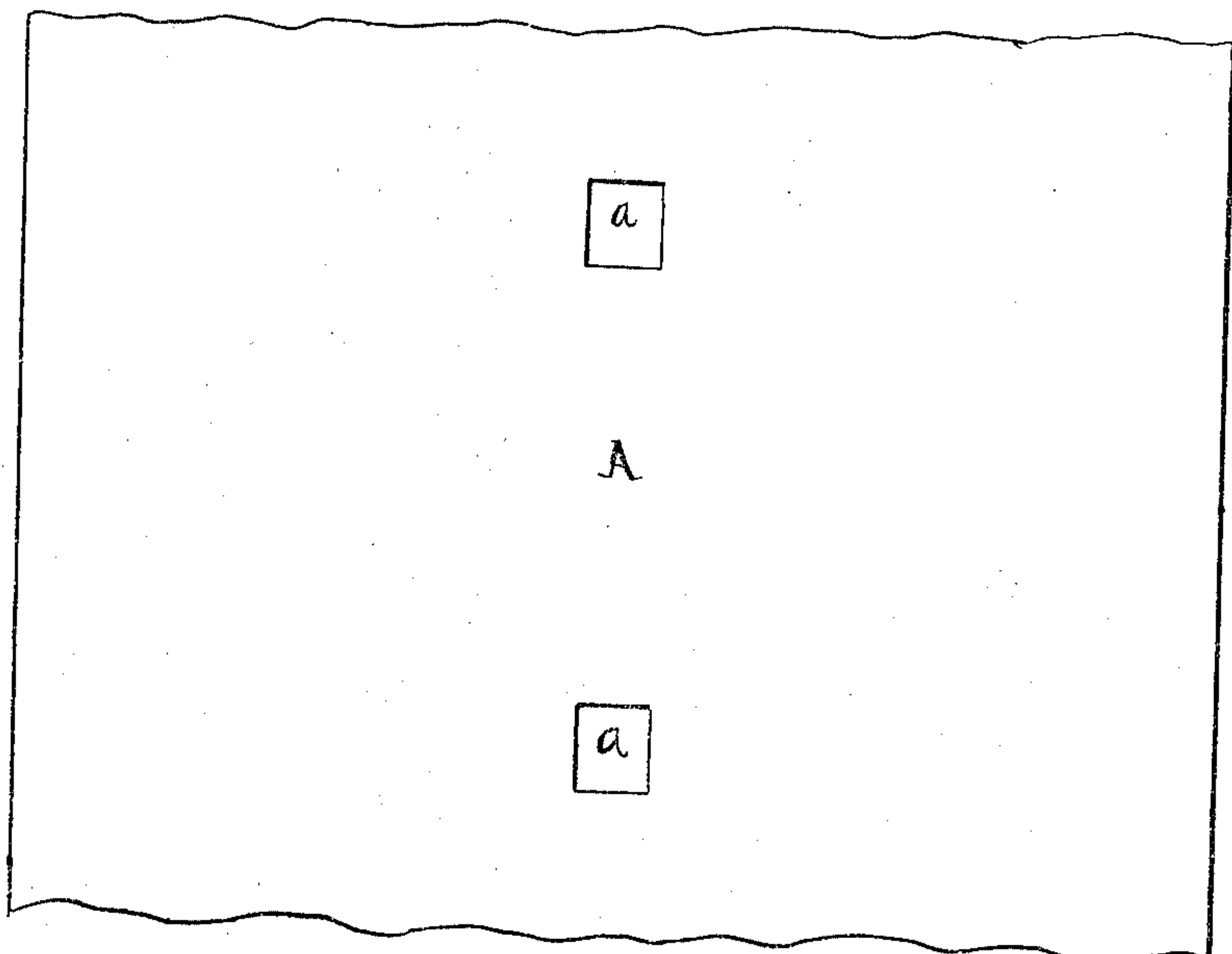
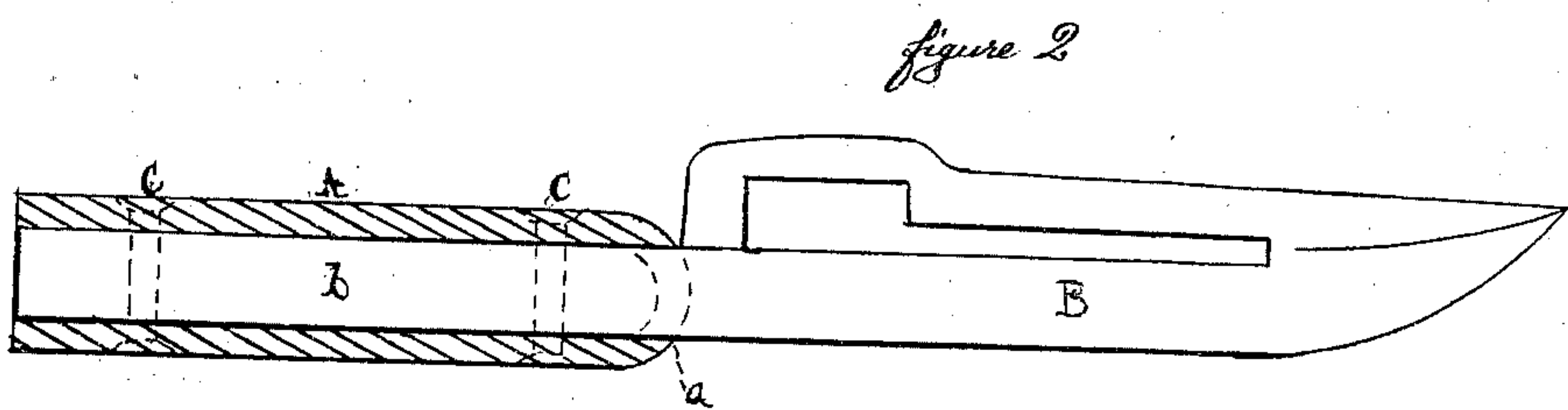
