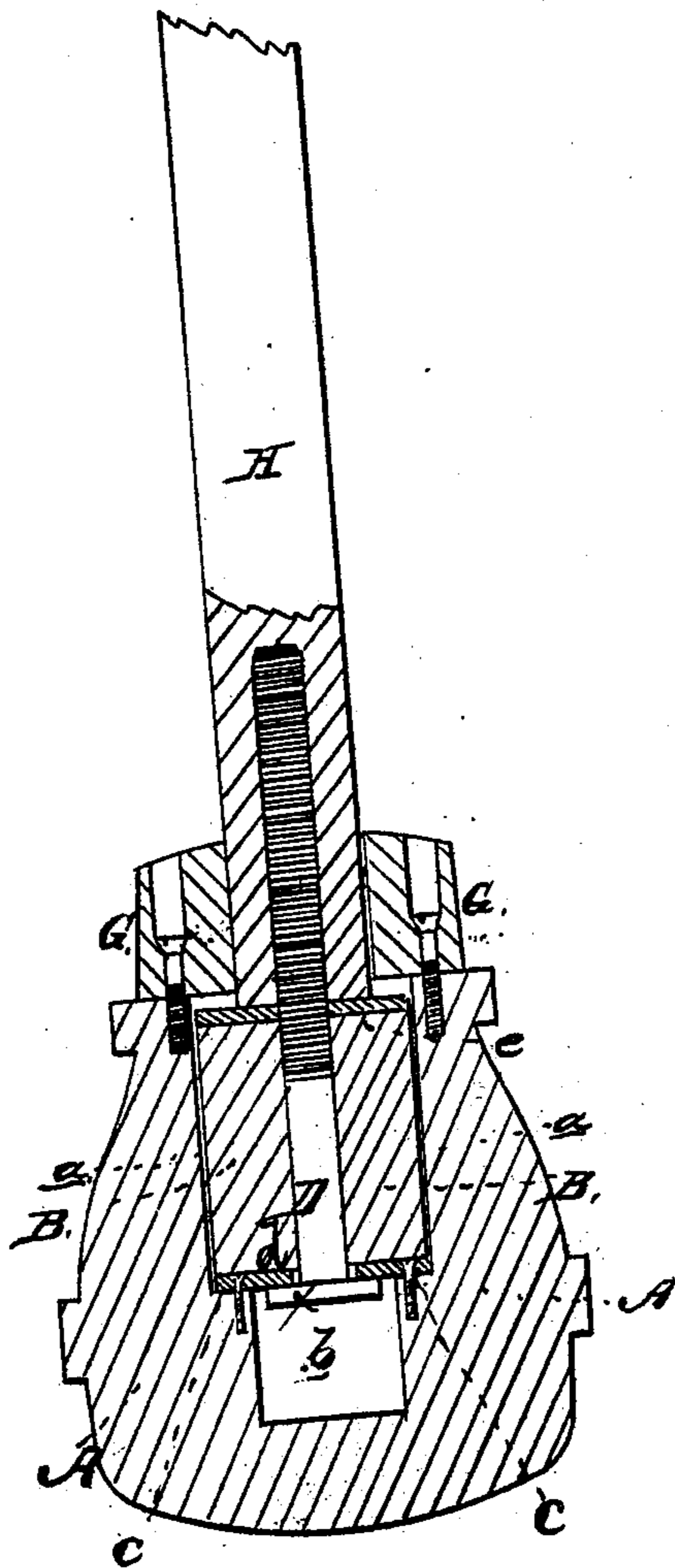


M. C. BOGIA.
 Rammer for Cannon.

Patented Oct. 22, 1861.

No. 2,509. }
 No. 33,513. }



Inventor:

Witnesses
Charles E. Foster
Charles Houston

Henry Howson
M. C. Bogia

UNITED STATES PATENT OFFICE.

MATTHEW C. BOGIA, OF PHILADELPHIA, PENNSYLVANIA.

IMPROVEMENT IN RAMMERS FOR CANNON.

Specification forming part of Letters Patent No. **33,513**, dated October 22, 1861.

To all whom it may concern:

Be it known that I, M. C. BOGIA, of Philadelphia, Pennsylvania, have invented a new and useful Improvement in Rammers for Cannon, &c.; and I do hereby declare the following to be a full, clear, and exact description of the same, reference being had to the accompanying drawing, and to the letters of reference marked thereon.

My invention consists in the peculiar manner, described hereinafter, of constructing a rammer for driving home the charges of cannon, whereby the hands and arms of the operator are relieved from the jars and shocks to which they are subjected in using ordinary rammers.

In order to enable others to make and use my invention, I will now proceed to describe its construction and operation.

The figure in the accompanying drawing, which forms a part of this specification, represents my improved rammer in section.

A is a block of metal or wood, strengthened by metal bands, and is of the proper form to suit the bore of the cannon in loading which the rammer has to be used. A circular recess, *a*, is formed in the block, and below this recess is another, *b*, of smaller diameter, so that a shoulder, *c*, is formed between the two recesses. To this shoulder is secured a plate or washer, *d*, above which is a cylindrical block, B, of gum-elastic, and above the latter another plate or washer, *e*, the upper surface of which is a short distance below the top of the block A, to which is secured a cover, G. A bolt, the head *f* of which bears against the under side of the washer *d*, passes through the said washer, upward through the cylindrical block B of gum-elastic, through the upper washer, *e*, and screws into the handle H, which passes freely through the cover G and bears on the washer *e*.

It should be understood that the recess *a* of the block A is somewhat larger in diameter than the block of gum-elastic, so that the latter can expand to a limited extent when compressed.

In ordinary rammers for cannon the heads are secured permanently and rigidly to the handle, in consequence of which the hands and arms of the operator using the instrument are subjected to severe shocks, and the fingers and

palms of the hands to that abrasion which tears the skin and produces blisters.

It will be observed that in using my improved rammer the force applied to drive the load up to the breech of the cannon is first imparted to the cylindrical block B of gum-elastic, and thence to the head or block A of the rammer. As the gum-elastic yields to a limited extent the moment the blow is given, the hands and arms of the operator are relieved from the disagreeable jars to which they are subjected in using rammers having their heads rigidly connected to the handles. The intervention of the yielding gum-elastic block does not diminish the effective force of the blow imparted by the rammer. On the contrary, it enables the operator to use that extra exertion which he would be disinclined to do with an ordinary rammer, owing to the above-mentioned causes. The moment the blow is given and the gum-elastic block yields, the head *f* of the bolt passes into the recess *b* of the block A; but immediately after the blow, the head of the bolt recovers its former position against the washer *d*.

More or less elasticity may be imparted to the gum-elastic block. For instance, if a slight yielding of the block is required, the handle may be turned round the bolt, and thus screwed down, so as to compress the gum block, to which greater elasticity may be imparted by unscrewing the handle.

Although I have alluded to my improved rammer as designed for driving home the charges of cannon, it will be evident that it may be used with advantage as a pavior's rammer.

I claim as my invention and desire to secure by Letters Patent—

The head or block A, the gum-elastic block B, screw-bolt D, handle H, and cover G, the whole being constructed, arranged, and operating substantially as and for the purpose herein set forth.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

MATTHEW C. BOGIA.

Witnesses:

HENRY HOWSON,
CHAS. HOWSON.