C. A. SODERBERG.

VISE.

APPLICATION FILED MAR. 13, 1915.

1,154,815. Patented Sept. 28, 1915.

Fig. 1

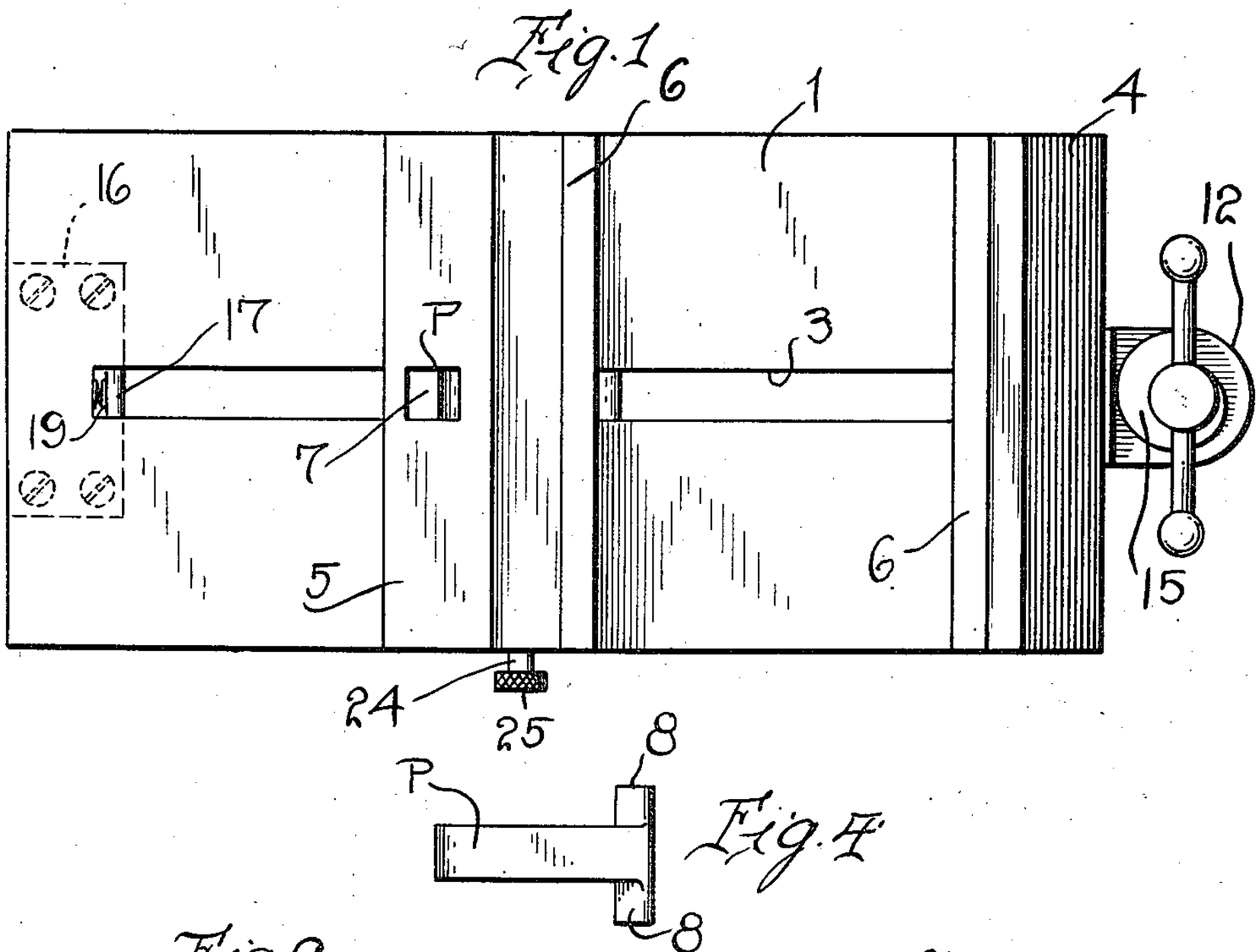


Fig. 4

Fig. 2

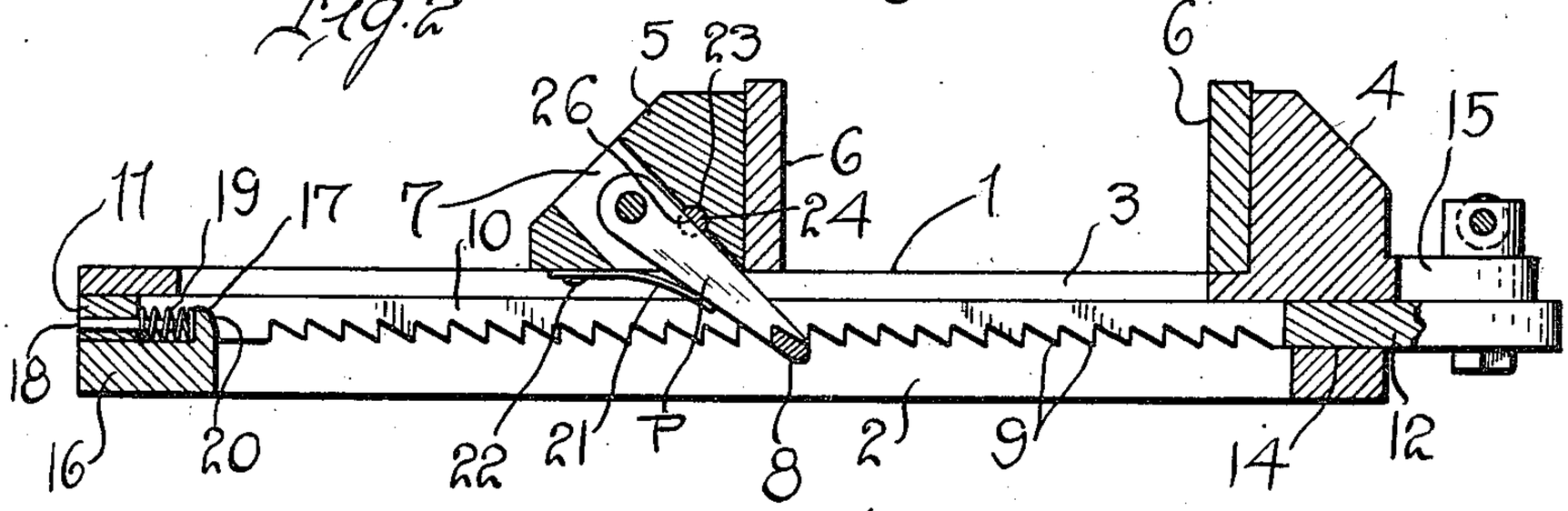
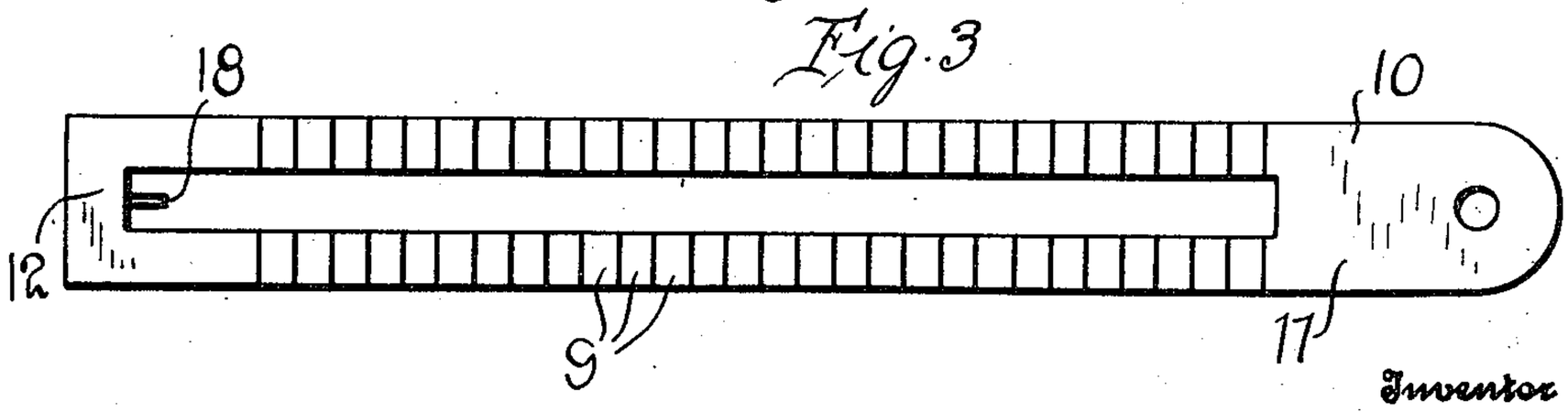