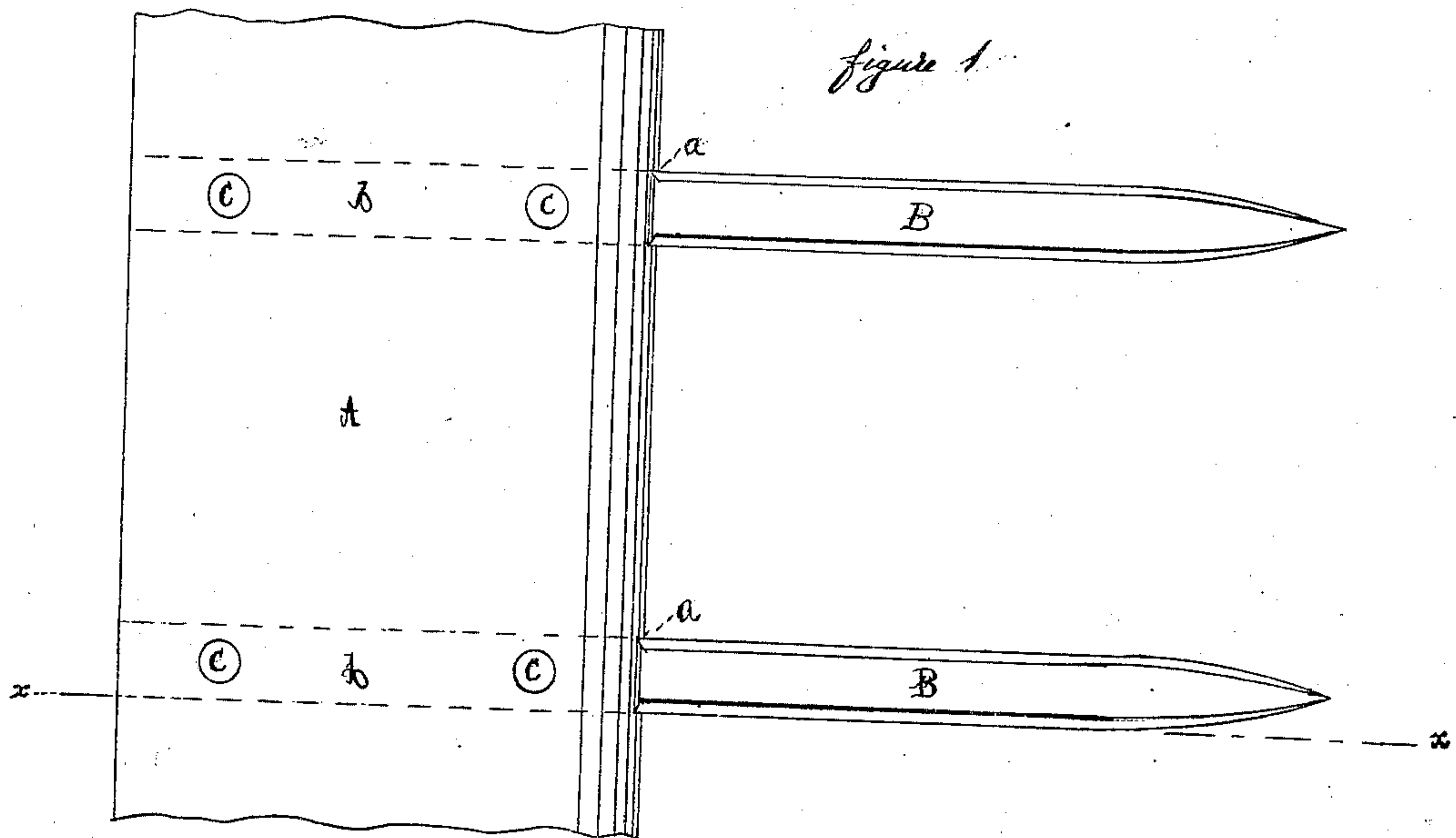


