

E. E. Van Etten,

Sharpening Reciprocating Saws.

N^o 66,754.

Patented July 16, 1867.

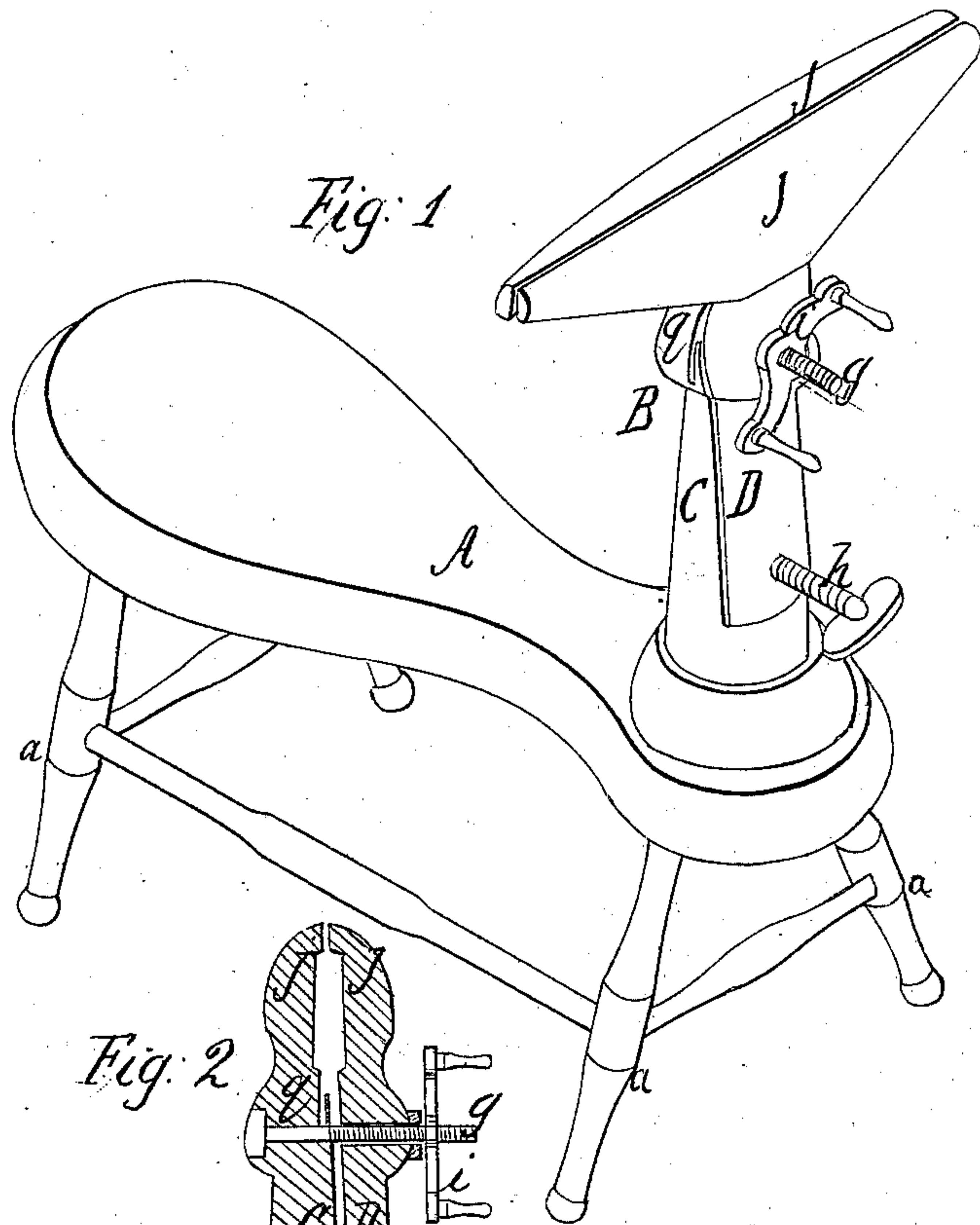


Fig. 3

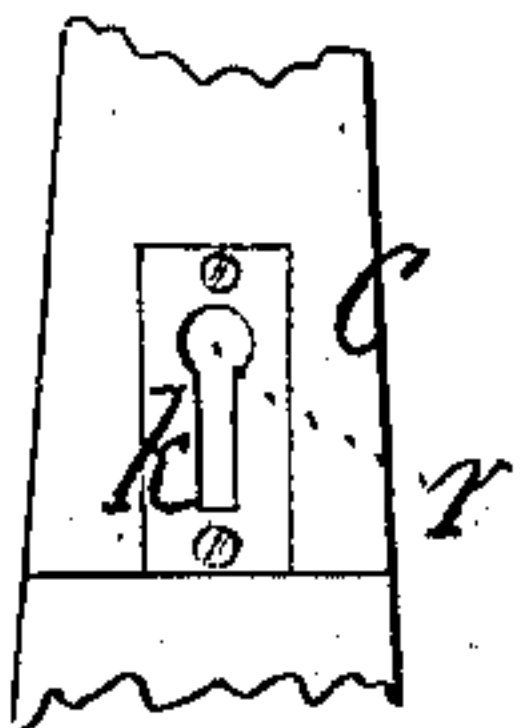