Fig. 3



Inventor

C. A. SODERBERG

Witnesses
Robert M. Sutphen.
A. L. Hind.

By Watson E. Coleman
Attorney

UNITED STATES PATENT OFFICE.

CARL A. SODERBERG, OF WEST LYNN, MASSACHUSETTS.

VISE.

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To all whom it may concern:

Be it known that I, CARL A. SODERBERG, a citizen of the United States, residing at West Lynn, in the county of Essex and State of Massachusetts, have invented certain new and useful Improvements in Vises, of which the following is a specification, reference being had to the accompanying drawings.

This invention relates to certain improvements in vises, and it is an object of the invention to provide a device of this general character having novel and improved means whereby the same may be adjusted with convenience and facility.

The invention consists in the details of construction and in the combination and arrangement of the several parts of my improved vise whereby certain important advantages are attained and the device is rendered simpler, less expensive and otherwise more convenient and advantageous for use, all as will be hereinafter more fully set forth.

The novel features of the invention will be carefully defined in the appended claims.

In order that my invention may be the better understood, I will now proceed to describe the same with reference to the accompanying drawings, wherein—

Figure 1 is a view in top plan of a vise constructed in accordance with an embodiment of my invention; Fig. 2 is a longitudinal vertical sectional view taken through Fig. 1 at substantially the transverse center thereof; Fig. 3 is a view in top plan of the rack members herein included together with their concomitant parts; and Fig. 4 is a fragmentary view in top plan of the pawl coacting with the slidable head.

As disclosed in the accompanying drawings, 1 denotes a base plate substantially rectangular in form and provided with the depending marginal flanges 2 and with the elongated longitudinally disposed slot 3 arranged at substantially the transverse center of the body 1. Formed with one extremity of the body 1 is the stationary jaw 4 with which is adapted to coact the movable jaw 5 supported by and adapted for movement relative to the body 1. The adjacent faces of the jaws 4 and 5 are provided with the gripping plates 64, for a purpose which is believed to be self-evident.

As herein embodied, the movable jaw 5 is provided with the forwardly and downwardly inclined opening 7 in which is pivotally engaged an extremity of a pawl P, said pawl being of such a length as to project through the slot 3 and being provided in its lower extremity with the lateral projections 8 adapted to coact with the teeth 9 of the parallel rack members 10. The adjacent ends of the racks are tied or connected by the integral portions 11 and 12, the portion 11 being projected through an opening 14 produced in the end of the body provided with the stationary jaw 4 and carried by said portion 11 is the cam member 15 adapted to coact with the adjacent extremity of the body 1 whereby the movable jaw 5 may be tightened relative to the work after said jaw has been adjusted into approximate position, it being understood that the racks 10 are capable of independent longitudinal movement. The opposite connecting portion 12 of the members 10 rests upon the supporting plate 16 connecting the lower marginal portions of the flanges 2 at the adjacent extremity of the body 1 and said plate is provided with the upstanding projection 17 disposed between the members 10 whereby said members are held against undue lateral movement.

