No. 631,664. Patented Aug. 22, 1899.

W. M. POTTER.

SAW VISE.

(Application filed July 28, 1898.

(No Model.) 2 Sheets—Sheet 1.

Fig. I.

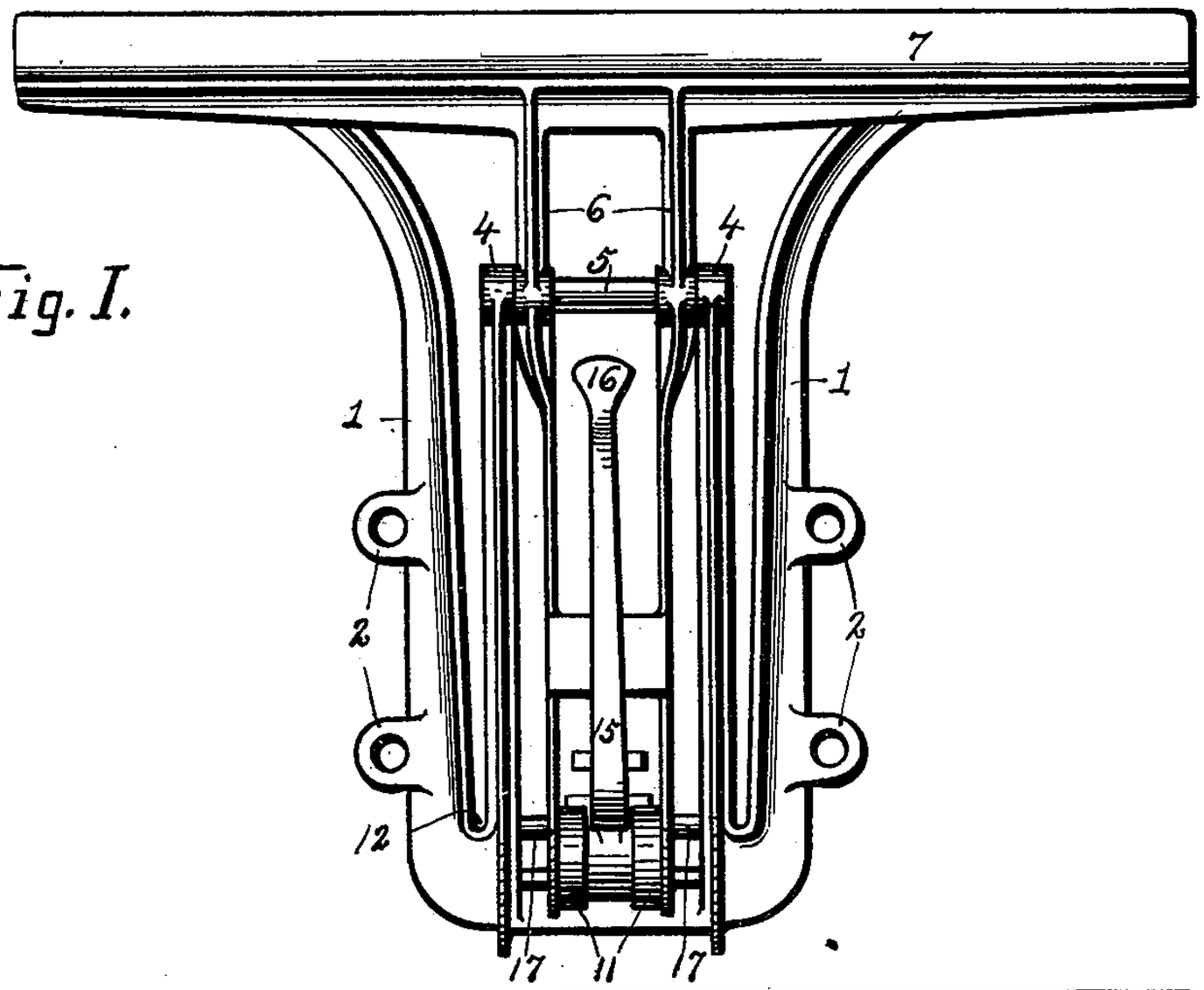

Fig. II.

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Fig. III.

