion to the bolt. The end of the bolt passes into the die, and the thread is cut. As fast as the thread is cut, the sliding block H is drawn forward thereby, until the thread is of the length required.

The foregoing specifies the construction and operation of my device in all its parts, except the dies used in cutting the threads. These dies are marked *d* on the drawings. They are constructed in two solid sections, and adjusted firmly in suitable grooves or openings in the jaw and sliding bar respectively, as shown on the drawings, and are removable by the use of a hammer.

This mode of construction and adjustment is believed to be an improvement upon the dies in common use.

What I claim as my invention, and desire to secure by Letters Patent, is—

The arrangement, herein specified and shown, of the several parts of the mechanism on the supporting-frame, in the manner described, and for the purposes set forth.

In testimony that I claim the above, I have hereunto subscribed my name, in the presence of two witnesses.

JUDSON A. CLEAVELAND.

Witnesses:

WM. WALLACE,

WM. HEHEMANN.