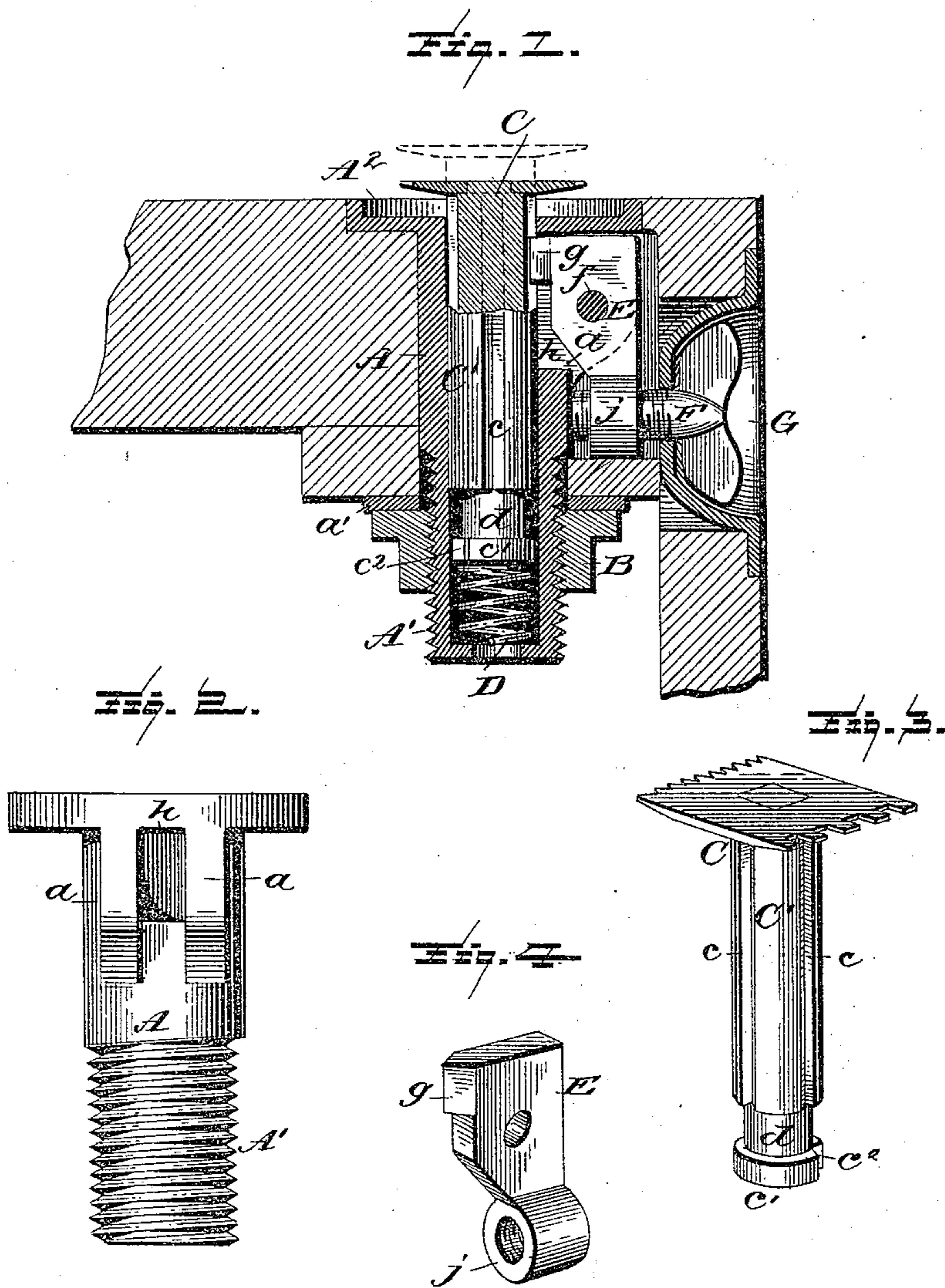


(No Model.)

G. A. COLTON.
BENCH HOOK.

No. 438,096.

Patented Oct. 7, 1890.



Witnesses
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UNITED STATES PATENT OFFICE.

GEORGE A. COLTON, OF CHICAGO, ILLINOIS.

BENCH-HOOK.

SPECIFICATION forming part of Letters Patent No. 438,096, dated October 7, 1890.

Application filed April 16, 1890. Serial No. 348,245. (No model.)

To all whom it may concern:

Be it known that I, GEORGE A. COLTON, a citizen of the United States, residing at Chicago, in the county of Cook, State of Illinois, have invented certain new and useful Improvements in Bench-Hooks, of which the following is a specification, reference being had therein to the accompanying drawings.

