

A. Clark.

Making Farm Implements.

N^o 36,993.

Patented Nov. 25, 1862.

Fig 1

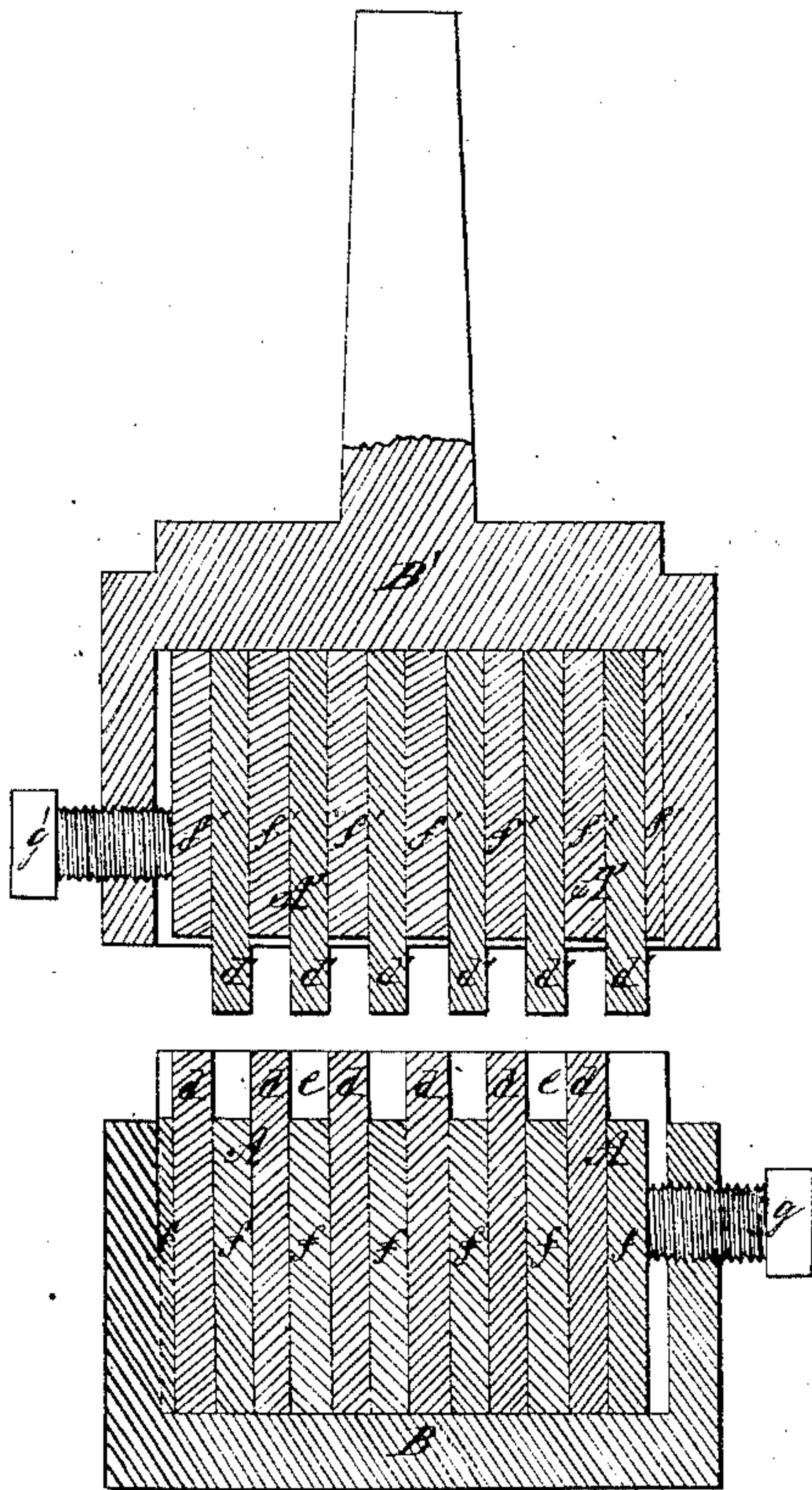


Fig 5.

