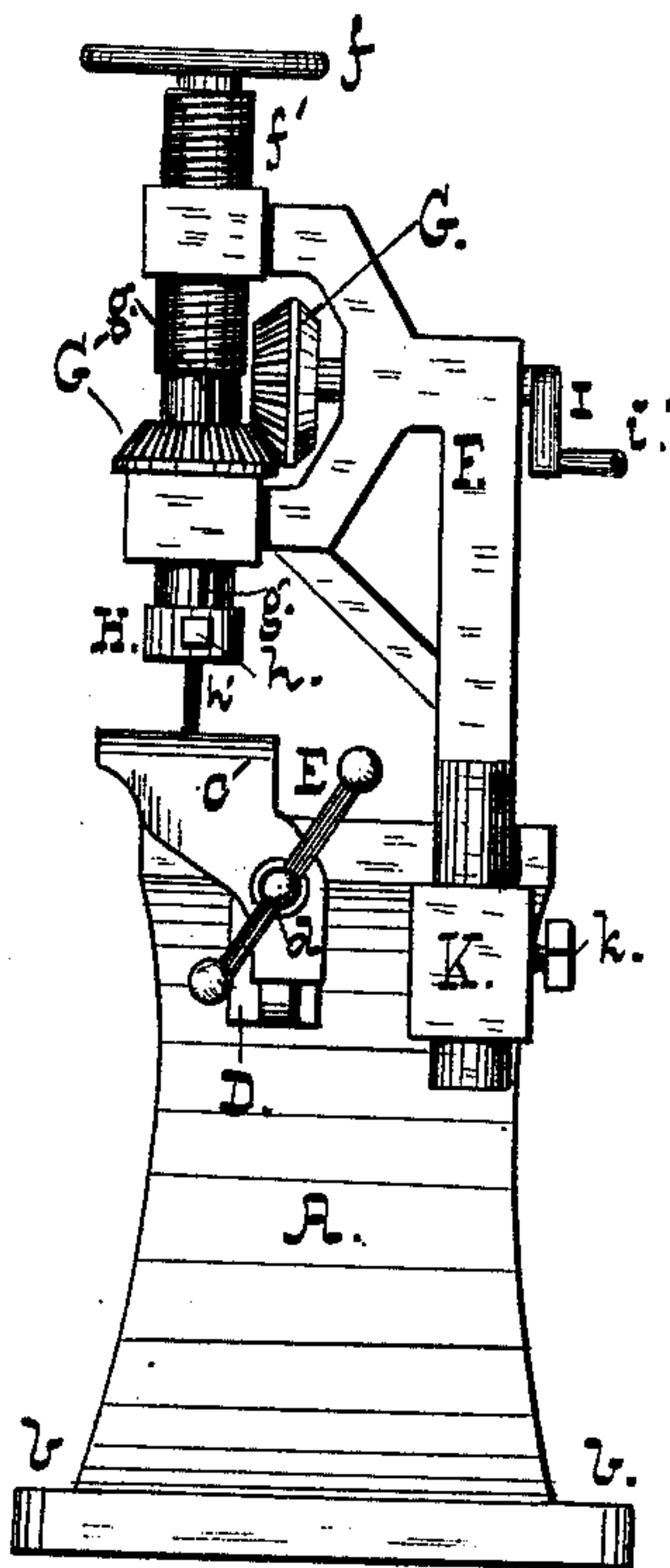
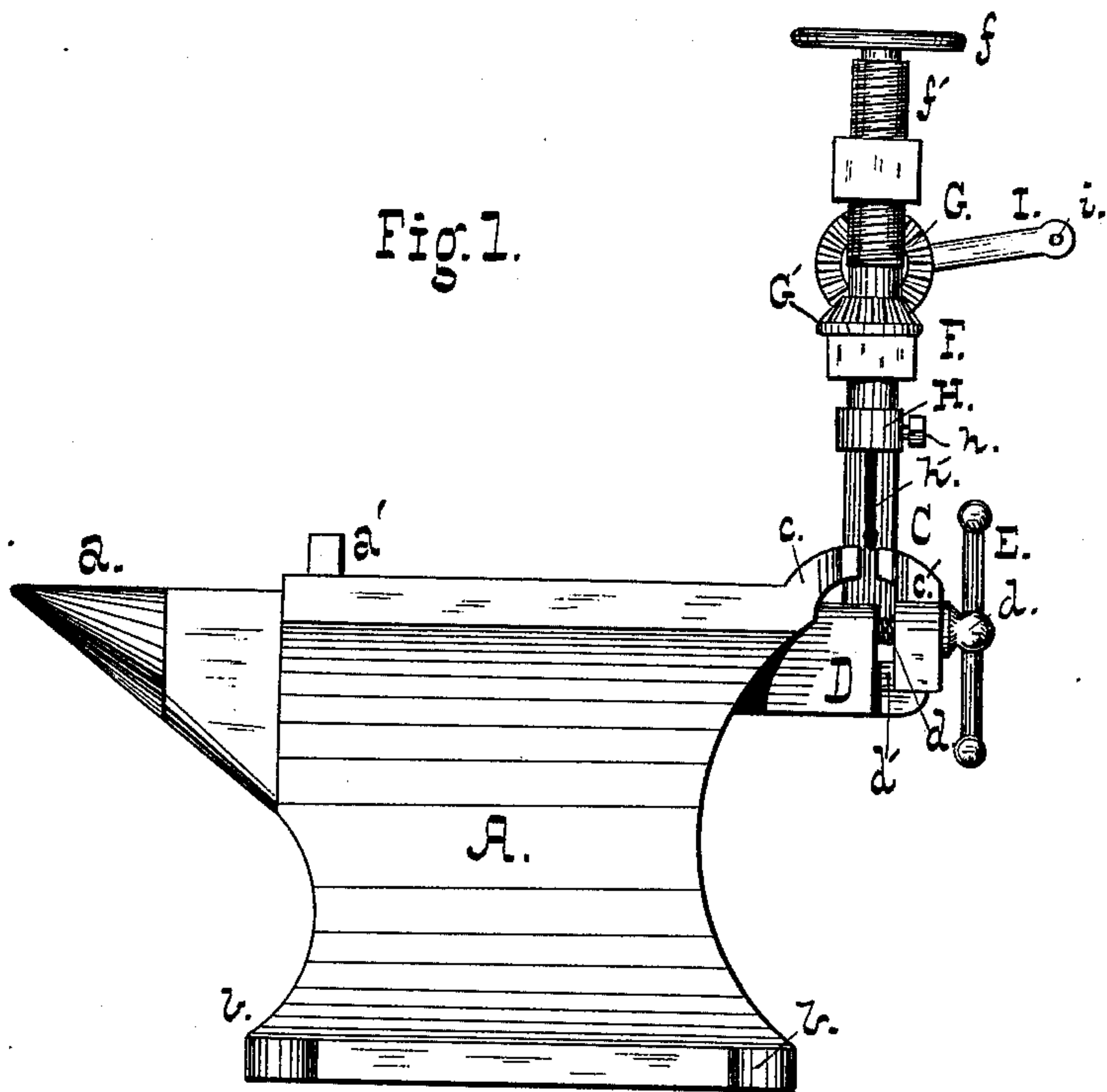


