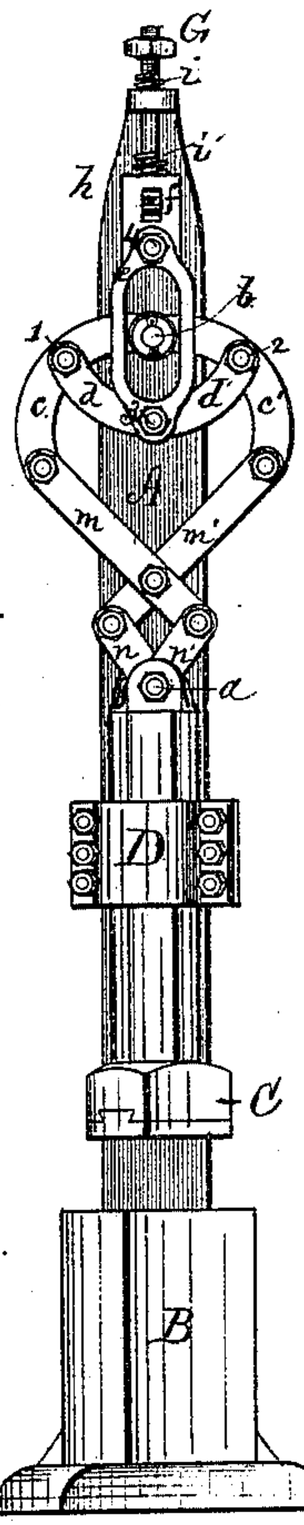
C. LUSTED.

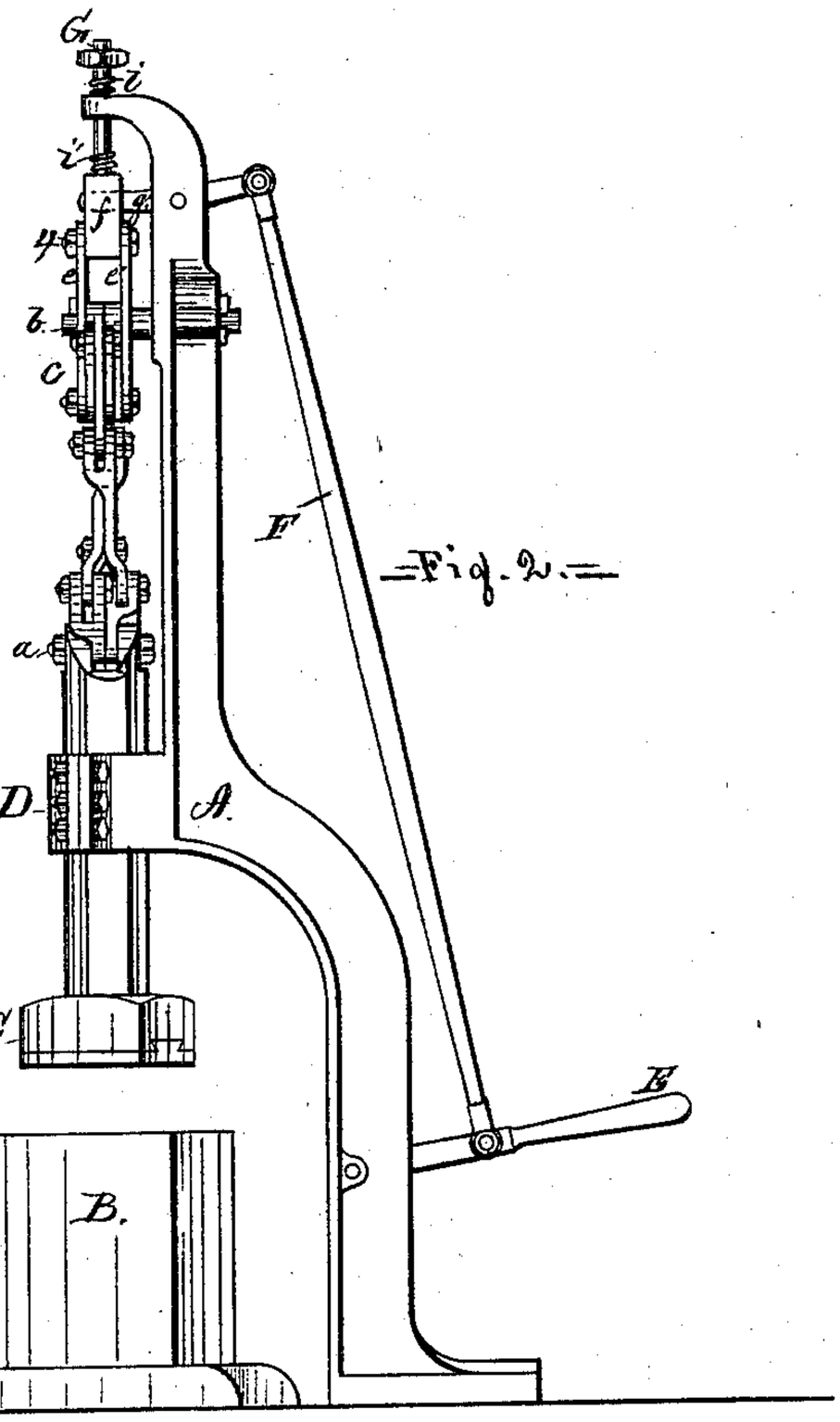
DROP-HAMMER.