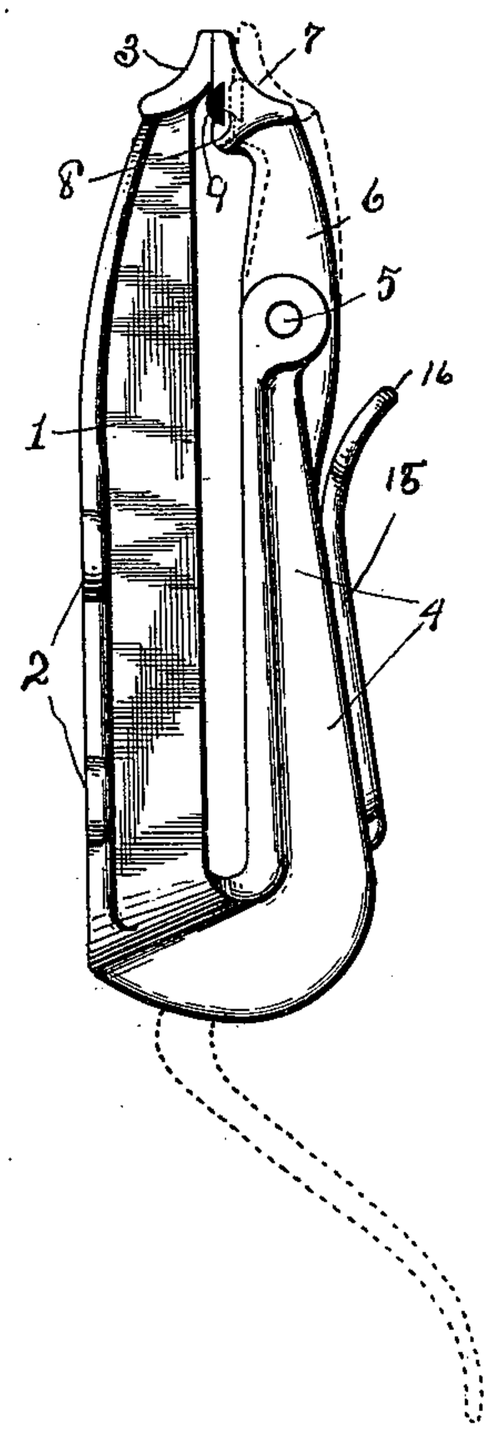


Fig. III.

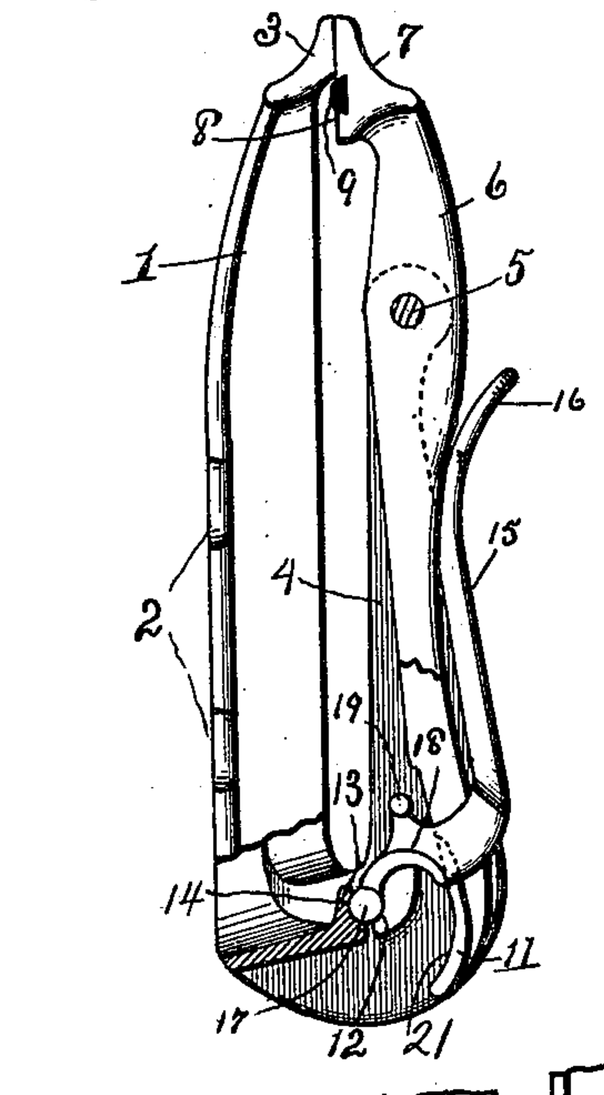


Fig. V.