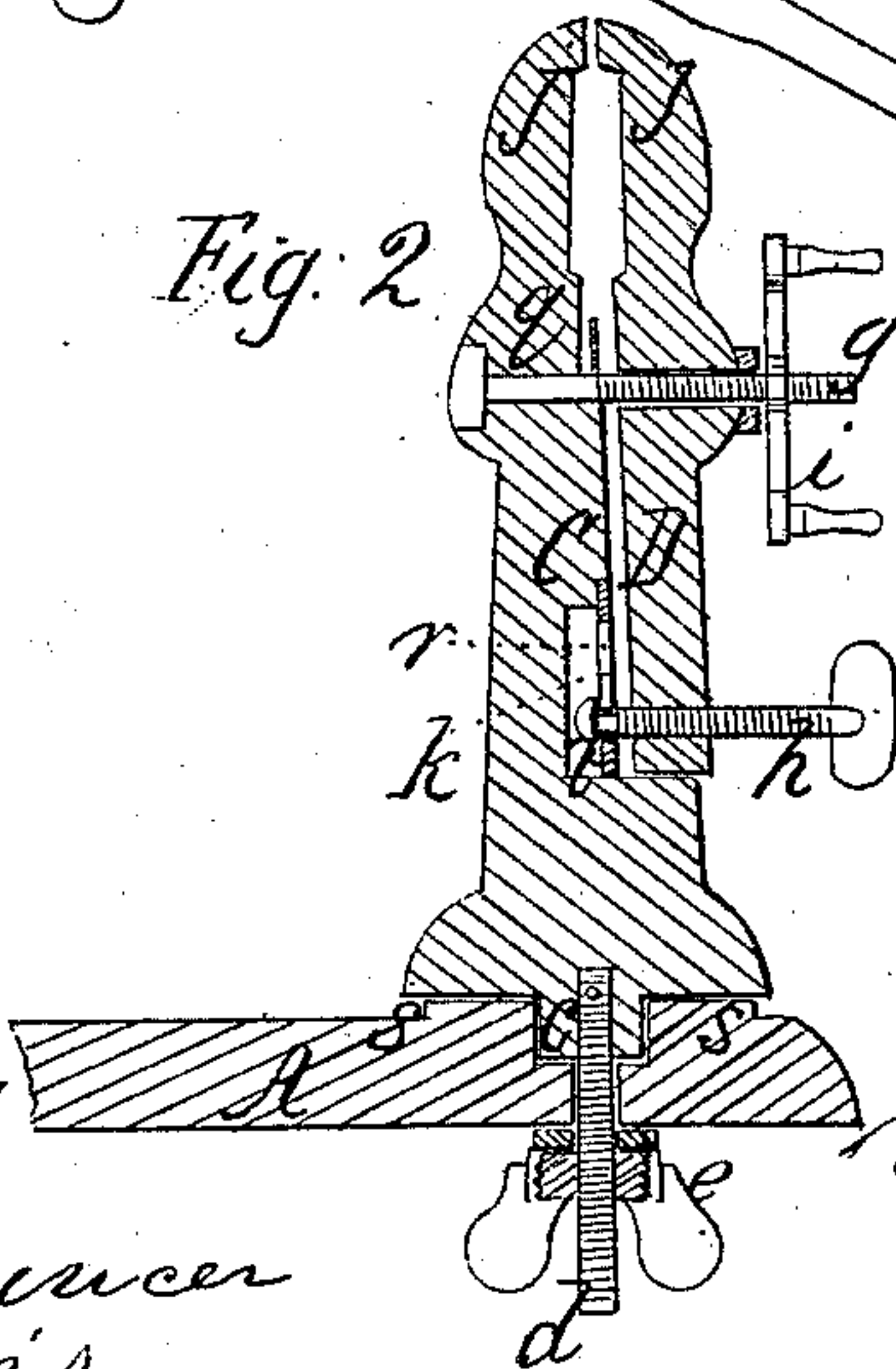


Fig. 2



Witnesses;
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United States Patent Office.