The connecting portion 12 of the members 10 is provided with the inwardly disposed pin or projection 18 surrounded by the expansible member 19 coacting with the adjacent face of the connecting portion 12 and the lug 20 whereby it will be perceived that upon adjustment of the cam 15 into inoperative position, the members 10 will be automatically moved inwardly so that an initial movement will be imparted to the movable jaw 5 to permit ready removal of the work from between the jaws 4 and 5, as is believed to be clearly apparent to those skilled in the art to which my invention appertains.

As is believed to be clearly shown in the accompanying drawings, the teeth 9 are produced on the under surfaces of the members 10 and the pawl P, or more particularly the projections 8 thereof, are normally maintained in engagement with the teeth under the influence of the spring member 21, herein disclosed as a conventional leaf spring, one extremity whereof being anchored, as at 22, to the under surface of the movable jaw 5 and having its free extremity engageable with the under surface of the pawl P. Disposed transversely of the movable jaw 5

is an opening 23 intersecting the upper portion of the opening 7 and mounted in said opening is a shaft 24 projecting beyond one side of the jaw 5 and being provided with an operating means 25, herein disclosed as a milled or knurled head. The shaft 24 is also provided with a lateral depression 26 adapted to receive the upper longitudinal edge of the pawl P upon axial rotation being imparted to the shaft 24, whereby said pawl P, or more particularly the lateral projections 8 thereof, will be disengaged from the teeth 9 in order to permit an adjustment of the jaw 5 away from the jaw 4.

From the foregoing description, it is thought to be obvious that a vise constructed in accordance with my invention is of an extremely simple and comparatively inexpensive nature and is particularly well adapted for use by reason of the convenience and facility with which it may be assembled, and it will also be obvious that my invention is susceptible of some change and modification without material departure from the principles and spirit thereof and for this reason I do not wish to be understood as limiting myself to the precise arrangement and formation of the several parts herein shown in carrying out my invention in practice.

I claim:

1. A device of the character described comprising a body provided with depending marginal flanges and with an elongated opening at substantially its transverse center, a stationary jaw carried by the body, a movable jaw mounted upon the body and coacting with the stationary jaw, a pawl carried by the movable jaw and projecting through the slot of the body, parallel rack members positioned beneath the body and provided with teeth on the under surfaces thereof, said pawl of the movable jaw coacting with said rack members, cross members connecting the opposite extremities of the rack members, one of said connecting portions projecting beyond an extremity of the body, means carried by said projected extremity coacting with the adjacent end of the body for imparting movement to the rack members in one direction, means coacting with the opposite connecting portion of the rack members for imparting movement to the members in an opposite direction, a plate connecting the flanges adjacent said last named extremity of the rack members and on which rests said last named connecting portion, and an upstanding lug carried by said plate and extending between the rack members.

2. A device of the character described comprising a body provided with depending marginal flanges and with an elongated opening at substantially its transverse center, a stationary jaw carried by the body, a movable jaw mounted upon the body and coacting with the stationary jaw, a pawl carried by the movable jaw and projecting through the slot of the body, parallel rack members positioned beneath the body and provided with teeth on the under surfaces thereof, said pawl of the movable jaw coacting with said rack members, cross members connecting the opposite extremities of the rack members, one of said connecting portions projecting beyond an extremity of the body, means carried by said projected extremity coacting with the adjacent end of the body for imparting movement to the rack members in one direction, means coacting with the opposite connecting portion of the rack members for imparting movement to the members in an opposite direction, a plate connecting the flanges adjacent said last named extremity of the rack members and on which rests said last named connecting portion, and an upstanding lug carried by said plate and extending between the rack members, said last named movable means for the rack members comprising an expansible member interposed between the lug of the plate and the opposite face of the adjacent connecting portion of the rack members.

In testimony whereof I hereunto affix my signature in the presence of two witnesses.

CARL A. SODERBERG.

Witnesses:

GEORGE J. MALMBORG,

JAMES E. ODLIN.