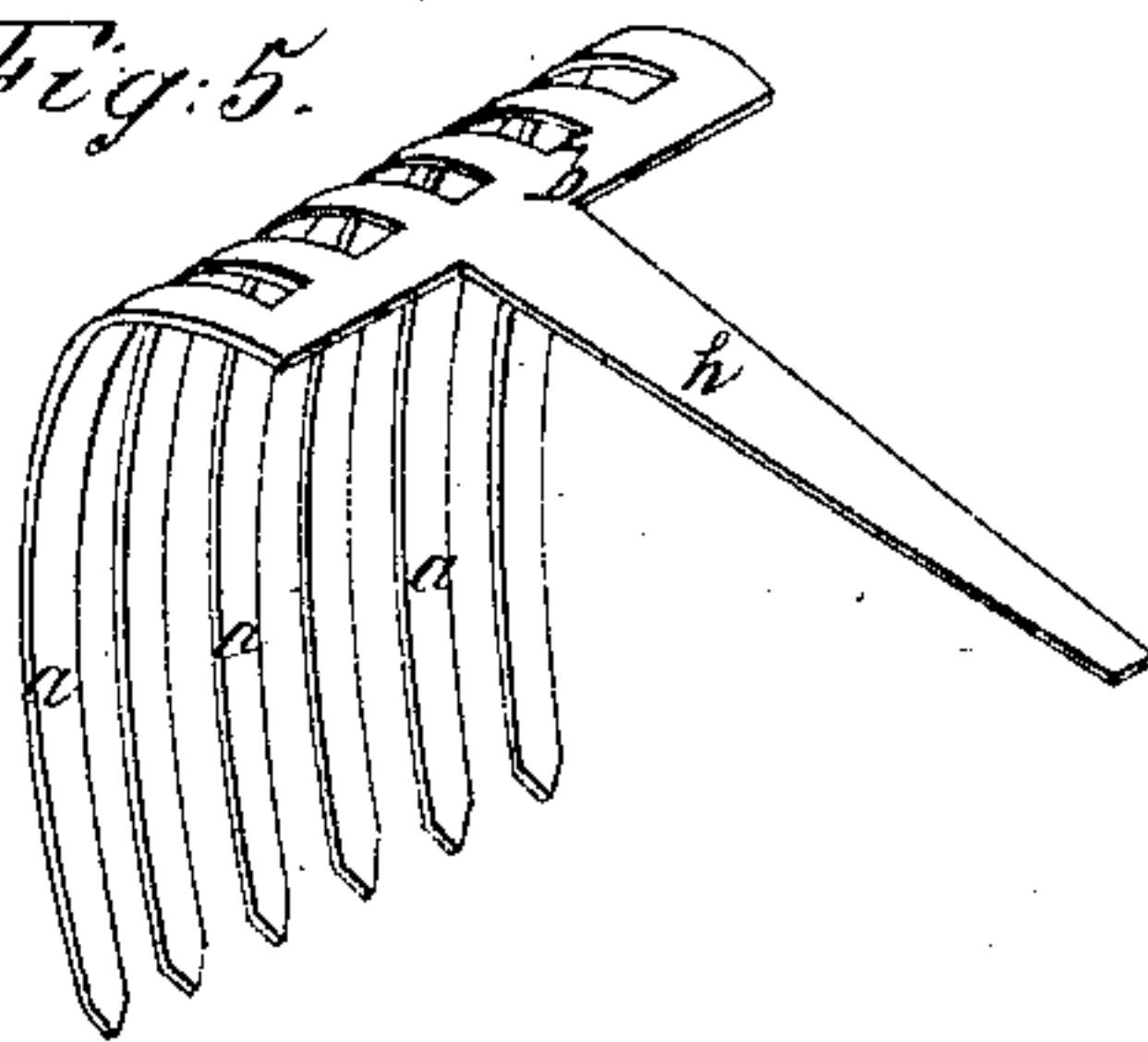


Fig 4.

