

A. L. DEMMON & A. W. DIEFENDORF.

Machinists' Vises.

No. 133,423.

Patented Nov. 26, 1872.

Fig 1

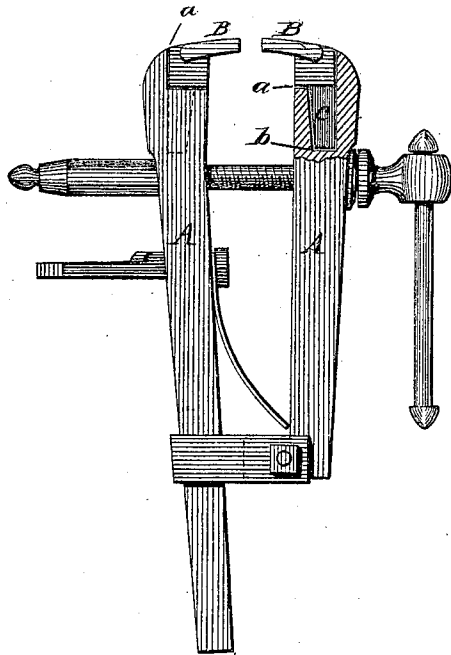


Fig 2.

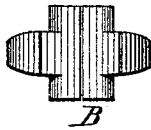


Fig 3.

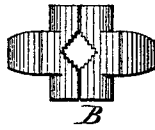


Fig 4

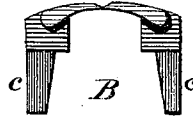


Fig 5

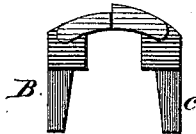


Fig 6.

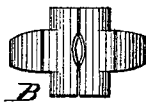
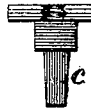


Fig 7.



Witnesses.

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UNITED STATES PATENT OFFICE.

AZRO L. DEMMON AND AMENZO W. DIEFENDORF, OF PARDEEVILLE, WIS.

IMPROVEMENT IN MACHINISTS' VISES.

Specification forming part of Letters Patent No. 133,423, dated November 26, 1872.

To all whom it may concern:

Be it known that we, AZRO L. DEMMON and AMENZO W. DIEFENDORF, of Pardeeville, in the county of Columbia and State of Wisconsin, have invented certain Improvements in Vises, of which the following is a specification, reference being had to the accompanying drawing.

Our invention relates to a vise provided with a series of interchangeable jaws adapted for different purposes; and it consists in the peculiar manner of attaching the jaws to the vise and in the use of jaws adapted for cutting off pipes, &c., and for forming screw-threads thereon, as hereinafter described.

Figure 1 is a side elevation of our improved vise, having a pair of plain jaws applied to it, a portion being broken away to show the manner in which the jaws are held in place. Figs. 2 to 7, inclusive, are views of different forms of jaws.

In constructing our vise the body and operating parts may be made in any of the ordinary forms, but, instead of providing it with the usual jaws or faces, we form in the upper inner corner of each arm or head *A* a square recess, *a*, and a vertical socket, *b*, extending down into the arm, as shown. We then provide a series of interchangeable jaws, *B*, having their backs shaped to fit snugly into the seats or recesses *a*, and having shanks or stems *c* to extend down into the socket *b*. When these jaws are applied to the vise-heads, as shown in Fig. 1, nearly the entire pressure and support is thrown upon the seats or recesses *a*, while the stems or shanks serve mainly to retain the jaws in place and prevent them from falling or being knocked off when the vise is not in use. As the strain is thus received upon the solid metal of the vise-heads or arms the jaws are held and supported as firmly as if rigidly attached, and can by no possibility be broken or forced off by use; nor

can they become wedged fast so as to prevent their removal. It is obvious that a great variety of jaws may be provided of different sizes and forms adapted for different uses, and that a special pair of jaws may be provided for any particular purpose.

Fig. 2 represents an ordinary plain pair of jaws; Fig. 3, a pair of jaws with serrated recesses, for holding round rods, &c.; and Fig. 5, a pair in which one jaw is higher than the other, for use in bending metal where a sharp corner or angle is required. Fig. 4 represents a pair of jaws provided with blades or cutters for cutting off gas-pipe, round rods, &c. Figs. 6 and 7 show jaws provided with dies for cutting screw-threads, by the use of which threads may be conveniently formed on gas-pipe, &c.

Jaws may also be provided with shears and punches for cutting and perforating sheet metal, and with various other devices.

Our vise, constructed as described and provided with a suitable assortment of jaws, will answer the purposes of several different tools, and will therefore be found of great service, especially for mechanics and plumbers.

We are aware that detachable jaws have been used heretofore, but, owing to the manner in which they were attached, they were frequently broken off by use and often wedged fast, so that they could not be removed.

Having thus described our improvements, what we claim is—

A vise having its two legs, *A A*, provided with the recess *a* and socket *b*, in combination with the series of interchangeable jaws *B*, constructed and arranged to operate as herein described.

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Witnesses:
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