This invention relates to certain new and useful improvements in bench-hooks; and it has for its object, among others, to improve generally upon this class of devices and to render them more efficient in use and less liable to get out of order.

The novelty in the present instance resides in the peculiar combinations, and the construction, arrangement, and adaptation of parts, all as more fully hereinafter described, shown in the drawings, and then particularly defined by the appended claims.

The invention is clearly illustrated in the accompanying drawings, which, with the letters of reference marked thereon, form a part of this specification, and in which—

Figure 1 is a vertical section of my improved bench-dog in position and ready for use. Fig. 2 is a side elevation of the casting removed. Fig. 3 is a perspective view of the dog removed. Fig. 4 is a perspective view of the lever detached.

Like letters of reference indicate like parts throughout the several views.

Referring now to the details of the drawings by letter, A designates a casting, cylindrical in form and provided at one end with a screw-threaded shank A' and at the other with a depression A², designed to receive the acting portion of the dog or hook and allow the same to be flush with the top of the bench when not in use. This casting is also formed or provided with lugs or ears a, with a space between them, as shown best in Fig. 2, for a purpose hereinafter specified. This casting is set in an opening in the bench vertically, as shown in Fig. 1, and is thus secured by means of the nut B, engaging the screw-threaded shank of the casting, a suitable washer a' being provided between the nut and the under side of the bench, if desired. Such construction is shown in Fig. 1. This allows of ready removal of the parts when necessary by simply unscrewing the nut. This

casting is bored longitudinally and is adapted to receive the hook or dog C, which is formed as shown best in Fig. 3, and consists of a shank C', provided with longitudinal grooves c, extending nearly its whole length, and at the extreme end being provided with a collar c', having a single notch c², as shown, there being a circular space d between the collar and the ends of the portions of the shank between the grooves therein. The hook portion is rectangular in shape and has its four sides differently formed, one very sharp, another blunt, and the other two formed with coarse and fine teeth, as shown, adapting it for different kinds of work. In practice this dog is placed with its shank within the casting, and beneath the shank there is placed a coiled spring D, as shown in Fig. 1, to normally keep the hook elevated, but which is compressed as the hook is forced downward.

E is a lever pivoted on a transverse pivot f, held in the ears a of the casting, as shown in Fig. 1, and having at its upper end a beveled tooth portion g, adapted to engage in the grooves of the shank of the dog and working through an opening h in the shank of the casting between the ears, as shown best in Fig. 2.

F is a thumb-screw entered from the side of the bench and engaging the screw-threaded boss j of the lever and bearing on the shank of the casting. This screw is seated within a socket-plate G provided therefor, which is set in a depression in the bench, as shown in Fig. 1.

In practice the turning of the screw one way throws the tooth of the lever away from the shank of the hook and allows the dog to be raised or lowered. Turning the screw in the other direction holds the dog in its adjusted position. When it is desired to turn the hook round, so as to bring one of its other acting edges into position, the dog is raised until the tooth of the lever is opposite the space between the collar and vertical ribs, when it may be turned round as desired. When it is desired to remove the dog entirely from the casting, it is only necessary to turn it round so that the notch in the collar is coincident with the tooth of the lever, when it can be readily raised.

I sometimes propose to omit the grooves

in the shank of the dog and the tooth on the lever and have the end of the lever bear directly against the shank of the dog, but much prefer the construction shown.

5 I deem it important that the lever be arranged so that its upper end engage with the dog, as by this construction the dog is rendered less liable to injury or breakage from strain thereon than it would be if the lever
10 engaged with the dog farther from its operating end.

What I claim as new is—

1. The combination, with the casting having ears and a space between them, of the dog
15 within the casting, and the lever pivoted between the ears and having its upper end adapted to engage the dog, substantially as specified.

2. The combination, with the casting and
20 the dog within the same, and provided with longitudinal grooves and a collar at one end, having a notch upon one side in its periphery, of the lever pivoted on the casting and engaging the said grooves, substantially as specified.
25

3. The combination, with the casting and the dog within the same, and provided with longitudinal grooves, a collar having a notch, and an annular groove above the collar, of the lever pivoted on the casting and having
30 a tooth engaging the grooves, substantially as specified.

4. The combination, with the casting provided with ears and an opening between the same communicating with the interior of the
35 casting, of the longitudinally-grooved dog having notched annular collar and an annular groove between the collar and the longitudinal groove, the spring beneath the same within the casting, the lever pivoted on the casting,
40 and the screw passed through the lever and bearing on the casting.

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

GEORGE A. COLTON.

Witnesses:

HENRY H. MUNGER,
CHAS. L. MUNGER.