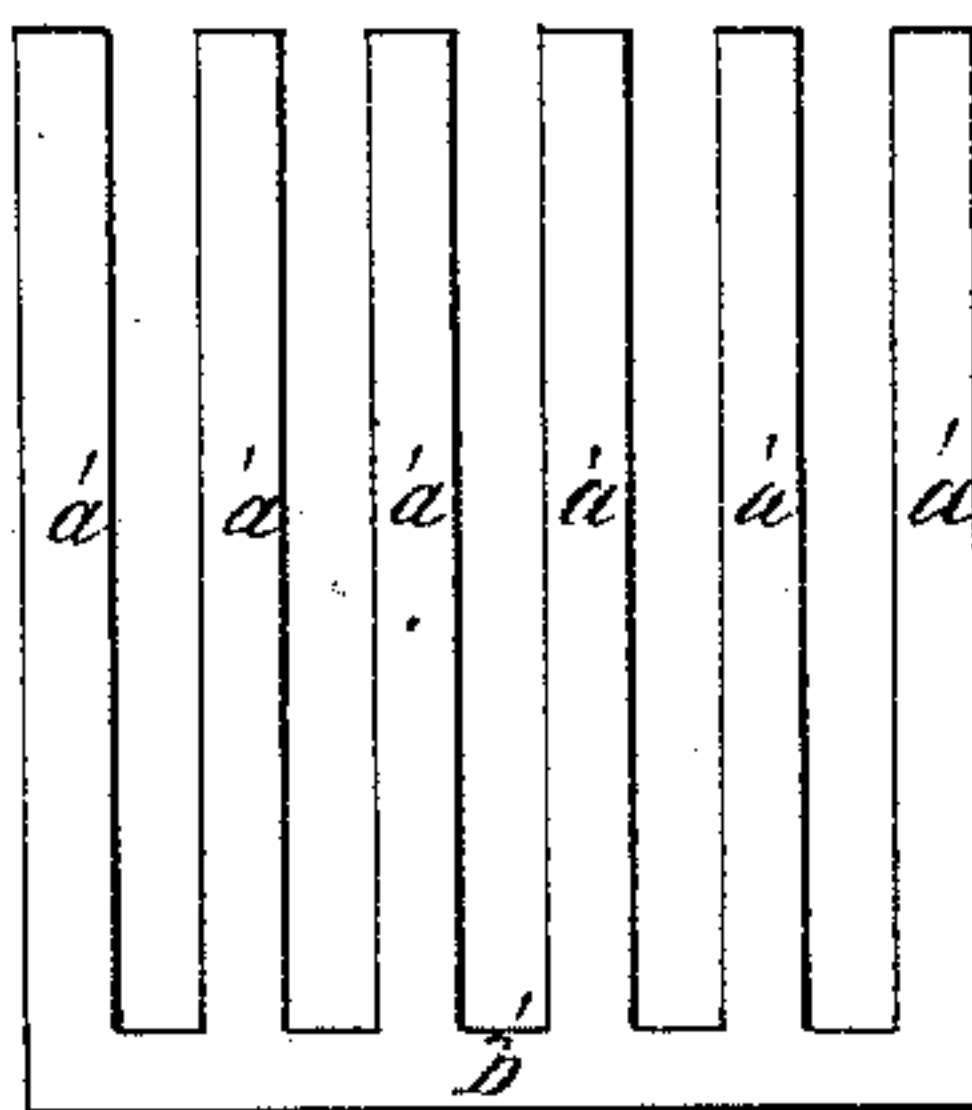


Fig 2.

