

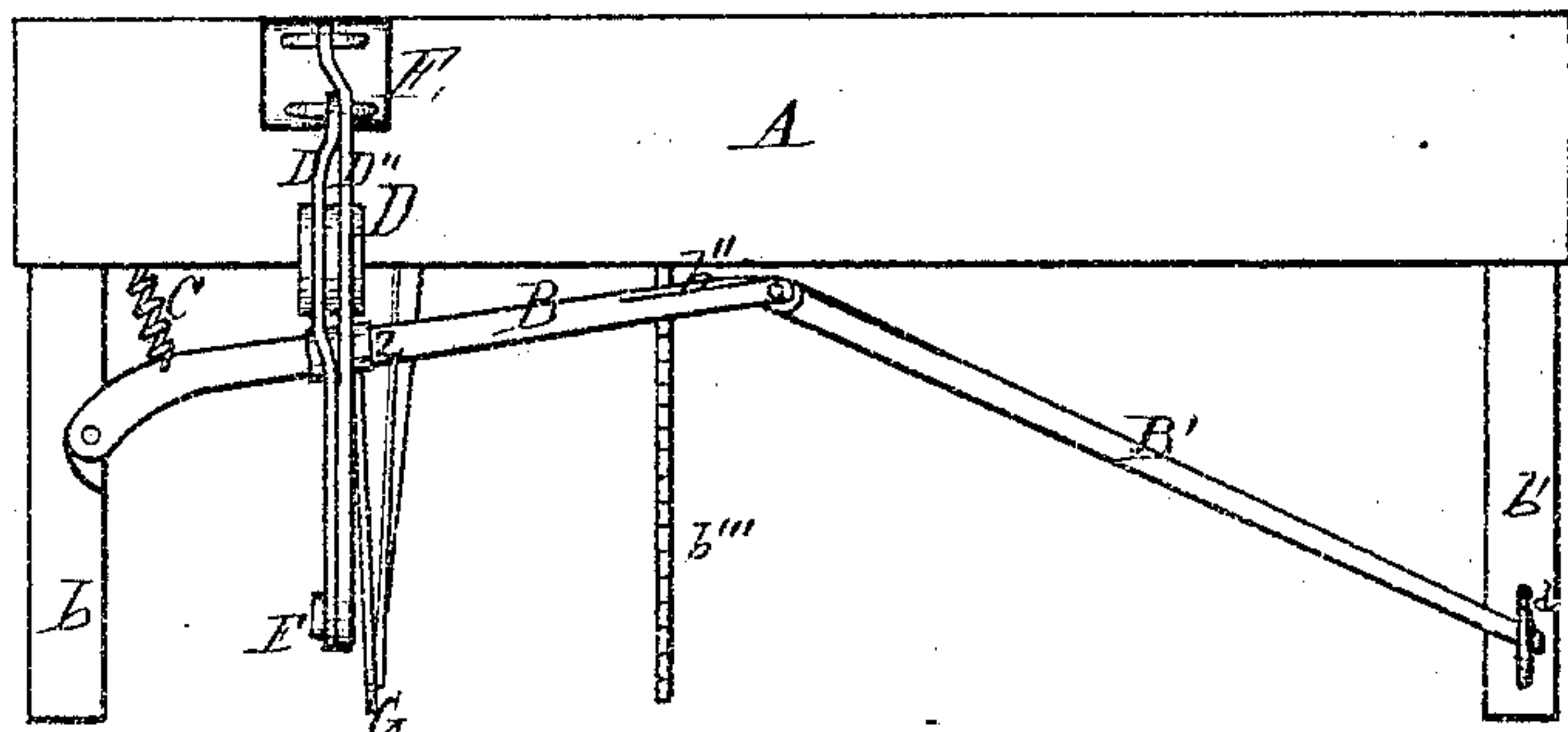
J.A.YOUNCE & G.W.SMITH.

CLAMP FOR CARPENTER'S BENCH.

