(Model.)

# D. F. SPANGLER.

## TOE CALK VISE.

No. 246,918. Patented Sept. 13, 1881.

*Fig. 1.*

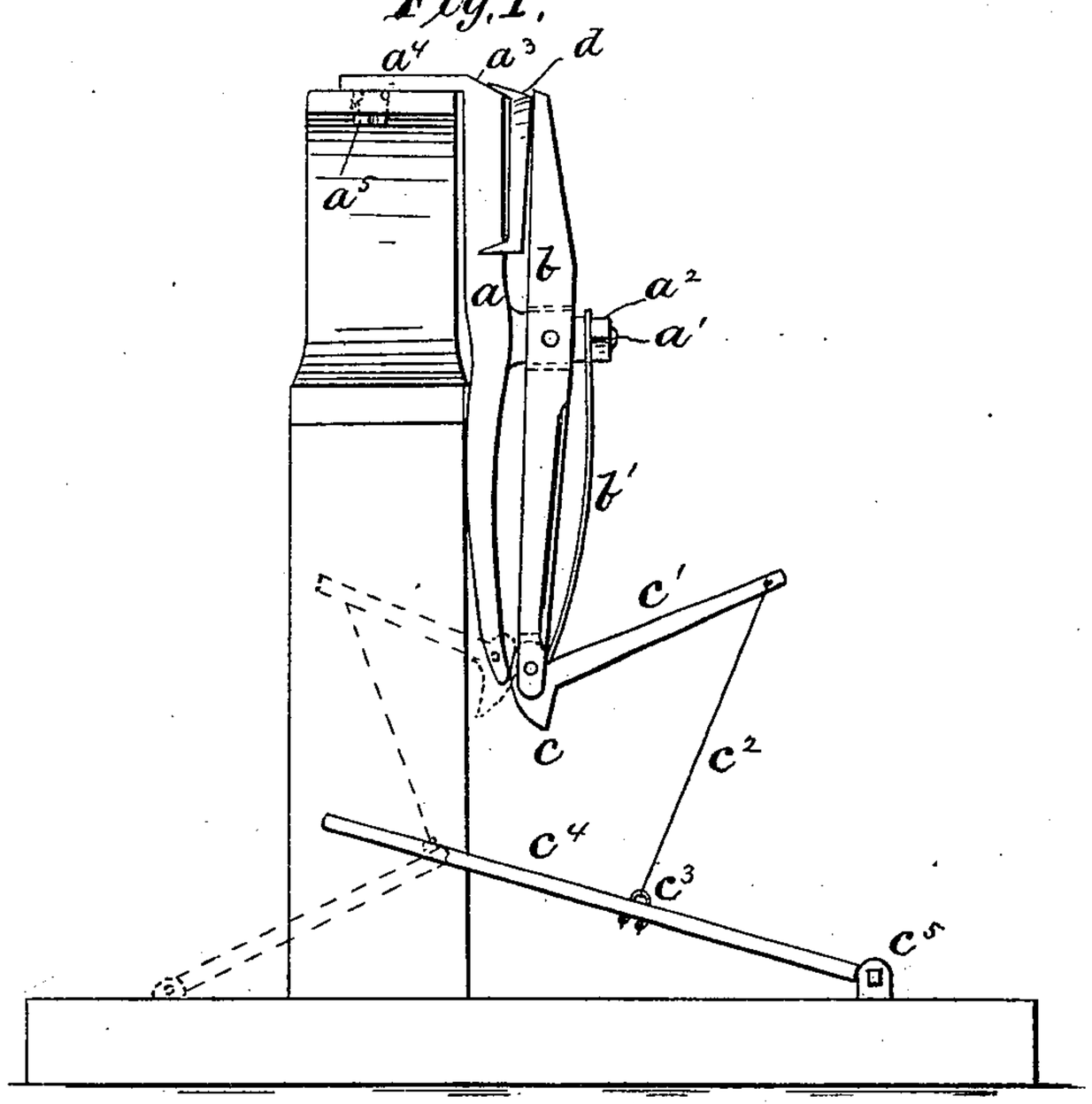
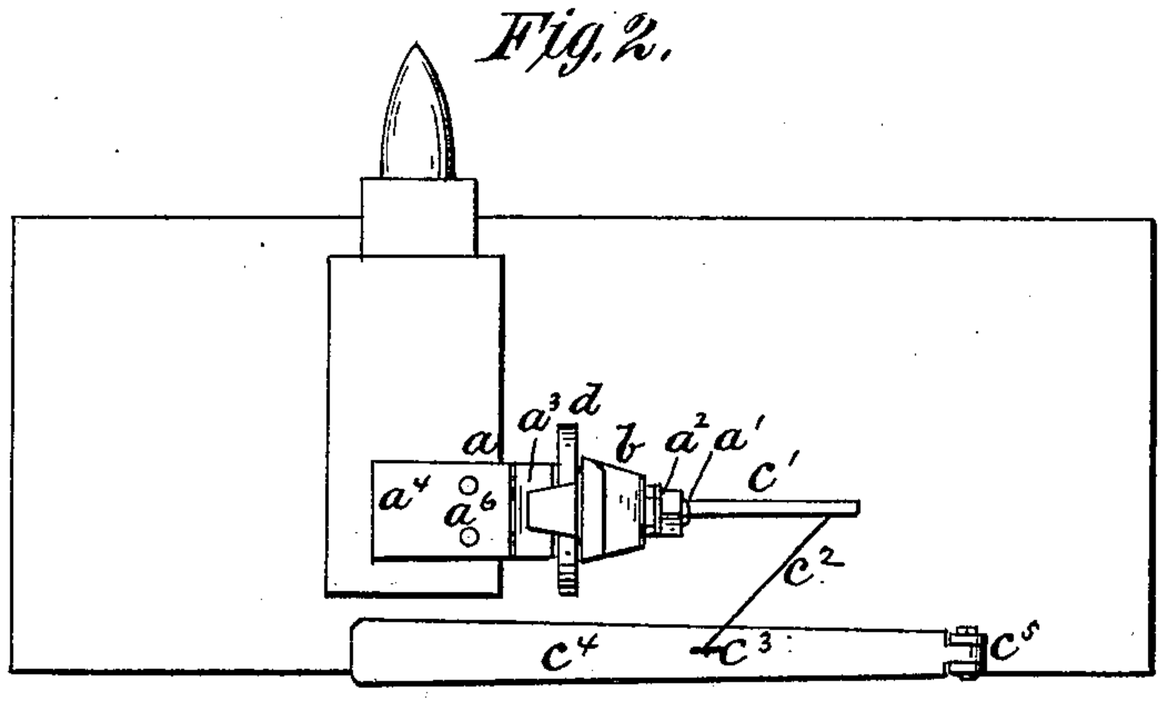