E. E. VAN ETTEN, OF MOUNT MORRIS, NEW YORK.

Letters Patent No. 66,754, dated July 16, 1867.

IMPROVEMENT IN CLAMPS FOR FILING SAWS.

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, E. E. VAN ETTEN, of Mount Morris, in the county of Livingston, and State of New York, have invented a certain new and useful Improvement in Clamps for Saws, applicable also to other purposes; and I do hereby declare that the following is a full and exact description thereof, reference being had to the accompanying drawings, making part of this specification.

Figure 1 is a perspective view of my improved device.

Figure 2, a vertical section of the swivel standard and a portion of the seat.

Figure 3, a view of the key-hole arrangement for holding the end of the lower set-screw.

Like letters of reference indicate corresponding parts in all the figures.

My invention consists in combining, with a swivelled standard formed of two jaws, a pair of set-screws so arranged that the jaws may be adjusted parallel to suit different thicknesses of the saws, and so arranged that the movable jaw may be readily detached, and the stationary jaw having a groove for the reception of the base of the saw, the whole arranged as hereafter described.

As represented in the drawings, A is the seat for the operator, which is supported by legs *a a*. With one end is connected a swivel standard, B, by a bearing, *c*, resting in a corresponding socket in the seat, so as to form a joint and allow the standard to be turned around in different positions. Extending down from the standard B through the seat A is a screw, *d*, provided with a clamping-nut, *e*, which serves to hold the standard steadily in place when tightened, and allows it to be turned when desired. The standard is divided into two clamps C D, with jaws *j j*. The part C is stationary, while D is made to adjust in and out, by means of set-screws *g h*, situated at suitable distances apart. The screw *g* is made stationary with the clamp C, but passes loosely through D, and is provided at its outer end with a hand-nut, *i*, which is employed for clamping the article firmly between the jaws after the lower end of the movable clamp has been fixed in the proper position. The lower screw *h* passes through clamp D, and has on its inner end a head, *l*, with neck *o*, which fits in a key-hole slot, *r*, of a metallic plate, *k*, of the stationary part C. The head *l* is inserted through the larger or circular portion of the slot, and the neck *o* is then slid down into the narrow passage of the slot, (as shown in fig. 2,) in which it turns easily, but cannot be withdrawn or forced in. On the inner face of the stationary clamp C is formed a vertical slot or groove *q*, which stands on a vertical plane with the clamp face of the stationary jaw, and is of sufficient width to admit saws of the maximum thickness. This groove serves as a bearing for the lower edge of the saw-blade when fixed in the clamp. The lower end of the standard is raised on a rim, *s*, of a little less diameter, so that such filings as fall around the standard cannot enter the joint and produce wear, but will be thrown off below. Clamp standards for saws have before been used. The novelty in my invention consists in combining with a swivelled clamp the special features for adjusting and holding the article as herein described. Saw-blades are of varying thickness, and in order to make the clamping-jaws hold firm the whole extent of their bearing surface, it is necessary to make the bottom as well as the top adjustable out and in. This is accomplished by the employment of the screws *g h*. The screw *h* is first set out to the proper extent to correspond with the thickness of the saw. Then, when the saw is in place, the nut *i* is turned up so as to clamp it firmly. In this manner the bearing surfaces of jaws *j j* are made to hold equally their whole vertical extent upon the blade, and thus prevent any swaying or vibration by the rasping action, as would occur if only one point of the jaws touched. The employment of the base groove *q* for the saw enables me to retain the saw always in a vertical position relatively with the jaw surface of C, irrespective of the adjustment of D. Thus it is only necessary to adjust D in position to bring the clamping-jaws in line, and the saw itself is in nowise affected by the adjustment. If the saw simply rested in the space between the shanks, it would be difficult to adjust and hold it properly. The employment of the key-hole socket *r*, in connection with the screw *h*, not only furnishes a convenient connection, but also enables me at any time to disconnect the clamps by simply removing nut *i* and screw *g*, and raising the part D up. It is obvious that the device thus described may be employed for other similar uses.

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

The arrangement of the swivelled clamps C D, the set-screws *h g*, key-hole socket *r*, and the groove *q*, constructed and operating in the manner and for the purpose specified.

In witness whereof I have hereunto signed my name in the presence of two subscribing witnesses.

E. E. VAN ETTEN.

Witnesses:

McNEIL SEYMOUR,

M. J. BARCALO.