

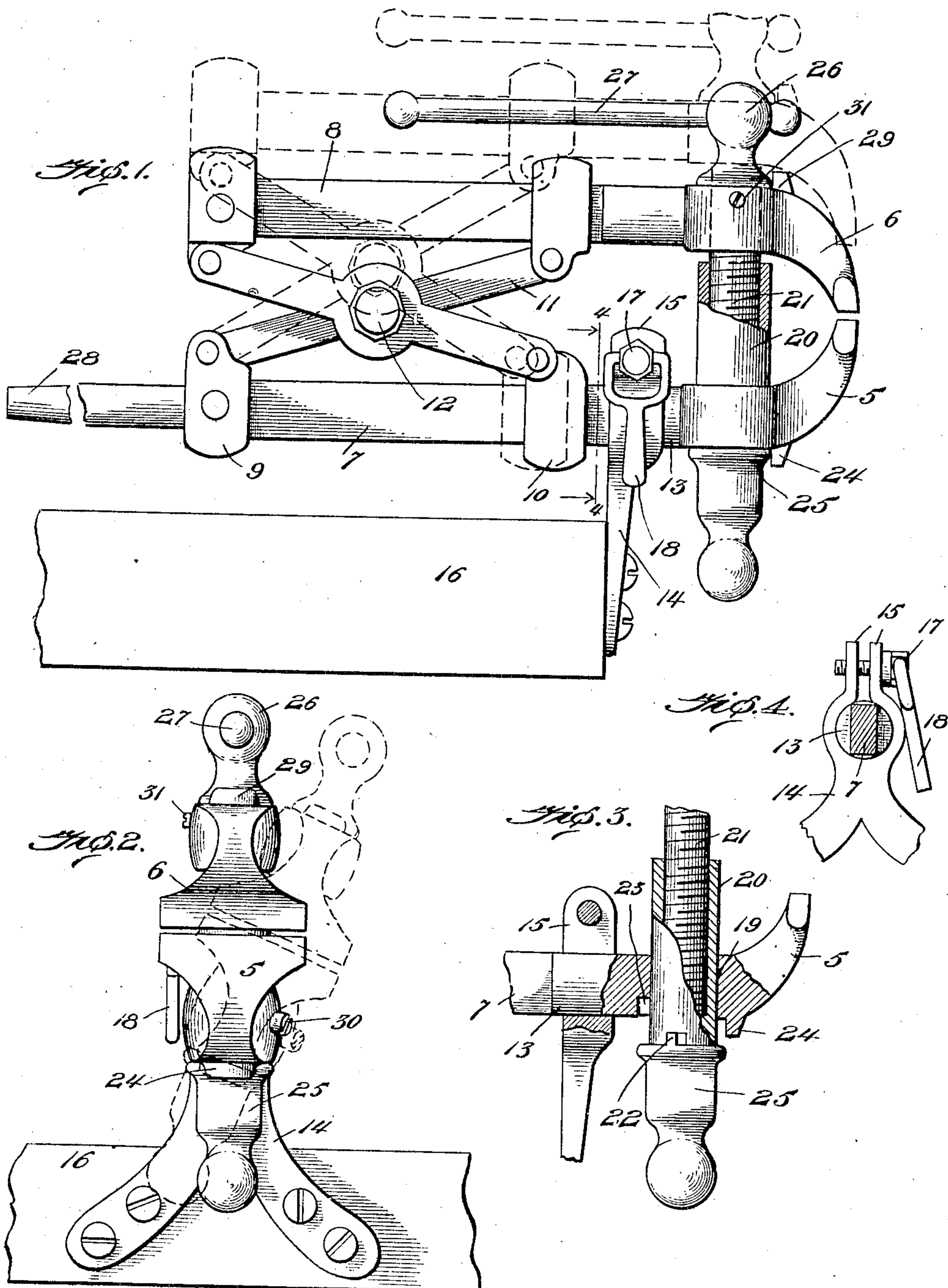
No. 849,616.

PATENTED APR. 9, 1907.

A. S. HOVANDER.

WISE.

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WITNESSES:

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UNITED STATES PATENT OFFICE.

AUGUST SVENSON HOVANDER, OF CLAY CITY, INDIANA.

VICE.

No. 849,616.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, AUGUST SVENSON HOVANDER, a citizen of the United States, residing at Clay City, in the county of Clay and State of Indiana, have invented a new and useful Vise, of which the following is a specification.

This invention relates to vises, and has for its object to provide a strong durable device of this character in which the gripping-jaws are disposed parallel with each other and movable vertically to open and closed position.

A further object of the invention is to provide means for tilting the gripping-jaws laterally and means for locking the same in closed position.

A still further object of the invention is to generally improve this class of devices so as to increase their utility, durability, and efficiency, as well as to reduce the cost of manufacture.

