

(No Model.)

G. W. EAST.
HARVESTER GUARD RENOVATOR.

No. 388,543.

Patented Aug. 28, 1888.

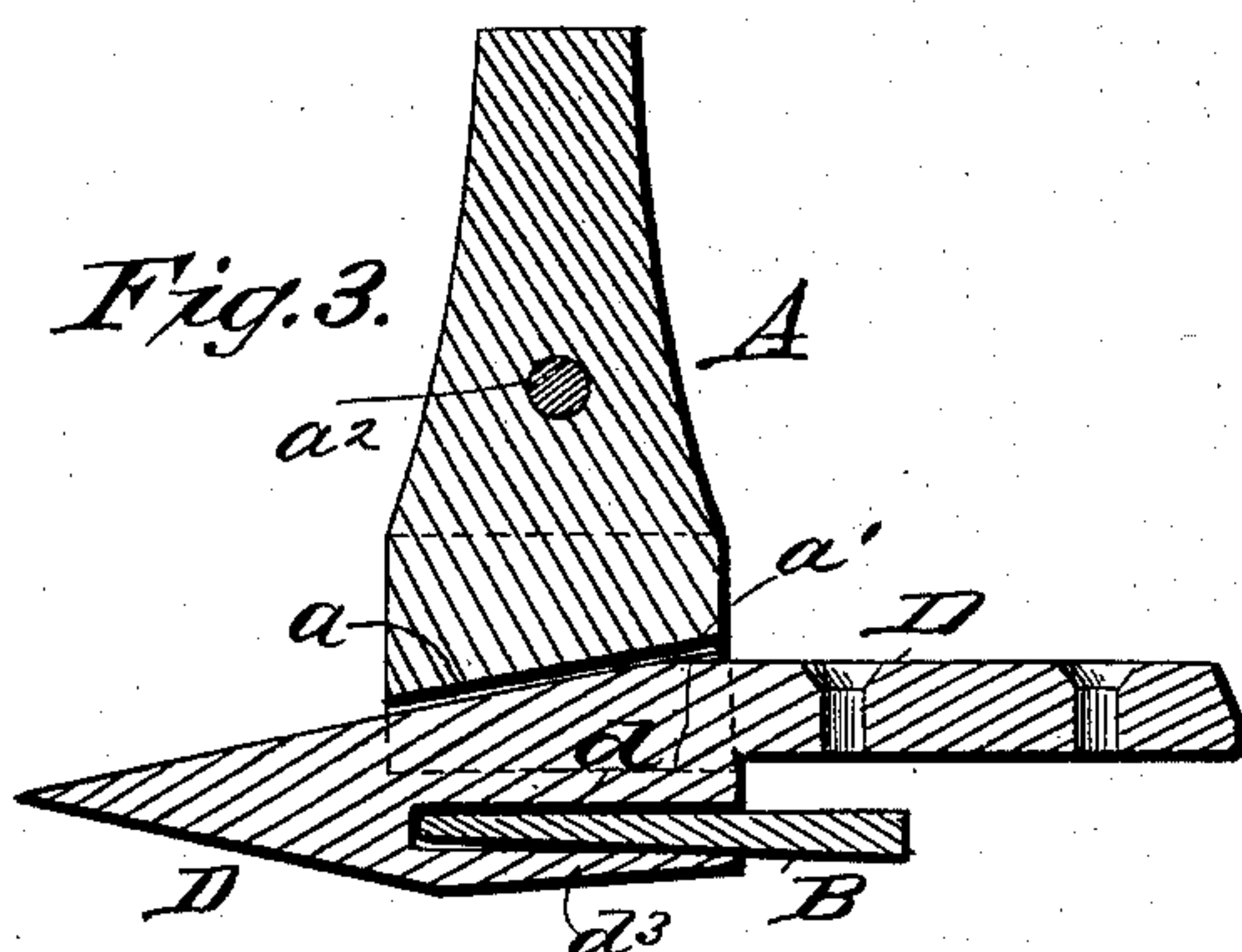