*Fig. 2.*




Witnesses:
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# UNITED STATES PATENT OFFICE.

DAVID F. SPANGLER, OF DAYTON, WASHINGTON TERRITORY.

## TOE-CALK VISE.

SPECIFICATION forming part of Letters Patent No. 246,918, dated September 13, 1881.

Application filed May 26, 1881. (Model.)

*To all whom it may concern:*

Be it known that I, DAVID F. SPANGLER, a citizen of the United States, residing at Dayton, in the county of Columbia, Washington Territory, have invented certain new and useful Improvements in Horseshoe Toe and Calk Vises; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to letters or figures of reference marked thereon, which form a part of this specification.

This invention has for its object to furnish a convenient tool to be attached to a blacksmith's anvil, for holding horseshoes and shaping the calks thereon.

It consists in a vise the fixed jaw of which is beveled at the top and provided with a wing which lies on top of the anvil, and has a depending lug, which fits into the hardy-hole, and in having the movable jaw provided with a cam-lever at its lower end, by which the vise is made to clamp the shoes.

In the drawings, Figure 1 is a side elevation, and Fig. 2 is a plan, of a vise made according to my invention and applied to an anvil.

*a* is the fixed jaw of the vise, being provided with a fixed stem, *a'*, with nut $a^2$ for holding the movable jaw. The upper end of the fixed jaw is beveled inward at $a^3$ at the proper angle usually given to the inner sides of horseshoe-calks.

$a^4$ is a horizontal wing projecting from the top of the jaw *a* across the top of the anvil, and on the under side of this wing there is provided a depending lug, $a^5$, which passes down into the hardy-hole and holds the jaw firmly to the anvil. In the wing $a^4$ there are formed two small vertical holes, $a^6$, to be used for holding the shanks of hardies or other like tools.

*b* is the movable jaw. It is held on the stem *a'* by the nut $a^2$. Its lower end is not connected to the lower end of the fixed jaw. The jaws are pressed open at their tops by a leaf-spring, *b'*, the upper end of which is held on the stem *a'*, and the lower end of which presses on the outer side of the lower end of the jaw *b*.

*c* is a cam, pivoted by preference in the lower end of the jaw *b*, and so that it bears against the lower end of the jaw *a*. It is so constructed and arranged that when turned in the proper direction it forces the lower ends of the jaws apart and closes the upper ends together. The cam could be easily constructed so that it could be pivoted to jaw *a* and bear against jaw *b*. The cam is provided with and operated by a lever-arm, *c'*. When the cam is pivoted to the movable jaw it projects away from the smith, and in such arrangement I connect the outer end of said lever-arm on one end of a rod, $c^2$, the other end of which is hooked into an eye, $c^3$, on a treadle, $c^4$. One end of the treadle is pivoted in a suitable eye on the floor of the shop, or to a sill or stake prepared for the purpose. The other end of the treadle extends to the side of the anvil-block, within easy reach of the foot of the smith.

When the vise is not in use the rod $c^2$ can be unhooked from the arm *c'* and dropped to the floor. The vise can then be lifted from the anvil and laid aside. The shoe *d* is placed between the jaws with the unsharpened calk resting on the beveled face $a^3$, where it can be beaten into proper shape.

The holes $a^6$ are employed to receive the ends of the punch employed to punch the nail-holes in the shoe.

When the cam is pivoted to the stationary jaw *a* it can be operated by placing the foot directly on the end of the lever-arm, or the treadle can be rigged in the position shown in dotted lines. I prefer the arrangement of the parts first hereinbefore described. The jaws could be pivoted together at the bottom and held apart at their tops by a spring placed between them in the well-known manner. A lever-arm could be pivoted to the side of the stationary jaw above the stem *a'*, and have its end extended past the movable jaw and provided with a lateral extension, which would bear on the outer side of the movable jaw and press the latter in toward the other jaw; but this arrangement puts the lever-arm somewhat in the way, and is not so convenient to operate.

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

In a vise for forming calks on horseshoes,

the combination, substantially as hereinbefore set forth, of the anvil, the stationary jaw provided with a beveled calk-face at its upper end, and with a horizontal wing extending over the face of the anvil, and with a depending lug adapted to enter the hardy-hole, the movable jaw, and a cam pivoted to one of the jaws and bearing against the other jaw, and provided with a lever-arm arranged to be under the control of the foot of the smith, substantially as set forth.

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

DAVID F. SPANGLER.

Witnesses:
R. F. STURDEVANT,
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