With these and other objects in view the invention consists in the construction and novel combination and arrangement of parts hereinafter fully described, and illustrated in the accompanying drawings, it being understood that various changes in form, proportions, and minor details of construction may be resorted to within the scope of the appended claims.

In the accompanying drawings, forming a part of this specification, Figure 1 is a side elevation of the vise constructed in accordance with my invention, showing in dotted lines the movable jaw in vertical or adjustable position. Fig. 2 is a front elevation of the same, showing in dotted lines the position assumed by the vise when the latter is tilted. Fig. 3 is a side elevation, partly in section, of the lower jaw and cooperating parts. Fig. 4 is a transverse sectional view taken on the line 4 4 of Fig. 1.

Similar numerals of reference indicate corresponding parts in all of the figures of the drawings.

The improved device comprises a relatively stationary gripping-jaw 5 and a movable gripping-jaw 6, provided with laterally-extending shanks 7 and 8, preferably disposed parallel with each other, as shown. Mounted on the shanks 7 and 8 are stationary collars 9 and movable collars 10, the stationary collar of one shank being connected, through the medium of a link 11, with the movable collar of the opposite shank. The links 11

are pivoted at their point of intersection, as indicated at 12, so that the jaws will be opened and closed with a parallel movement, and thus insure an even grip on the pipe or other article operated upon. The lower shank 7 is provided with a curved portion 13, and engaging said curved portion is a supporting-bracket 14, the upper end of which is split or bifurcated, as indicated at 15, while the lower end thereof is designed for attachment to a bench or other suitable support 16. Threaded in aligned openings formed in the free end of the bracket 14 is a clamping-screw 17, the head of which is provided with a pivoted handle 18, by means of which the screw may be rotated to contract the free end of the bracket, so as to securely grip the adjacent portion of the shank, and thus lock the latter in adjusted position.

Seated in an opening 19, formed in the lower jaw 5, is a sleeve or collar 20, having its interior walls threaded for engagement with an operating-screw 21. The sleeve or collar 20 is formed with a lug or projection 22, adapted to engage a recess 23, formed in the lower jaw 5, so as to prevent rotation of said sleeve, while that portion of the jaw opposite the recess 23 is formed with a depending reinforcing-lug 24, adapted to bear against the solid end 25 of the sleeve, there being a similar lug 29 formed on the upper jaw 6, as shown.

The screw 21 is loosely mounted for rotation in the upper or movable jaw 6 and is provided with a terminal head 26, through which extends an operating-handle 27, so that by rotating said handle the screw may be actuated to move the jaws to open or closed position. The lower shank 7 is preferably extended beyond the adjacent end of the upper shank 8 to form a handle 28, whereby the jaws may be conveniently tilted laterally, as shown in Fig. 2 of the drawings, said jaws being locked in tilted position by adjusting the nut 17, as before described.

To assist in preventing accidental rotation of the sleeve or collar 20, a clamping-screw 30 pierces the lower jaw 5 and engages the exterior walls of said sleeve, there being a similar screw or pin 31 threaded in the upper jaw 6 in order to prevent independent vertical movement of the actuating-screw 21.

In operation when it is desired to grip a pipe or other article the jaws are adjusted

vertically by rotating the handle 27. When it is desired to tilt the vise, the clamping-screw 17 is loosened by rotating the handle 18 and the vise tilted laterally to adjusted position by rotating or partially rotating the handle 28, after which the clamping-screw 17 is adjusted, as before stated.

From the foregoing description it is thought that the construction and operation of the device will be readily understood by those skilled in the art, and further description thereof is deemed unnecessary.

Having thus described the invention, what is claimed is—

1. A vise comprising relatively stationary and movable jaws each provided with laterally-extending reinforcing lugs, parallel shanks carried by the jaws one of which is extended beyond the adjacent end of the other to form an operating-handle, stationary and movable collars mounted on the shanks, links connecting the stationary collar of one shank with the movable collar of the adjacent shank, a pivotal connection between said links, a threaded sleeve engaging the stationary jaw and provided with an extension bearing against the adjacent reinforcing-lug, an operating-screw engaging the threads of the sleeve and provided with an

enlarged head bearing against the opposite reinforcing - lug, a supporting - bracket engaging the shank of the stationary jaw and having one end thereof bifurcated, and a clamping-screw engaging the bifurcated end of the bracket for clamping the bracket in engagement with the shank.

2. A vise comprising relatively stationary and movable gripping-jaws provided with parallel shanks, one of said shanks being provided with a curved bearing-surface and extended beyond the end of the adjacent shank to form an operating-handle, a pivotal connection between said shanks, a supporting-bracket having one end thereof formed with a bearing-surface for engagement with the curved portion of the relatively stationary shank and having its free end bifurcated, a clamping-screw engaging the bifurcated end of the bracket for clamping the bracket in engagement with shank, and means for operating the jaws.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in the presence of two witnesses.

AUGUST SVENSON HOVANDER.

Witnesses:

ABIJAH MERRILL,
EMERY C. LLOYD.