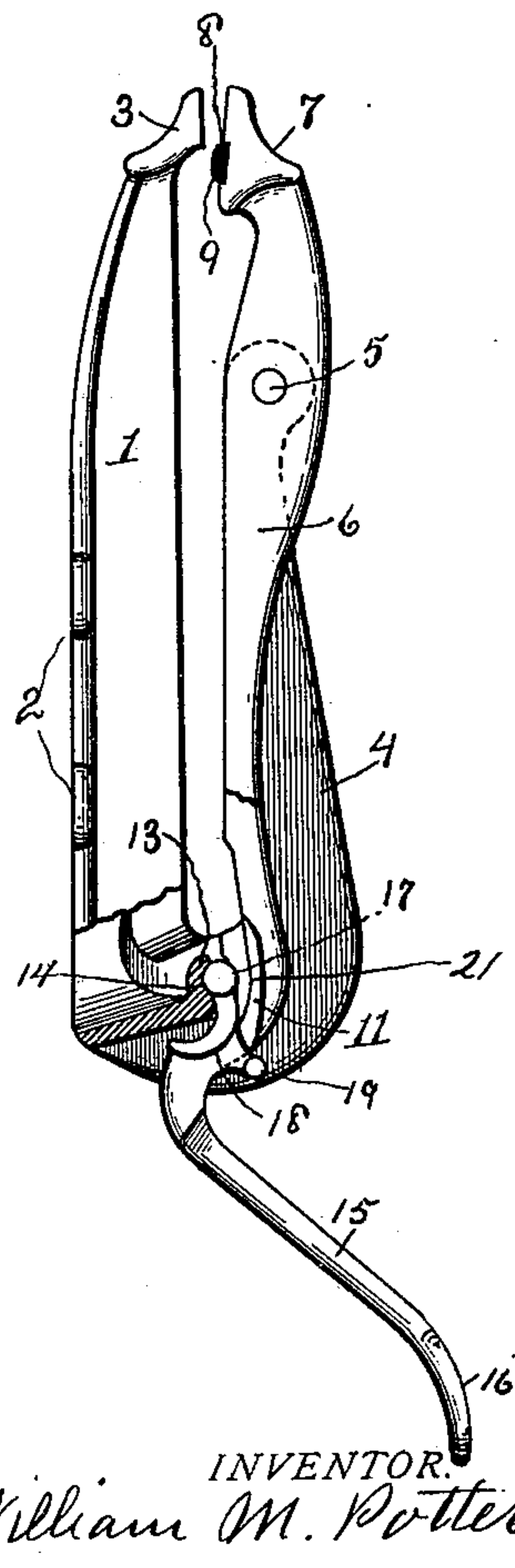


Fig. VI.

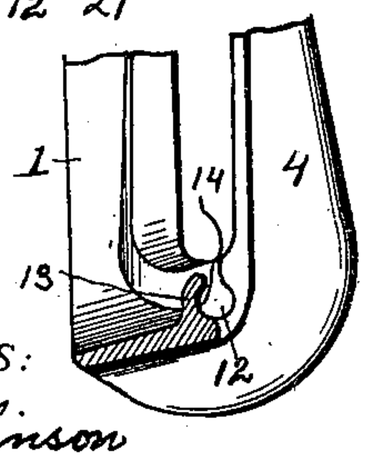
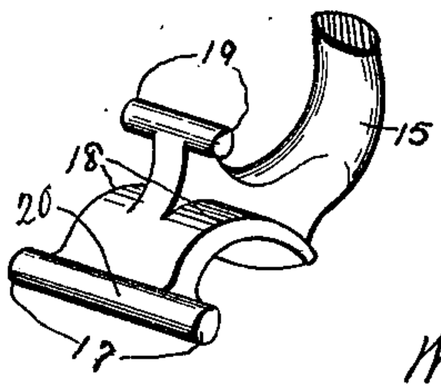


Fig. VII.



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UNITED STATES PATENT OFFICE.

WILLIAM M. POTTER, OF SYRACUSE, NEW YORK, ASSIGNOR TO E. C. STEARNS & CO.

SAW-VISE.

SPECIFICATION forming part of Letters Patent No. 631,664, dated August 22, 1899.

Application filed July 28, 1898. Serial No. 687,102. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM M. POTTER, of Syracuse, in the county of Onondaga, in the State of New York, have invented new and useful Improvements in Saw-Vises, of which the following, taken in connection with the accompanying drawings, is a full, clear, and exact description.

