

(No Model.)

C. F. WEYHE.
COMBINED CLAMP AND VISE.

No. 529,765.

Patented Nov. 27, 1894.

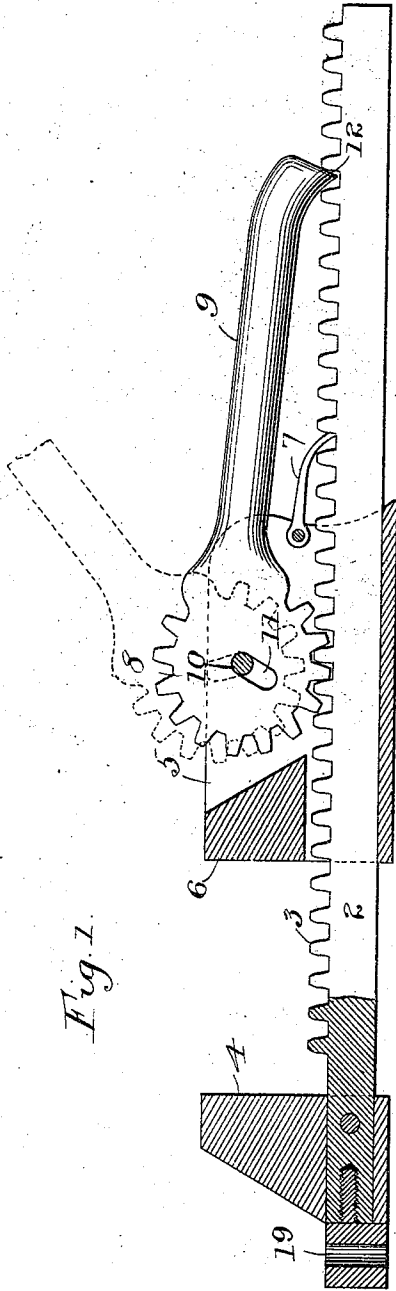


Fig. 1.

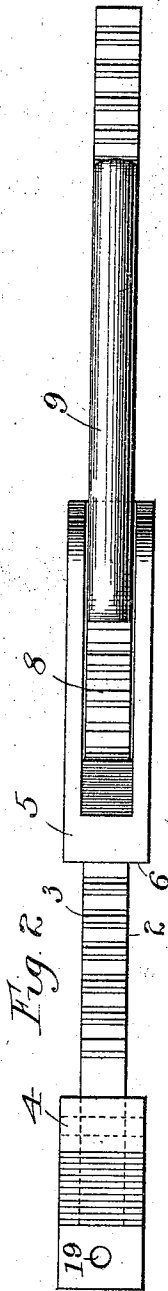


Fig. 2.

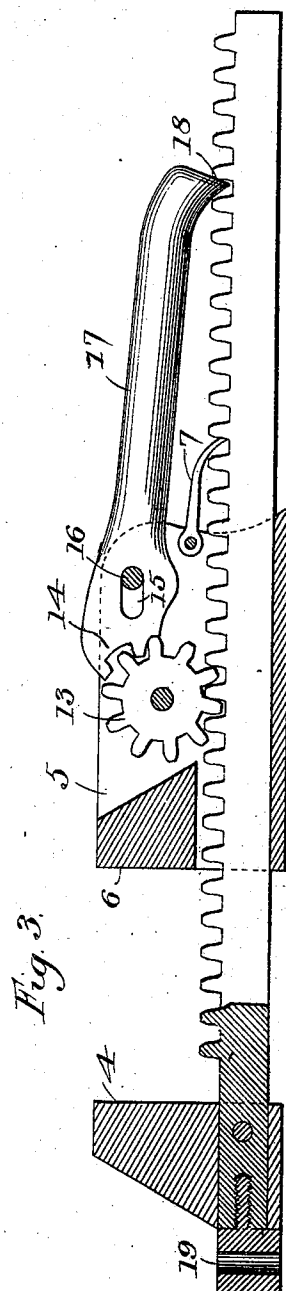


Fig. 3.

Witnesses:-

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UNITED STATES PATENT OFFICE.

CHARLES F. WEYHE, OF ST. PAUL, MINNESOTA.

COMBINED CLAMP AND VISE.

SPECIFICATION forming part of Letters Patent No. 529,765, dated November 27, 1894.