H. DUCSH.  
Metal-Drilling Machine.

No. 218,002.

Patented July 29, 1879.



Witnesses,  
W. A. Burham  
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by

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# UNITED STATES PATENT OFFICE.

HENRY DUCSH, OF BALTIMORE, MARYLAND.

## IMPROVEMENT IN METAL-DRILLING MACHINES.

Specification forming part of Letters Patent No. **218,002**, dated July 29, 1879; application filed March 14, 1879.

*To all whom it may concern:*

Be it known that I, HENRY DUCSH, of Baltimore city, State of Maryland, have invented certain new and useful Improvements in Anvils; and I hereby declare the same to be fully, clearly, and exactly described as follows, reference being had to the accompanying drawings, in which—

Figure 1 is a side elevation, and Fig. 2 an end elevation, of the device.

My invention is designed to supply a need long felt by blacksmiths and workers in metal generally; and it consists in an anvil combined, as hereinafter set forth, with certain appurtenances.

In metal-working establishments that indispensable article, the vise, has heretofore been generally secured to the work-bench, and has been liable to become loose sooner or later and cause annoyance, besides having its efficiency incidentally impaired, as stability of the work is practically indispensable in nearly all operations in metal-working.

I obviate these difficulties by casting the stationary jaw of the vise and the bearing for the rod of the movable jaw integral with an ordinary anvil, whose weight insures stability. The anvil A (shown in the accompanying drawings) has the usual horn *a*, removable cutter *a'*, and perforated lugs *b b*, for attaching it to the base. At the end opposite the horn the jaw *c* of the vise C is cast integral with the anvil, as is also the bearing D for the sliding jaw, which latter is provided with orifices for the rod *d'* and screw *d*, the hole for the latter being suitably tapped. As an alternative, the anvil is cast upon an internally-threaded tube for the screw.

The sliding jaw *c'* is of the usual shape, except that the rod *d'* and hole for the screw are not vertically beneath the jaw, the object being to admit of rods or long objects being held vertically in the center of the vise. Also,

integral with the vise is cast a strong perforated lug, K, having a set-screw, *k*, as shown. This is designed to clamp the shaft of a drill, F, in proper position as regards the vise and anvil. The drill is of the usual construction, having a hand-wheel, *f*, mounted upon a threaded rod, *f'*. The rod is slotted longitudinally at *g*, and on it is mounted a bevel-gear wheel, *G'*, that meshes with a second wheel, *G*, driven by a crank, *I*, and handle *i*.

A stop, H, provided with a clamping-screw, *h*, is located on the lower end of the rod *f'*, and retains the drill-point *h'*. The shaft of the drill is made circular to admit of its revolution in the lug K, wherein it is securely fastened in any position by the screw *k*.

Inasmuch as the parts are of the usual construction, separately considered, it is unnecessary to describe the operation of the device.

Should it be deemed desirable, the vise-jaw may be formed flush with the upper surface of the anvil; but as this would require the work to be reversed in many instances, as in filing, and as the vise is practically out of the way in the position shown, it is deemed preferable to have it project, as illustrated, above the anvil-face.

The advantages of the device, as a whole, aside from the mere convenience of juxtaposition, will be at once apparent, as the anvil furnishes a perfectly stable support for vise or drill, or both.

What I claim is—

In combination with the adjustable drill-standard and vise, a base common to both, and having the stationary jaw of the vise and the support for the drill-standard integral, as set forth.

HENRY DUCSH.

Witnesses:

J. C. GITTINGER,  
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