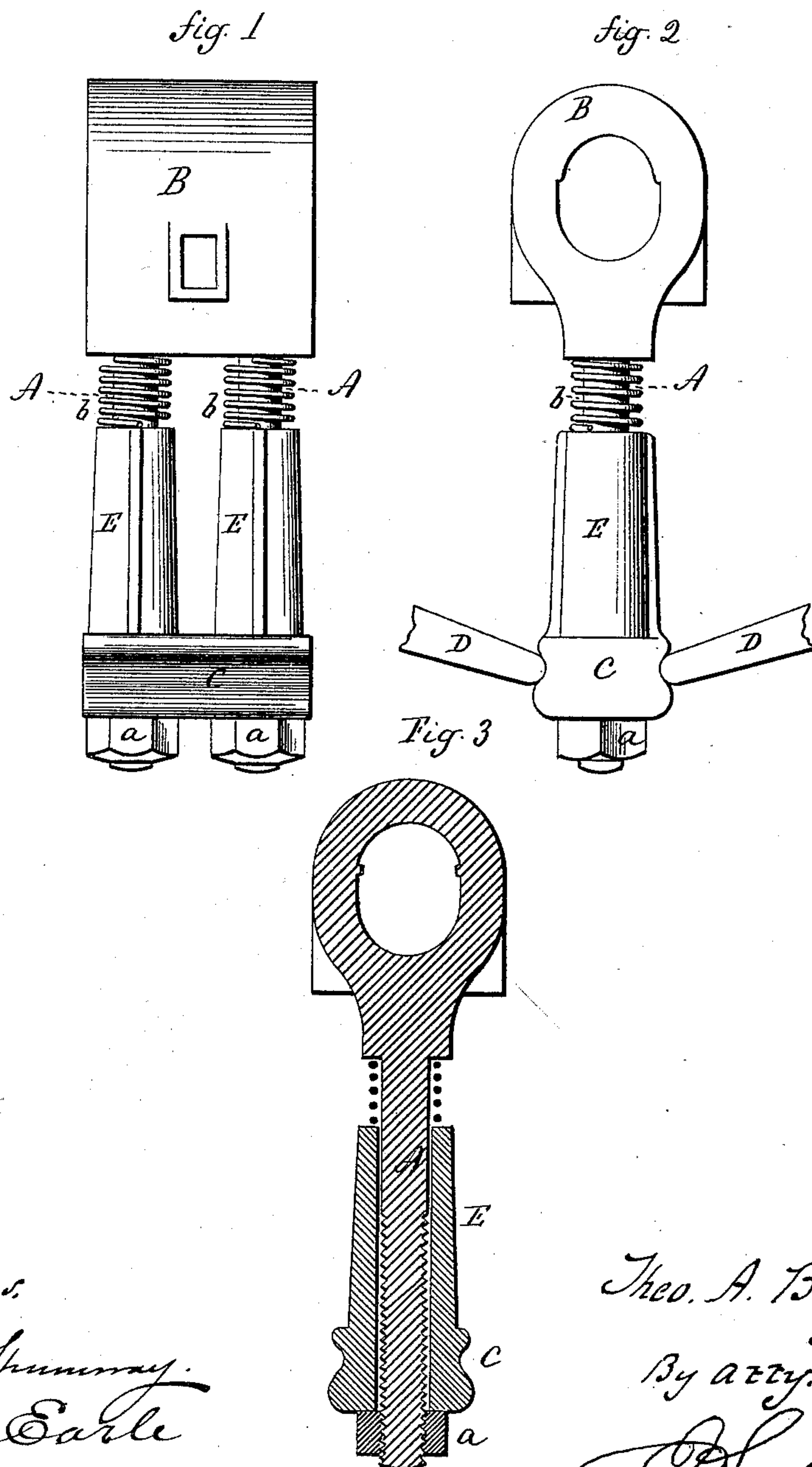


T. A. BLAKE.
Stone-Crusher.

No. 223,697.

Patented Jan. 20, 1880.



Witnesses,

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UNITED STATES PATENT OFFICE.

THEODORE A. BLAKE, OF NEW HAVEN, CONNECTICUT.

STONE-CRUSHER.

SPECIFICATION forming part of Letters Patent No. 223,697, dated January 20, 1880.

Application filed November 20, 1879.

To all whom it may concern:

Be it known that I, THEODORE A. BLAKE, of New Haven, in the county of New Haven and State of Connecticut, have invented a new Improvement in Stone-Crushers; and I do hereby declare the following, when taken in connection with the accompanying drawings and the letters of reference marked thereon, to be a full, clear, and exact description of the same, and which said drawings constitute part of this specification, and represent, in—

Figure 1, a front view; Fig. 2, a side view, and in Fig. 3, a vertical section.

This invention relates to an improvement in pitmen for that class of stone-crushing machines in which the pitman is made adjustable as to its length for the purpose of varying the stroke or movement of the jaws, such as shown in my application for patent filed April 9, 1879.

As constructed in that application, the toggle-bearing was made adjustable on the rod, but was not supported against the twisting strain produced by the working of the machine. Such support would not be required were it possible to cause the toggles on opposite sides of the toggle-bearing to have always the same or equal inclination to the toggle-bearing; but in practice I find that it is impossible to attain such a perfect bearing between the two toggles, and that, unavoidably, owing to the vibratory movement given to the pitman by the eccentric on the main shaft, the pressure on one side of the toggle-bearing is not exactly counterbalanced by the pressure of the other, as the inclination of one must be slightly greater than that of the other, and as a result the tendency is to twist the toggle-bearing, and consequently bend the pitman-rod—that is, to turn up that side in which the toggle-bearing is highest and down the opposite side—so that a great transverse strain is brought upon the rod, tending to break it, and it constantly increases as the bearing wears in the use of the machine.

To overcome this difficulty is the object of this invention; and it consists in constructing the toggle-bearing with a sleeve extending

onto the rod from the bearing, and so as to support the bearing at a considerable distance from it.

In the illustration, two rods, A A, are shown combined in a single head, B, in which the eccentric is arranged to operate. C is the toggle-bearing, D D representing the two toggles resting on the bearing at each side. The bearing C is constructed with a sleeve, E, extending therefrom onto the rod, as seen in Fig. 3, and so as to take a bearing upon the rod above the toggle-bearing. This sleeve prevents the twisting or turning of the toggle-bearing before described, retains the toggles in their proper line, and thereby relieves the rod from the transverse strain which is brought upon it by the twisting before mentioned.

Where two or more rods are used, as shown, it is advisable that the bearing should be provided with a sleeve for each rod, yet a single sleeve may serve the purpose of preventing twisting or turning of the toggle-bearing.

Adjustment here shown is made by means of a nut, *a*, on the rod below the bearing, and a spring, *b*, above the sleeve, by substantially the same method of adjustment as that in my before-mentioned application; but other methods of adjustment may be applied and other arrangements of the rod may be adopted; but no claim is herein made to such adjustment or arrangement, as these features are included in my before-mentioned application, the essential feature of this invention being the adjustable toggle-bearing provided with the sleeve for supporting the bearing on the pitman-rod.

I do not broadly claim a toggle-bearing made separate from, but connected to, the pitman, as such, I am aware, is not new.

I claim—

In a stone-breaking machine, a pitman having a toggle-bearing adjustable thereon, said bearing constructed with a sleeve extending from said bearing onto the pitman-rod, substantially as and for the purpose described.

THEODORE A. BLAKE.

Witnesses:

JOS. C. EARLE,
J. H. SHUMWAY.