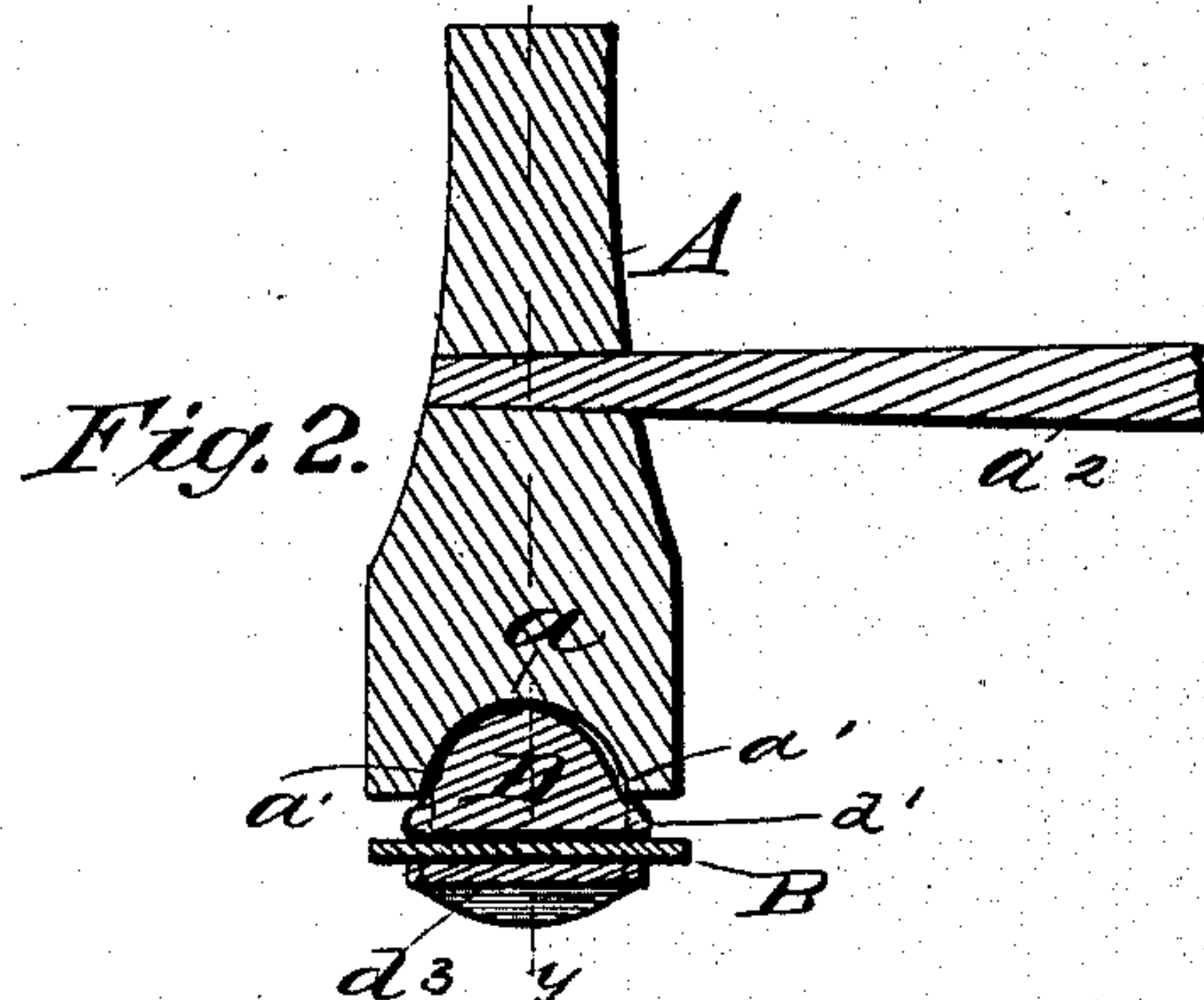
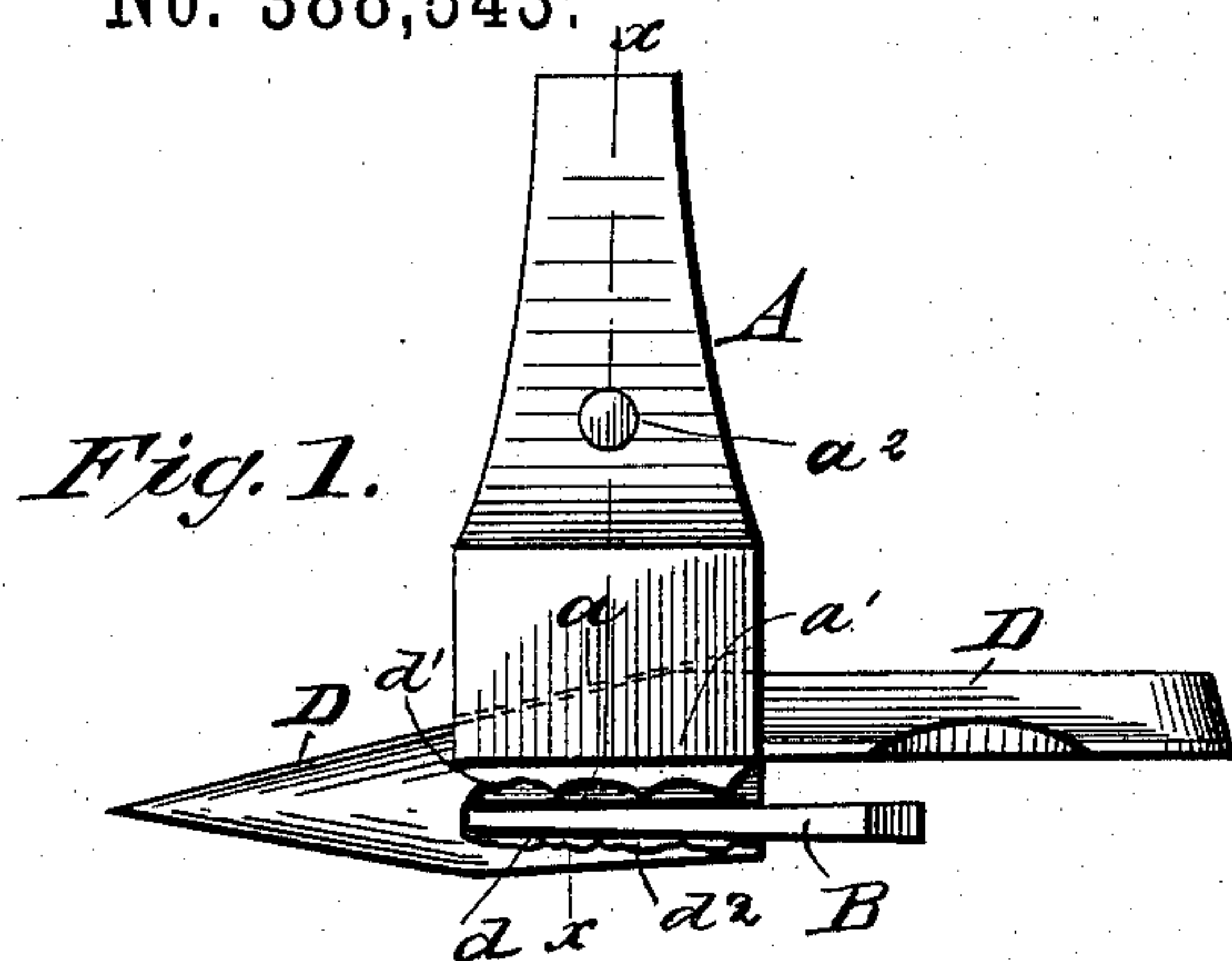