Moore and Patch.
Harvester Cutter.

No. 16134

Patented. Nov. 25. 1856



UNITED STATES PATENT OFFICE.

JOSEPH A. MOORE AND ASAHEL H. PATCH, OF LOUISVILLE, KENTUCKY.

IMPROVED FINGER-BAR ARRANGEMENT FOR HARVESTERS.

Specification forming part of Letters Patent No. **16,134**, dated November 25, 1856.

To all whom it may concern:

Be it known that we, J. A. MOORE and A. H. PATCH, of Louisville, in the county of Jefferson and State of Kentucky, have invented a certain new and useful Improvement on Finger-Bar Arrangements of Harvesting-Machines, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, which form part of this specification, and in which—

Figure 1 represents a top view of a portion of the finger-bar with fingers therein attached; Fig. 2, a vertical transverse section of the same, taken as indicated by the line *xx* in Fig. 1; and Fig. 3, a view of a portion of the metal plate of which the bar is formed previously to being bent or folded.

Finger-bars of harvesters have been so variously constructed, and many of them and the several defects which it has been their peculiarity to reduce or avoid are so well known to those engaged in the building and using of harvesters; that it appears unnecessary for us to allude here briefly to more than a few of them, by way of showing the extent and importance of our improvement, which has reference to the sheet-metal kind, combining lightness with strength.

One mode of securing the fingers has been arming the front edge of the platform of the machine with a flat metal plate, in which square holes were punched for shanks of the fingers to pass through; but this is so palpably defective as a means of fastening that no comment upon it is necessary. Various finger-bars have also been rounded at their front edge, so as to admit of cutting close to the ground without damage, and this advantage our improvement possesses.

In sheet-metal finger-bars many difficulties have been presented, a few only of which can be noticed here. In one form a top finger cutting plate has been used, with the back portion of the plate bent round underneath in **U** form and brought out again in front to clasp as a spring the intermediate-moving cutter; but this constitutes no stable hold to stout fingers to be separately inserted, and is weak and liable to spring and open, and is rather a peculiar form of double cutter than finger-bar. Another form of finger-bar has been a plate of somewhat less width than the latter, similarly bent at the back edge, or edge next to the platform, and open in front, presenting a continuous cavity, in which

the shanks of the fingers were inserted, riveted, and the spaces between the fingers filled by pouring in metal, thus doing away with that lightness which should form a prominent feature of the sheet-metal bar. In bars of this latter kind, made and used open in front, strain upon the fingers has a tendency to open the bar and to loosen the fingers, and for the most part they are not adapted to cut close to the ground. Our improvement obviates these defects and many others, possesses numerous advantages, and for a given amount of metal has greater strength, as will appear from the following description.

The finger-bar **A** represented in the accompanying drawings is made of sheet metal, with holes *a* first punched in it, after which the sheet or strip is readily and accurately folded into **U** form, as seen in Fig. 2, the holes *a* of the folded sheet or finger-bar proper being through the center of the fold, or thereabout, and serving for the shanks *b* of the fingers **B** to fit through. The shanks of the fingers thus entered in front through the fold are worked or driven backward toward the back open edge of the bar, and are grasped between the top and bottom sides or leaves of the hollow bar and fastened therein by bolts or rivets *c*, uniting the whole firmly together.

The end of the finger-bar, termed the "shank," for securing the bar to the frame of the machine, may be made slightly broader than the other end, and the hollow portion of the bar forming said shank filled with wood or iron; but the rest of the hollow bar—that is, the spaces between the shanks of the fingers—should be left without filling, so as to allow the "platform" (when the machine is a "reaper") a convenient attachment by tongues or projections of the platform entering the bar between the finger-shanks. This finger-bar arrangement offers but little or no obstruction to the stubble or to the cut grass or grain, and may be used for cutting close to the ground, its rounded front-closed edge giving it a great advantage over other sheet-metal bars.

The rounded closed edge of the bar being in front, the bar is less liable to spring or work open by strain on the fingers, which, whether up or down, has not the same prizing effect upon the two leaves of the bar to throw them apart that entering the fingers through a front open edge of the bar, as in other arrangements, has; and,

further, it should be specially observed, the jaw-bend of the finger-bar in our arrangement, having its fulcrum or hinge portion in front, admits of the fingers being so tightly pinched by the back and inner edges, top and bottom, of the holes *a*, on folding or making tight and perfect the fold of the bar on the fingers, as described, that the steadiest hold is given to the fingers, and thus the whole finger-bar arrangement is of a stronger and more rigid character, though the bar be made lighter than usual, and the bar is effectually restrained from opening, and the fingers less liable to loosen, even, than in those arrangements which do not come within the class of sheet-metal bars, but in which the fingers are riveted or screwed to the top or bottom of a solid bar; and our arrangement, in addition to all these advantages, is both cheap to manufacture and durable.

What we claim as our improvement on folded

sheet-metal finger-bars, and desire to secure by Letters Patent, is—

The combination and arrangement, substantially as herein shown and described, of the folded sheet-metal bar A, with fingers B, when the latter are inserted through holes in the front and rounded folded portion of the bar and gripped and pinched between and by the lips of the bar in the rear, and secured therein, essentially as specified.

In testimony whereof we have hereunto subscribed our names.

JOSEPH A. MOORE.
ASAHEL H. PATCH.

Witnesses:

JOHN ENRIGHT,
WILLIAM HARRAH.