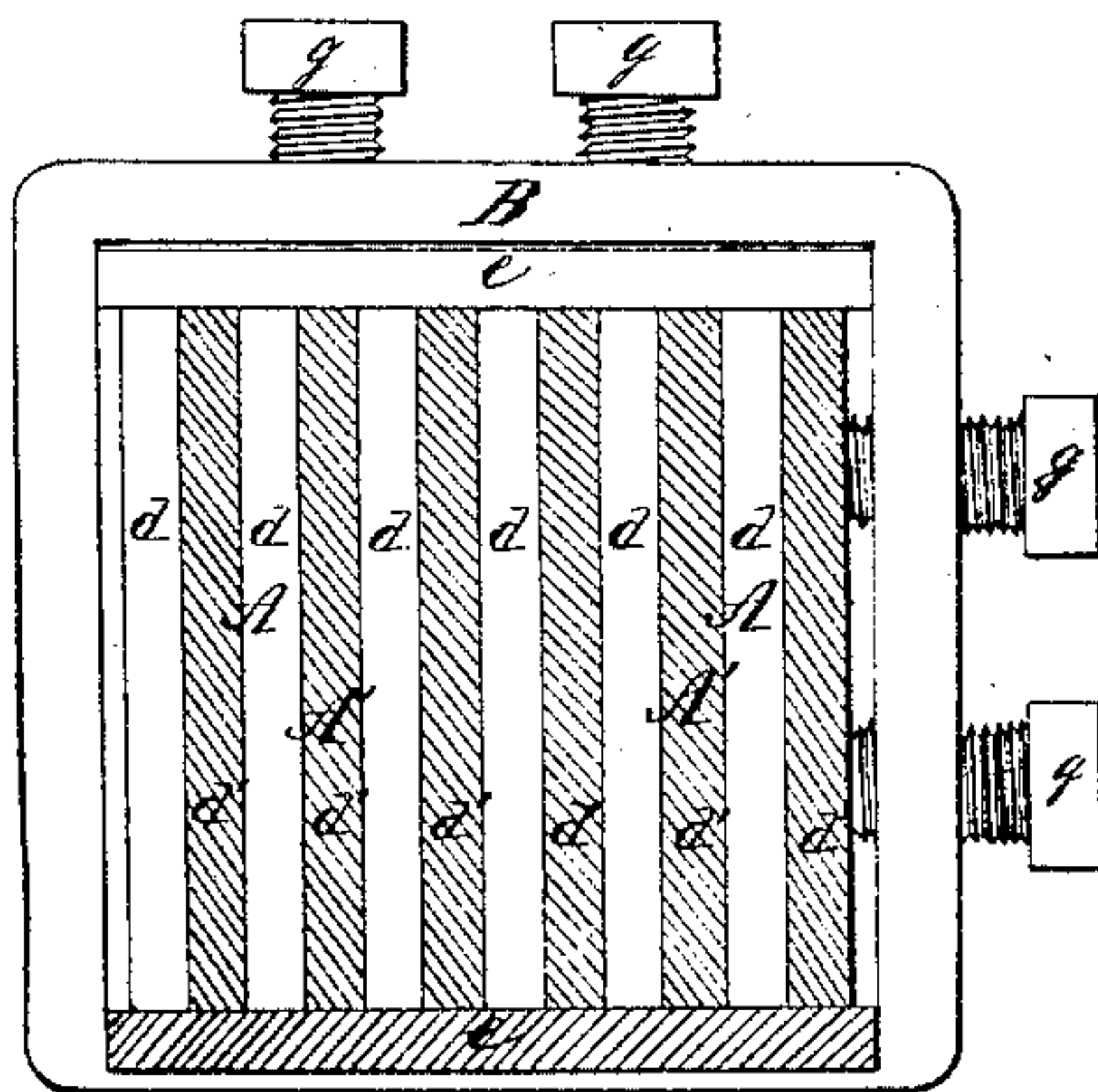