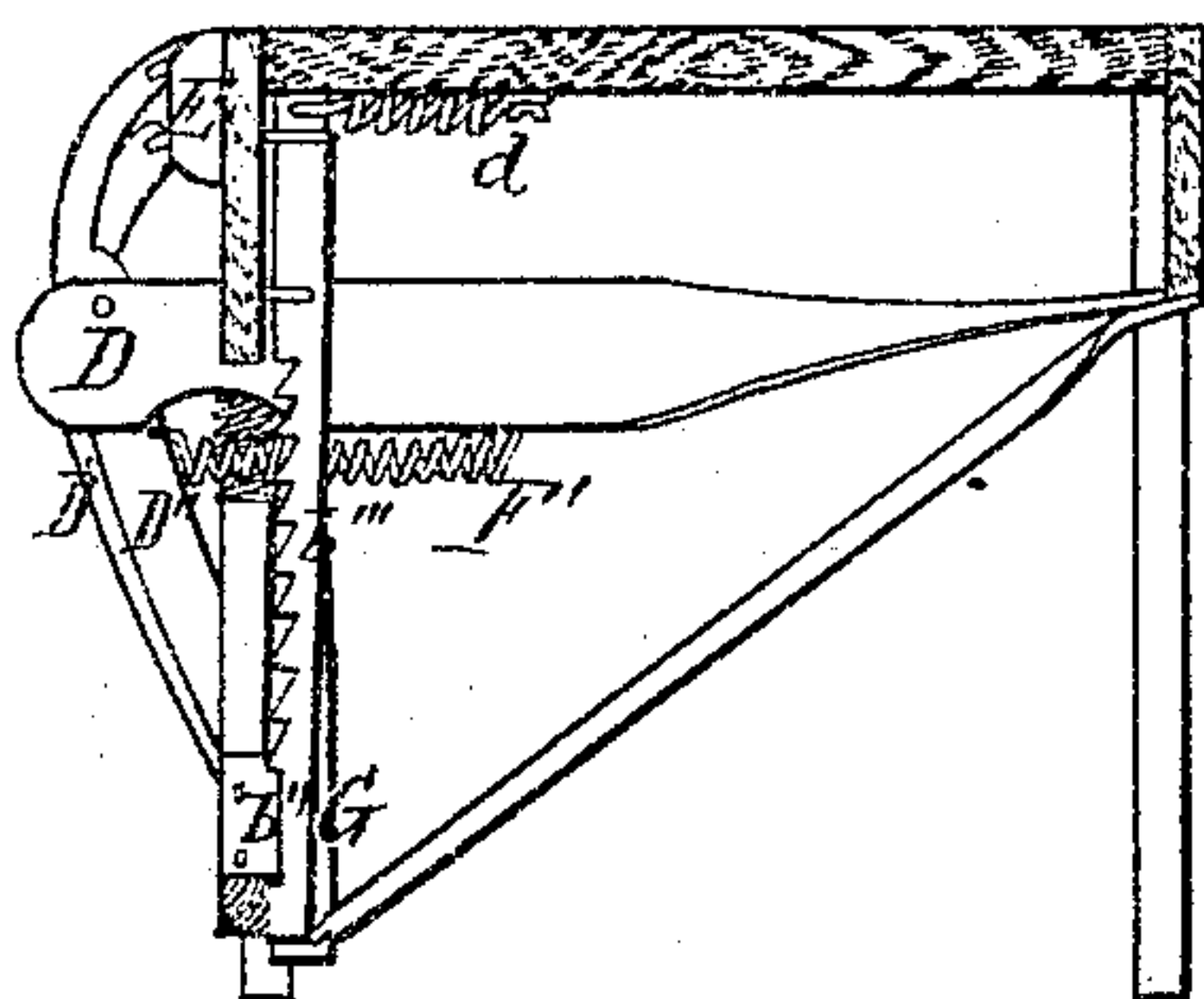
No. 118,999.

Fig' 1.