What I have invented is a new and improved construction of saw-vise, which is strong and simple and holds the saw with great firmness.

It consists, essentially, in the form of the lever carrying the movable jaw and the form of the double-action hand-lever engaging with and operating the main lever.

My invention will be better understood by reference to the accompanying drawings, in which the same reference-numerals indicate the same parts in all the figures.

Figure I is a front elevation of my vise closed. Fig. II is a front elevation of the vise open. Fig. III is a side elevation of the vise closed, the open position of the parts being indicated in dotted lines. Figs. IV and V are side elevations, respectively, in closed and open positions, portions being broken away. Fig. VI is a vertical section of the lower end of the main frame enlarged with both levers removed. Fig. VII is a view in perspective of the lower end of the hand-lever.

In the figures, 1 indicates the main frame, provided with ears 2 2 for receiving screws or with other desirable means for holding the vise in position; 3, the integral stationary jaw, and 4 4 the integral outwardly and upwardly curved arms, between which is journaled by rod 5 or other desirable means the swinging frame 6, carrying on its upper end the integral jaw 7, provided with slot 8 and usual cushion 9, of rubber or similar material, and having its lower forked end provided on the inner faces of the forks with integral segments or segmental ridges 11 11.

On the inner faces of arms 4 4, where they are joined to the main frame 1, are formed sockets 12 12, with which coöperates the integral stud 13, having a concave outer face corresponding to said sockets for receiving the hand-lever 15. This lever has a handle 16, trunnions 17 17, fitting the sockets 12 12, eccentric surface 18, and cross-head 19. Between the trunnions is a cross-bar 20, fitted to outer surface 14 of stud 13.

From this description it will be seen that when the handle is thrown up into the positions shown in Figs. I and IV the eccentric surfaces 18 18 bear against the inner faces 21 of the segments 11 11, forcing outwardly the lower end of the lever 6 with great power. When the handle is thrown down for opening the jaws in the position shown in Figs. II and V, the first result is that the eccentric surfaces are thrown away from the inner faces of the segments, the hand-lever not being journaled concentrically with those surfaces. The lower end of the main lever is thus released and the movable jaw is slightly loosened. At this point the pin 19, which does not engage with the upper portion of the eccentric, comes into engagement with the lower portion of their outer faces, forcing in the lower end of the main lever and effecting an additional and sufficient clearance of the jaws. It will also be seen that as the cam-surfaces on the shorter arm of the hand-lever engage with the longer arm of the main lever the jaws will be forced together and the saw clamped in position with great power.

Having described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. In a saw-vise, the combination of the stationary main frame carrying an integral fixed jaw, integral arms outwardly and upwardly extending, a main lever carrying the movable jaw journaled between the upper ends of said arms and having segmental surfaces or ridges on its lower end, a hand-lever journaled within the lower ends of said arms and provided with an integral eccentric surface for forcing the lower end of said main lever outwardly, and a cross-head for forcing it inwardly.

2. In a saw-vise, the combination of the stationary frame provided with the integral fixed jaw and with integral outwardly and upwardly curved arms, a main lever journaled between the upper ends of said arms carrying the integral movable jaw and having a forked lower end formed with integral segmental ridges on the inner faces of said ends, a hand-lever journaled within the lower end of said main

frame and provided with integral eccentric surfaces for engaging with the upper inner surfaces of said segmental ridges for forcing outwardly the lower end of said main lever, and with a cross-head for engaging with the lower outward surfaces of said segmental ridges and forcing inwardly the lower end of said main lever.

3. In a saw-vise, the combination of a main frame provided with an integral stationary jaw and with integral outwardly and upwardly extending arms, a main lever carrying a movable jaw and having a forked lower end provided with opposite corresponding integral segmental ridges on the lower ends and inner faces of said forks, said main lever being journaled between the upper ends of said arms, sockets formed in the inner faces of said arms, a corresponding stud on said main frame; a hand-lever formed with trunnions and a cross-bar for journaling it between said stud and sockets, and having integral eccentric surfaces for engaging with the upper portion of the inner faces of said segmental ridges when the hand-lever is thrown upwardly, and having an integral cross-head for engaging with the lower portion of the outer faces of said segmental ridges when the hand-lever is thrown downwardly.

In testimony whereof I have hereunto signed my name.

WILLIAM M. POTTER. [L. S.]

Witnesses:
A. D. ALLEN,
H. M. SEAMANS.