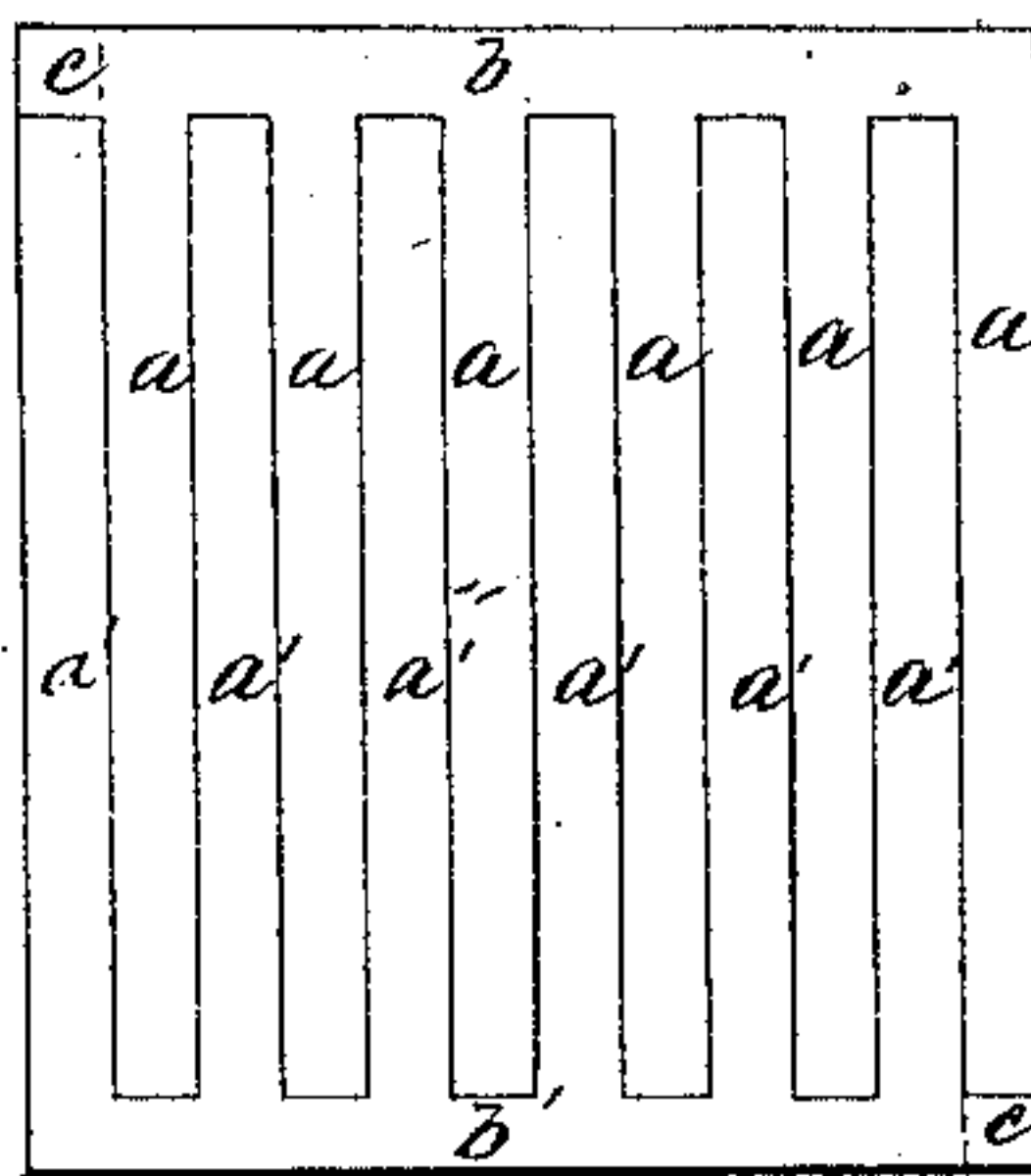