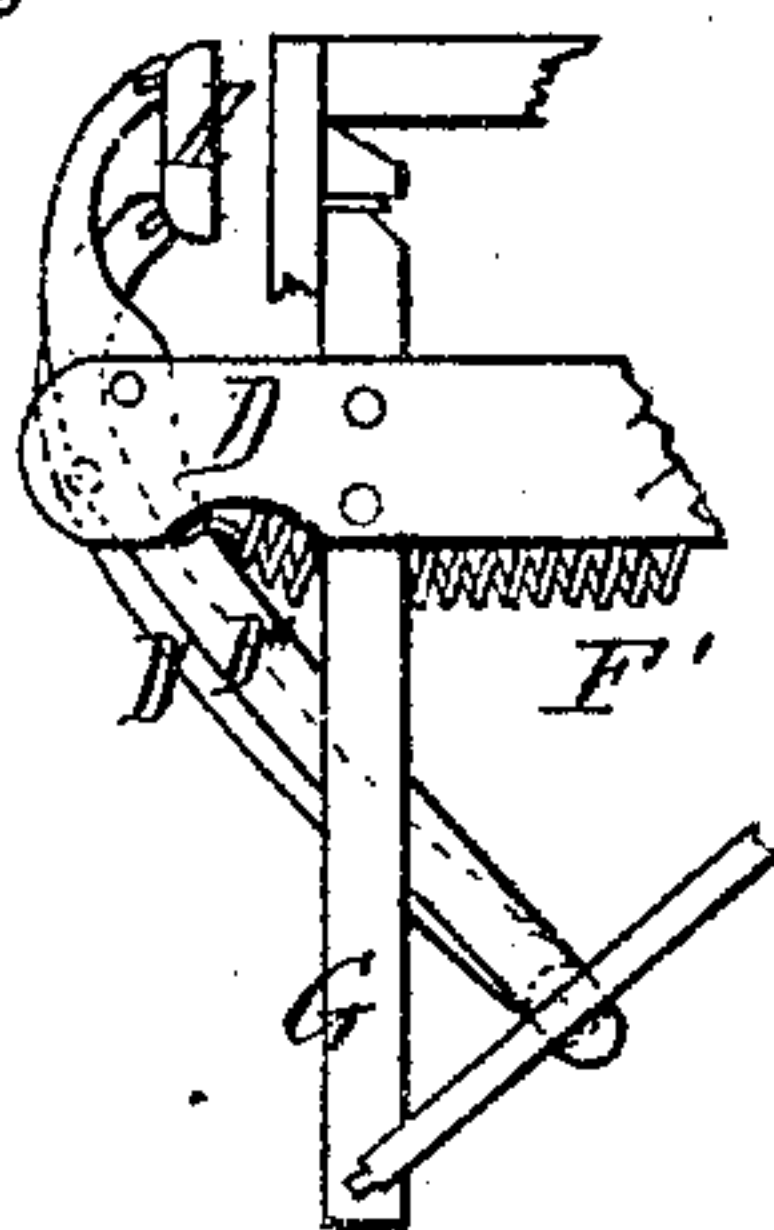
Patented Sep. 12, 1871.



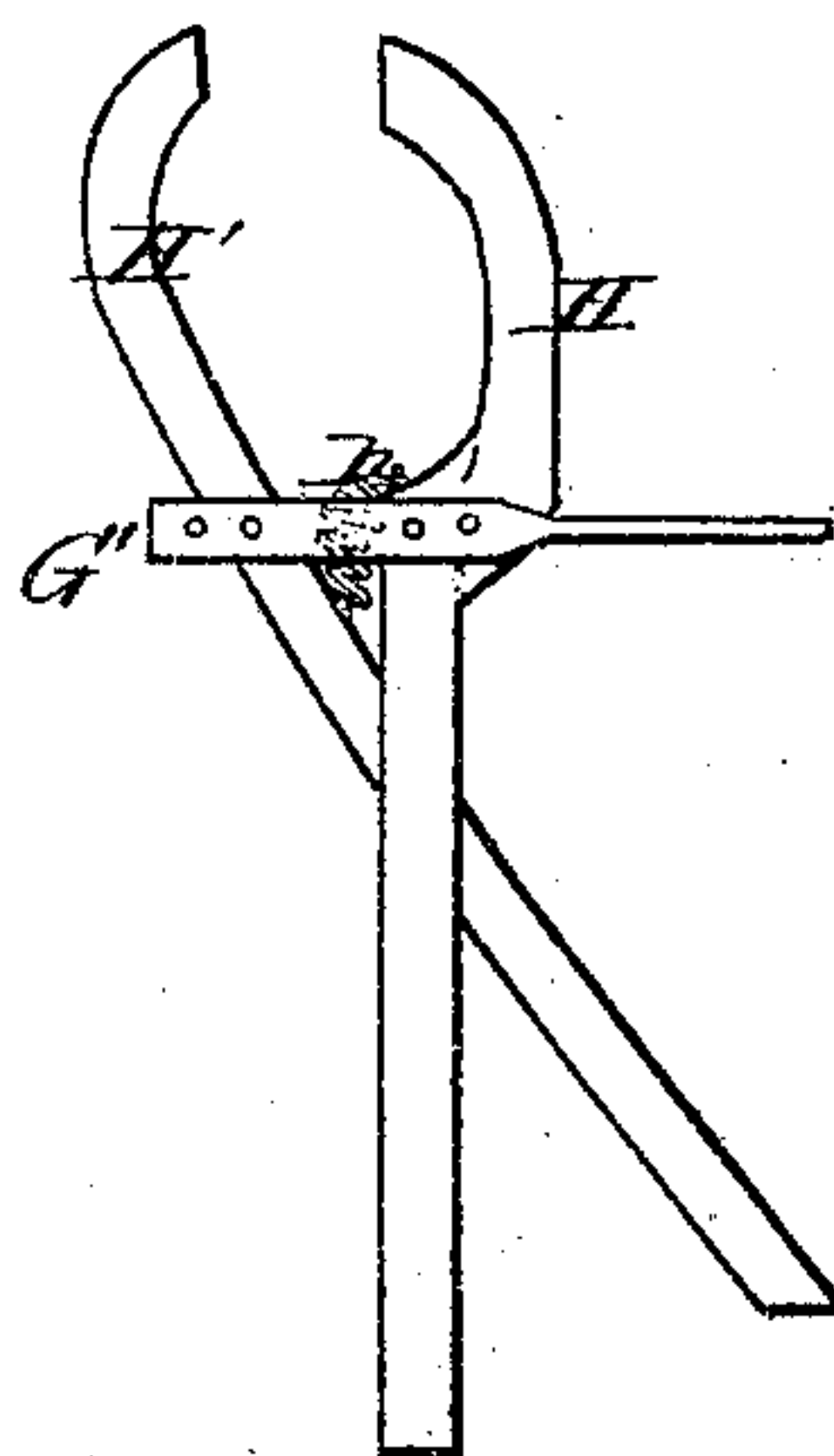
Fig' 2.



