No. 46,278. PATENTED FEB. 7, 1865.

J. M. STONE.

ECCENTRIC ADJUSTMENT.

Fig: 1.

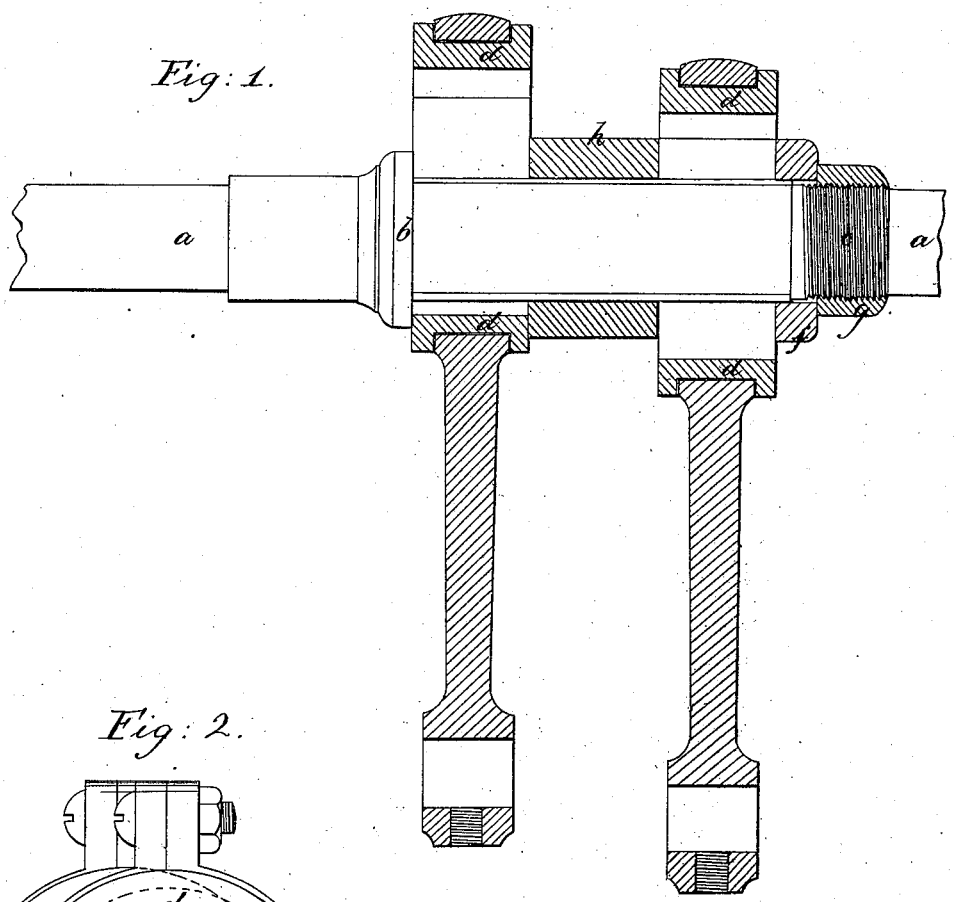
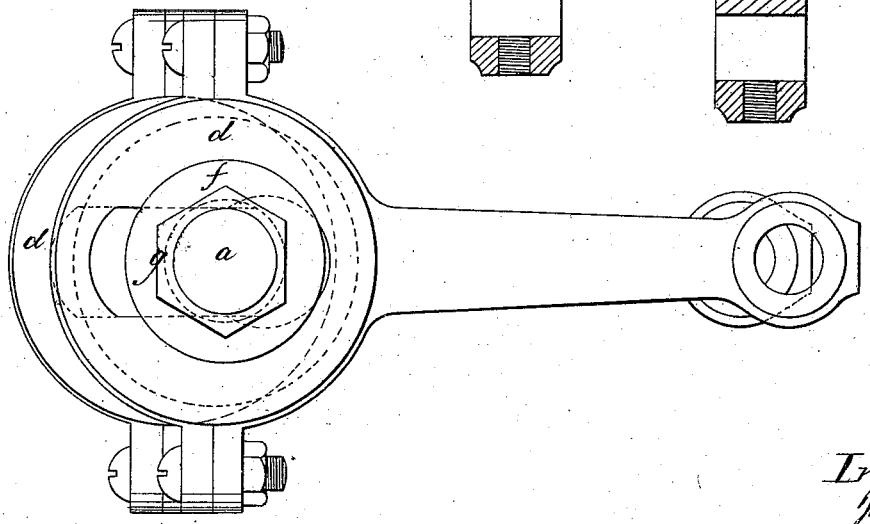