Fig 3.



Witnesses.
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UNITED STATES PATENT OFFICE.

ALINZOR CLARK, OF ST. JOHNSVILLE, NEW YORK.

IMPROVEMENT IN APPARATUS FOR CUTTING TINED IMPLEMENTS FROM METAL PLATES.

Specification forming part of Letters Patent No. 36,993, dated November 25, 1862.

To all whom it may concern:

Be it known that I, ALINZOR CLARK, of St. Johnsville, in the county of Montgomery and State of New York, have invented certain new and useful Improvements in Machinery for the Manufacture of Pitchforks, Rakes, Potato-Hooks, and other Tined Implements; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawings, forming part of this specification, in which—

Figure 1 is a vertical section of a pair of dies and their stocks for cutting out the tined blanks from steel-plate. Fig. 2 is a plan view showing the face of the lower die and showing the upper one in section. Fig. 3 represents a plan of a piece of plate from which two blanks are cut, showing the manner in which the blanks are cut. Fig. 4 is a plan view of one of the blanks. Fig. 5 shows a hook having the tines bent and the shank or tang welded on.

Similar letters of reference indicate corresponding parts in the several figures.

This invention consists in the construction of a pair of dies to cut the blanks for two forks, rakes, or tined hooks from a piece of steel-plate in such manner that the metal cut from between the tines of each forms the tines of the other, thereby enabling the forks to be made without any material waste of stock.

It also consists in the construction of the dies for cutting out the blanks of a series of plates set up edgewise with interposed packing-plates, and secured together in box-like stocks by set-screws or their equivalents.

To enable others skilled in the art to make and use my invention, I will proceed to describe its construction and operation.

A, Figs. 1 and 2, represents the lower and A' the upper cutting-die, intended to be arranged in a suitable press, each having its face of the form of one of the tined blanks to be cut, and constructed to match the other, so that one will enter the other in such manner as to cut two blanks from a quadrangular piece of steel-plate in the manner indicated in Fig. 3, forming the tines *a a* of the one of the metal cut from between the tines *a' a'* of the other, leaving only a small square piece, *c*, of waste at two corners of the plate—one at one side of the head *b* or *b'* of each blank—to be cut therefrom by a chisel or other tool after the two blanks have been separated.

d d and *e* are the steel plates, set up edgewise to form the cutting portions of the lower die, A, and *f f* are packing-plates, of very slightly greater thickness, set up between and outside of *d d* within a quadrangular iron box or stock, B, in which they are secured by set-screws *g g*. The plate *e*, which is to cut the head *b*, is arranged across the ends of *d d*, which are to cut the tines *a a*, and their faces are all flush and stand up some distance above the packing-plates *f f*.

d' d' and *e'* are steel plates like *d d* and *e*, set up edgewise to form the cutting portions of the upper die, and *f' f'* are packing-plates like *f f*, set up between and outside of *d' d'* within a quadrangular box or stock, B', in which they are secured by set-screws *g'*. The plates *d' d'* and *e'* are arranged precisely the reverse of *d d* and *e*, and in such manner that *d' d'* will work between *d d*, and vice versa, and that *e* will just pass the ends of *d' d'*, and *e'* will pass the ends of *d d*, as illustrated by Figs. 1 and 2. The plate *e'* cuts the head *b'*, and those *d' d'* cut the tines *a' a'*. The box B is placed on the bed of a press, and B' is attached to the plunger or follower.

To manufacture the blanks for the forks, rakes, or hooks, a piece of steel of suitable size to make two blanks is placed over the die A while the die A' is raised, and the descent of the die A' cuts it into two blanks, as shown in Fig. 3, after which the blanks are completed by cutting off the small piece *c* from the head of each. The shank or tang *h* may then be welded on, and the tines heated and drawn out to the proper form, and, when desirable, bent to the proper form.

The tines may be cut of taper form, if desired, by making the cutting-plates *d d d' d'* and interposed packing-plates *f f f' f'* of taper form.

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

The construction of each die of a series of cutting-plates, *d d e* or *d' d' e'*, and interposed packing-plates *f f* or *f' f'*, the whole secured together in a box or stock, B or B', by set-screws *g g* or *g'*, or their equivalents, substantially as herein set forth.

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Witnesses:

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