Fig' 3.



Fig' 4.



Witnesses
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UNITED STATES PATENT OFFICE.

JOHN A. YOUNCE AND GEORGE W. SMITH, OF HARTFORD, INDIANA.

IMPROVEMENT IN VISES.

Specification forming part of Letters Patent No. 118,999, dated September 12, 1871.

To all whom it may concern:

Be it known that we, JOHN A. YOUNCE and GEORGE W. SMITH, of Hartford, in the county of Blackford and State of Indiana, have invented a new and valuable Improvement in Clamps for Carpenters' Benches; and we do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the annexed drawing making a part of this specification, and to the letters and figures of reference marked thereon.

Figure 1 of the drawing is a representation of a front elevation of bench with our invention applied. Fig. 2 is a vertical transverse section of the same. Fig. 3 is an end view of clamping devices. Fig. 4 is a side view of vise-jaws.

This invention has relation to an improvement in clamps for carpenters' benches; and it consists in the construction and novel arrangement of devices for operating the vise or clamp quickly and without the aid of a clamp-screw, as hereinafter described.

In the accompanying drawing, illustrating this invention, A represents a carpenter's bench; B B', a pair of toggle-levers, the former, B, pivoted to the leg *b*, and provided with a flange or lip, *b''*, to catch in a vertical rack, *b'''*, depending from the under side of the bench A, and the latter, B', resting in a staple, *a*, inserted in the leg *b'*. C is a spiral spring, one end of which is attached to the bench and the other end to the lever B. D indicates a pair of projecting jaws, holding pivoted at different points levers D' D'', hinged one above the other to the head-block E; their lower ends, extending diagonally underneath the bench A, are held together by a pin, F. G is a standard depending from the under side of the bench and passing to one side of the lower part of the levers D' D''. The lever B is situated and works between these levers and said bar, and, when pressed down, throws these levers outward and causes them to clamp the head-block E and secure rigidly anything placed

between it and the front of the bench. To operate perfectly, the lever B is formed with a wedge-shaped enlargement at *z*. The mode of arranging the levers between the jaws D and hinging them to the head-block serves to keep the latter always in a vertical position, so as to exert even pressure on the clamped material. The clamp is locked at any desired position by means of the rack *b'''*, which is hinged to the bench and connected to a spring, *d*, the object being to allow it to give to the downward pressure of the lip *b''*, and, at the proper time, to fall back to its vertical position and secure said lip. F is a spring arranged to act on the lever D', and tends to keep the block E back from the bench, so that when the toggles are raised the same will act automatically. The spring C lifts the toggles as soon as released from the rack *b'''*. In Fig. 3 is represented a pair of vise-jaws, which may be employed in some cases as equivalents for the block E and levers D' D''. The bracket G' is secured to the work-table. The jaw H is rigid, and the jaw H' pivoted and opened by the spring *h*. The lever B passes and works between the lower parts of these jaws.

This device is particularly applicable to metal-workers' tables.

What we claim as our invention, and desire to secure by Letters Patent, is—

1. The combination, with the levers D' D'' and the bar G, of the toggle-levers B B', substantially as specified.

2. The lever B, provided with the wedge-shaped enlargement *z*, to operate a bench-clamp or vise, substantially as specified.

In testimony that we claim the above we have hereunto subscribed our names in the presence of two witnesses.

JOHN A. YOUNCE.
GEORGE W. SMITH.

Witnesses:

WILLIAM A. YOUNTS,
ELIHU BOSS.