Application filed June 13, 1892. Serial No. 436,495. (No model.)

To all whom it may concern:

Be it known that I, CHARLES F. WEYHE, of St. Paul, Ramsey county, Minnesota, have invented a certain new and Improved Combined Clamp and Vise, of which the following is a specification.

My invention relates to improvements in clamps of the class designed for use in the putting together of frames and similar structures, and consists in improved features of construction hereinafter particularly described and pointed out in the claims.

In the accompanying drawings forming part of this specification, Figure 1 is a sectional side elevation of my improved clamp. Fig. 2 is a plan view of the same, and Fig. 3 is a sectional side elevation of a modified construction.

In the drawings 2 represents a rack bar provided with the gear teeth 3, and having at its outer end the clamp jaw 4. Sliding along this bar is the block 5, the end of which adjacent to the jaw 4 forms the other jaw 6 of the clamp. Pivoted to the block 5 is the gravity dog 7 adapted to engage the teeth 3 of the rack bar and hold the clamp in adjusted positions. In the construction shown in Figs. 1 and 2 the clamp is operated by means of the segmental gear 8 provided with the handle 9 and turned on a pivot 10 fixed in the block 5, the hole in the gear for this pivot being a slot 11, as shown in Fig. 1, which permits the gear to be lifted from the rack and turned on its pivot without moving the bar. With the handle 9 in the position shown in Fig. 1 and the gear in engagement with the rack, by lifting the handle the gear turns on its pivot and draws the rack bar through the block 5 closing the jaws together, the dog 7 engaging the teeth of the rack successively, and holding the clamp in adjusted positions. The gear can then be released from the rack by simply slipping it upward, the pivot working in the slot 11, so as to release the teeth of the rack. The arm can then be depressed to the original position and the operation repeated. When in the lowered position shown in Fig. 1, the point 12 on the end of the handle 9 engages the teeth of the rack, thus holding the clamp firmly in position.

In the modified construction shown in Fig.

3, the block 5 is provided with the pinion 13, the teeth of which mesh with the rack. The pinion is operated by means of the segmental gear 14 having a slot 15 extending preferably lengthwise of the handle 17, in which stands the pivot 16 fixed in the block, the handle having a point 18 similar to that of the handle 9. In the operation of this form of clamp the handle 1 is worked in the opposite direction from that of the handle 9, being lifted and brought into engagement with the teeth of the pinion 13. On bearing upon the handle it acts as a lever with the segmental gear as the fulcrum and engaging the teeth of the pinion 13, and turning it on its pivot thereby drawing the rack bar 2 through the block 5 as before described.

In case it is desired to use the clamp fixed to the bench, it may be secured thereon by means of a screw passed through the hole 19 into the bench, the clamp thus serving as a vise.

I claim—

1. In a clamp, the combination with the relatively fixed jaw and its connected rack bar, of the movable jaw slidable along said rack bar, the lever operated means having a sliding pivotal connection with said block for engaging the teeth of the rack bar to move said block thereon, and the projection upon said lever adapted to engage said rack to lock the clamp in adjusted positions.

2. In a clamp, the combination with the relatively fixed jaw and its connected rack bar, of the movable jaw slidable along said rack bar, the lever operated means having a sliding pivotal connection with said block for engaging the teeth of the rack bar to move said block thereon, the dog carried by said block and adapted to engage said rack bar and the projection upon said lever adapted to engage said rack to lock the clamp in adjusted positions.

3. In a clamp, the combination with the rack bar, and the rigidly connected jaw, of the block sliding upon said rack and serving as a movable jaw, the gear for engaging said rack arranged in said block and having a slidably pivotal connection therewith whereby it may be thrown into and out of gear with the rack, the lever for operating the gear, and the

locking device carried by said lever for engaging said rack to hold said clamp in adjusted positions.

4. In a clamp, the combination with the rack
5 bar and its fixed jaw, of the movable jaw slidably arranged on said bar, the lever pivoted in said movable jaw with a slidable connection by means of which it may be raised and lowered therein, the teeth carried by said lever adapted to engage said rack, and the pro-

jection upon said lever adapted to engage said rack when the lever is depressed so as to lock the clamp in adjusted positions.

In testimony whereof I have hereunto set my hand this 25th day of May, 1892.

CHARLES F. WEYHE.

In presence of—

T. D. MERWIN,
H. S. JOHNSON.