Fig: 2.



Witnesses;
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UNITED STATES PATENT OFFICE.

J. M. STONE, OF NORTH ANDOVER, MASSACHUSETTS, ASSIGNOR TO HIMSELF, GEORGE L. DAVIS, AND JOHN A. WILEY, OF SAME PLACE.

IMPROVEMENT IN ECCENTRIC ADJUSTMENTS.

Specification forming part of Letters Patent No. **46,278**, dated February 7, 1865.

To all whom it may concern:

Be it known that I, J. M. STONE, of North Andover, in the county of Essex, in the State of Massachusetts, have invented an Improved Eccentric Adjustment; and I do hereby declare that the following, taken in connection with the drawings which accompany and form part of this specification, is a description of my invention sufficient to enable those skilled in the art to practice it.

Of said drawings, Figure 1 is an elevation of a shaft, showing in section thereupon two eccentrics and the means for adjusting and holding them in any desired position. Fig. 2 is an end view of said shaft with said eccentrics shown as adjusted thereupon.

Many instances occur in mechanism where it is desirable to secure two or more eccentrics on the same shaft, and to have them capable of adjustment within the limits of the capacity given by their construction without the employment of set-screws and keys or other parts which form projections, and are therefore liable to catch and tear objects with which they come into contact, and which beside accumulate dirt and are troublesome to clean.

The particular object of this invention is to reciprocate to any desired amount the rolls in such drawing-frames as are shown in the Patent No. 42,076, granted March 29, 1864, for the joint invention of Joseph Chase and myself, though the invention may be generally used whenever eccentries are required to be adjusted to obtain changes in the amount of motion given.

The shaft *a* is formed with a fixed collar or shoulder, *b*, and a screw-thread, *c*. Between the screw thread *c* and the shoulder *b* the shaft is flattened on opposite sides, and each eccentric *d* is bored near its periphery with a hole parallel to its axis large enough to pass the shaft *a* through said hole from the screw-thread *c* to the collar *b*. An elongated opening is then formed in each eccentric from the aforesaid holes, and equally on each side of the center of each eccentric, the width of said opening or slot being that of the thickness of the shaft where flattened. It will now be obvious that the eccentrics can be placed on the shaft, the latter passing through the holes first named in the former, and that when on the shaft between the collar *b* and the screw-thread *c* the elongated opening in each eccentric can be made to encompass the flattened part of the shaft, so that when the shaft is rotated the eccentrics must rotate with it. It will now be seen that any amount of eccentricity of position can be given on the shaft to the eccentrics *d* by moving them more or less at right angles to the axis of the shaft, and that it is now only needed to secure them in any desired position. This is done by clamping the eccentrics between the shoulder *b* and the washer *f*, which is performed by screwing up the nut *g*. Washers or collars *h* are used to keep the eccentrics any given or desired distance apart. To change the adjustment, slacken the nut *g*, slide the eccentrics to the desired position on the shaft, and again tighten the nut.

I claim—

For the purpose of adjusting the amount of throw of any of two or more eccentrics on the same shaft, the construction and arrangement operating substantially as described.

In witness whereof I have hereunto set my hand this 13th day of December, A. D. 1864.

J. M. STONE.

In presence of—
J. B. CROSBY,
FRANCIS GOULD.