No. 170,868. Patented Dec. 7, 1875.

=Fig. 1=



=Fig. 2=



Witnesses.

J. C. Hubbell

T. J. Roach.

Inventor.

Charles Lusted

Per. H. A. Jenkins

Attorney

UNITED STATES PATENT OFFICE.

CHARLES LUSTED, OF NEW ORLEANS, LOUISIANA.

IMPROVEMENT IN DROP-HAMMERS.

Specification forming part of Letters Patent No. **170,868**, dated December 7, 1875; application filed October 11, 1875.

To all whom it may concern:

Be it known that I, CHARLES LUSTED, a resident of the city of New Orleans and State of Louisiana, have invented a certain new and useful Improvement in Drop-Hammers; and I do hereby declare the following to be a full, clear, and correct description of the same, reference being had to the annexed drawing, making a part of this specification.

The object of my invention is to provide a simple, durable, and efficient drop-hammer, which is designed, more especially, for use in small shops, where, at times, tolerably heavy work is required to be done.

The construction and arrangement of the various mechanical parts of my invention will be readily understood by referring to the drawing, whereon

Figure 1 represents a front elevation, and Fig. 2 a side elevation, of the same.

A is a frame for the support of the working parts of my invention. B is the anvil-block, which, for the convenience of the operator, is placed at an angle with the frame. C is the hammer, the stem of which is made hexagonal in section for the purpose of facilitating its vertical guidance in the slide D. The faces of the hammer and anvil are provided with steel dies similar to those usually employed in power or drop hammers. The upper end of the hammer-stem is provided with a pin, *a*, by which it is secured to the lower portion of the lifting apparatus, which consists of a combination of straight and curved levers, suspended by a pin, *b*, secured to the frame near the upper portion thereof. About the center of the curved levers *c c'* is secured, by means of bolts 1 2, the outer ends of the hinged levers *d d'*, to the inner ends of which are secured, by the bolt 3, the lower ends of the open links *e e'*. The upper ends of the latter are, in turn, secured by bolt, as at 4, to the lower end of the lifting-rod *f*, the upper end of which has a vertical movement in the top of the frame A. The upper portion of the said frame A is provided with a recess, in which is pivoted a lever, *g*, the front end of which operates in a slot, *h*, cut in the lower end of the lifting-rod *f*, while the rear end of the said lever is connected with the operating-lever E by means of the rod F. The lifting-rod *f* is provided, above and below that portion of the frame through which it passes, with springs *i i'*, that on the top being to lighten the blow of the hammer, and that on the lower part being to receive the shock of the upward motion of the hammer, as well as to assist in throwing the same downward with increased force. G is an adjustable nut, fitted to the upper end of the lifting-rod *f* for the purpose of regulating the drop of the hammer.

From the above description and accompanying drawing it will be readily understood that, although my invention is designed, chiefly, for operation by hand-power, that steam or any other known power may be applied to the working of the same without in any manner interfering with the main features of my machine.

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

1. The levers *c c' d d' m m' n n'* and hammer C, in combination with the frame A, provided with pin *b* and guide D, and the anvil-block B, as described, and for the purpose set forth.

2. The hammer C and levers *c c' d d' m m' n n'*, in combination with the links *e e'*, lifting-rod *f*, nut G, and springs *i i'* the whole being arranged to operate, by means of the levers *g* E and connecting-rod F, as described, and for the purpose specified.

This specification signed this 12th day of August, 1875.

CHARLES LUSTED.

Witnesses:
H. N. JENKINS,
J. C. HUBBELL.