Fig. 4.

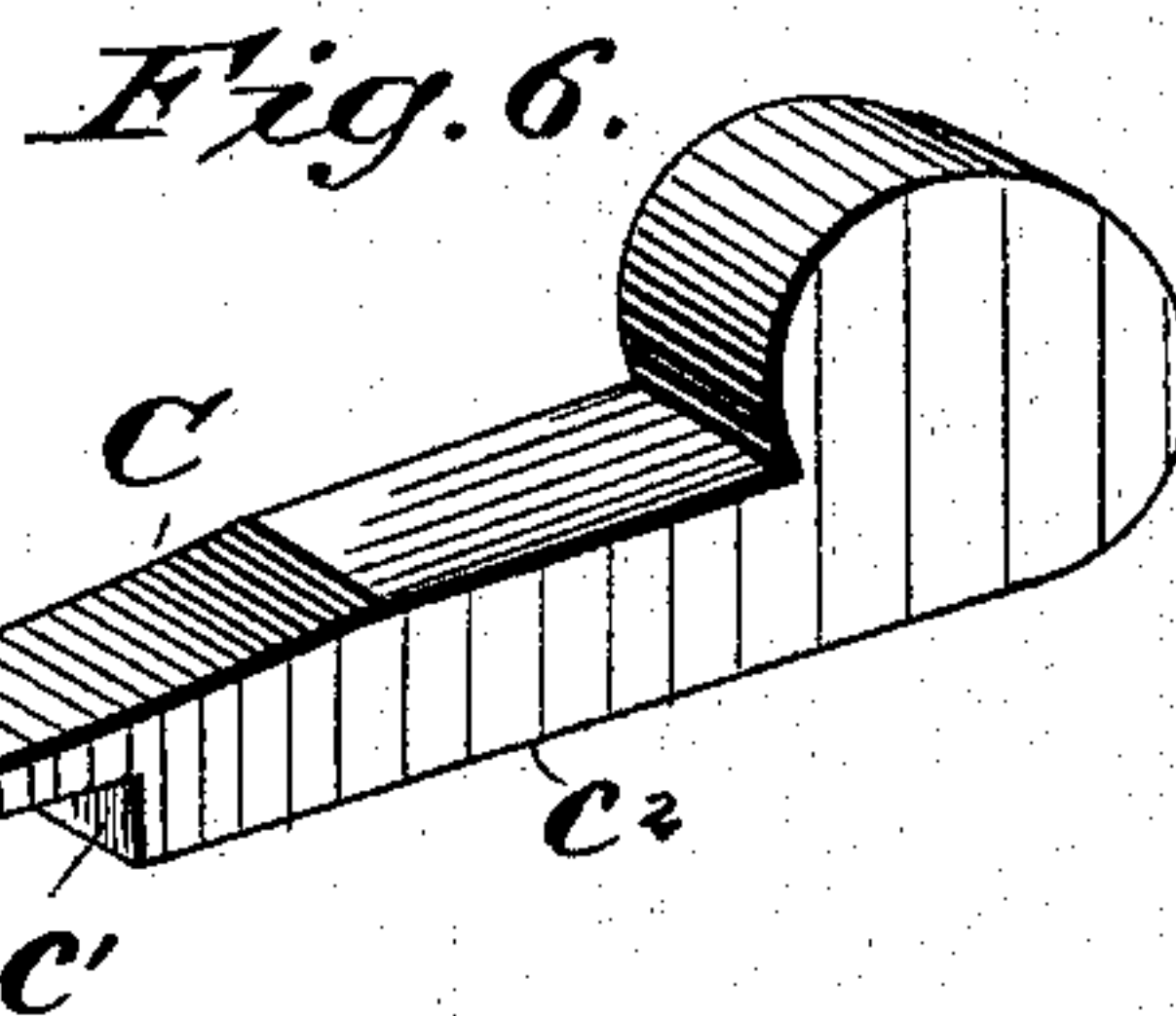
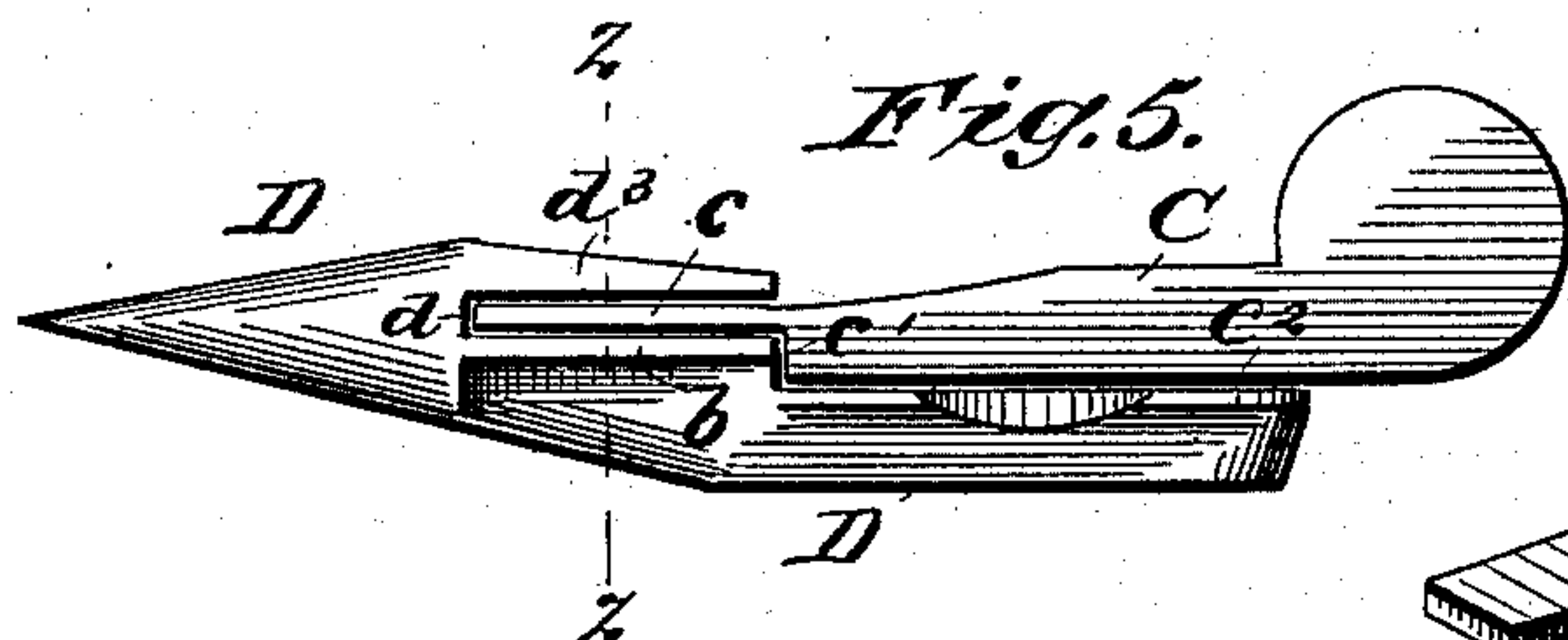
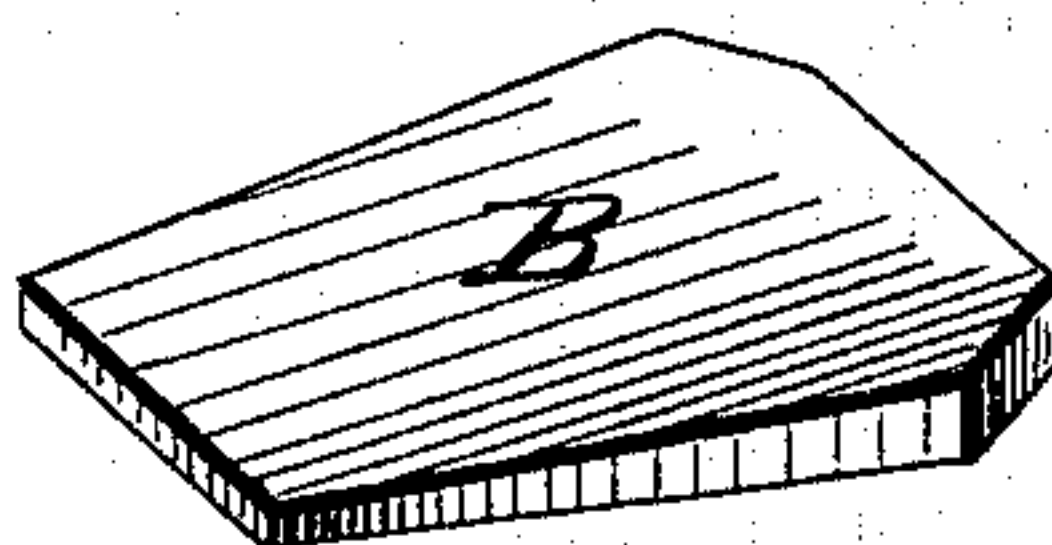
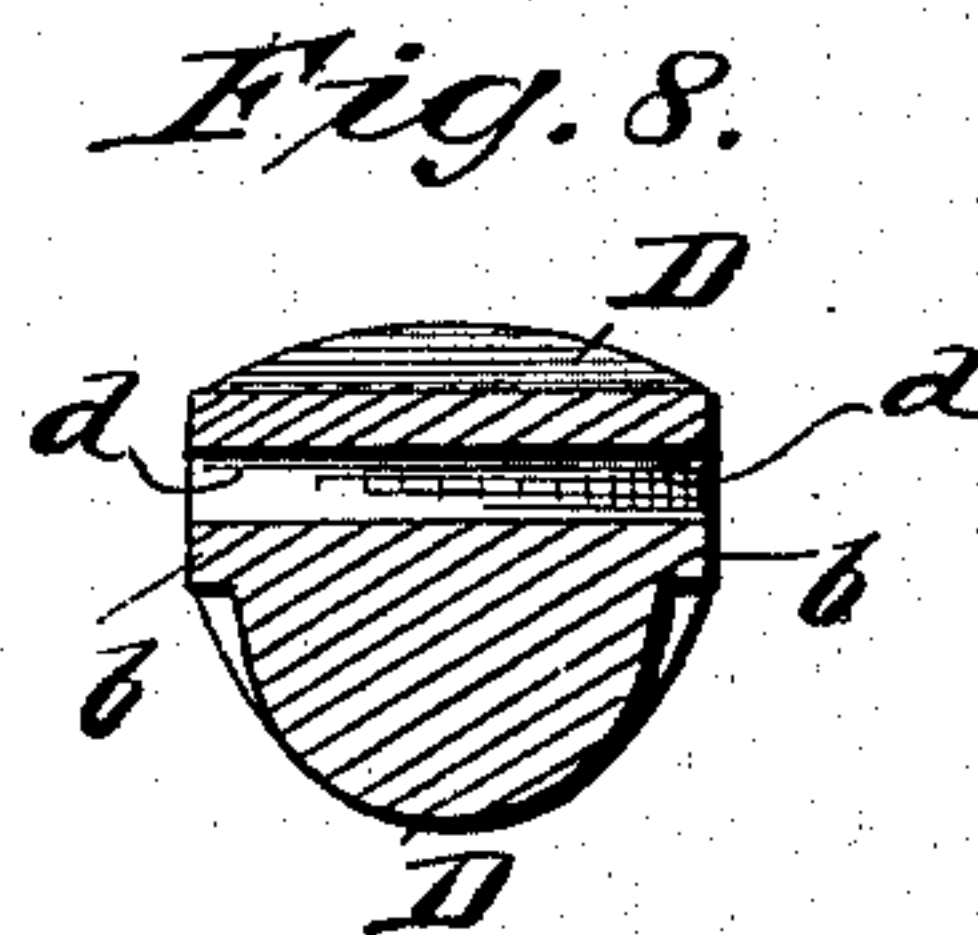
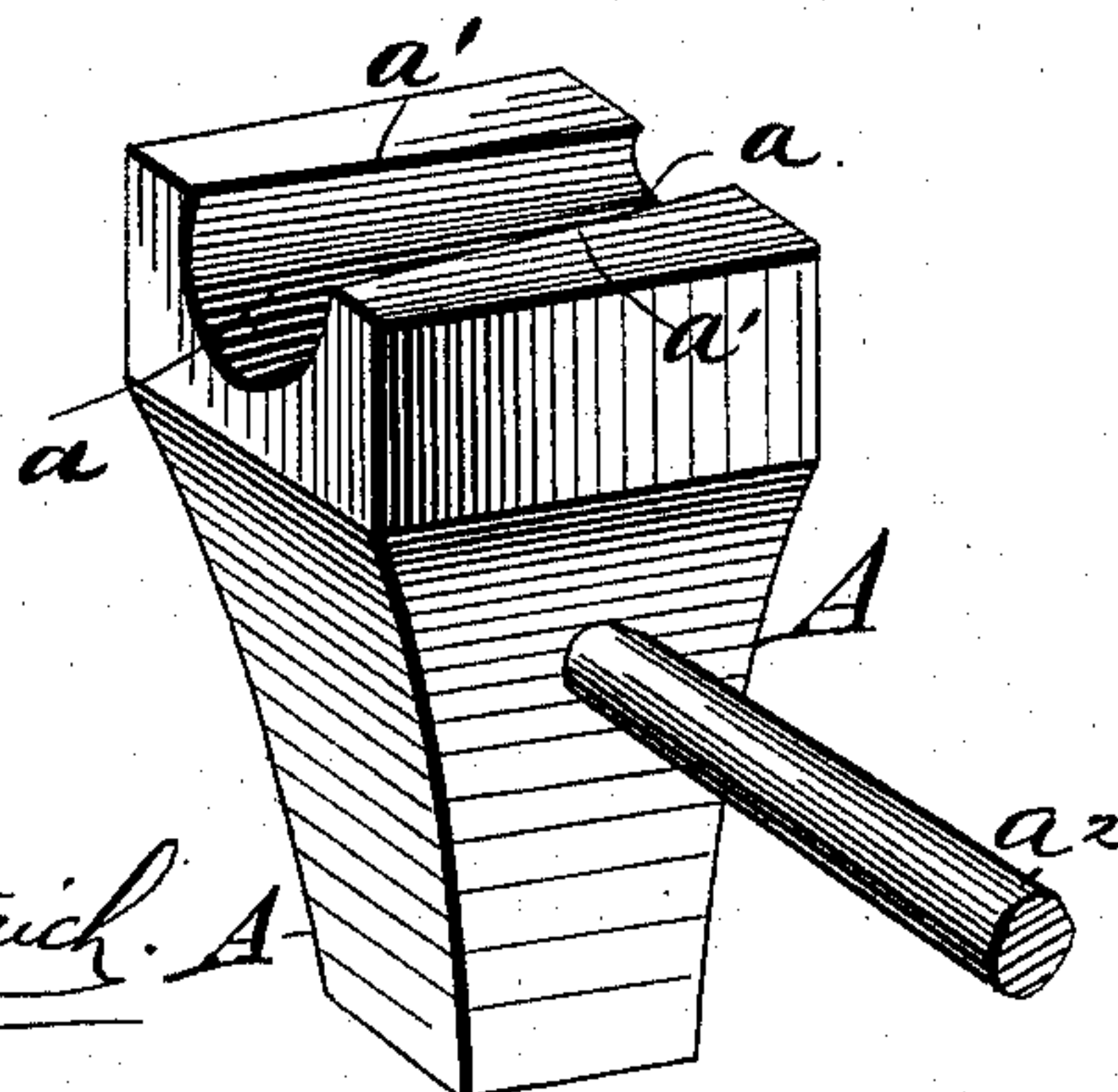


Fig. 7.



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GEORGE W. EAST, OF HELTONVILLE, INDIANA.

HARVESTER-GUARD RENOVATOR.

SPECIFICATION forming part of Letters Patent No. 388,543, dated August 28, 1888.

Application filed June 23, 1888. Serial No. 277,957. (No model.)

To all whom it may concern:

Be it known that I, GEORGE W. EAST, of Heltonville, in the county of Lawrence and State of Indiana, have invented a new and Improved Harvester-Guard Renovator, of which the following is a full, clear, and exact description.

My invention relates to devices for sharpening or renovating worn-out or dulled harvesting or mowing machine guard-fingers, and has for its object to provide simple, inexpensive, and efficient devices, allowing this work to be accomplished easily and thoroughly and at a slight expenditure of time and labor.

The invention consists in certain novel features of construction and combinations of parts of the guard-renovating devices, all as hereinafter more fully described.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar letters of reference indicate corresponding parts in all the views.

Figure 1 is a side elevation of a worn harvester-guard in inverted position and with devices applied thereto in positions for sharpening or renovating the guard in accordance with my invention. Fig. 2 is a vertical section taken on the line *xx* in Fig. 1, and shows the swaging-head as driven down to upset or partly renovate the guard. Fig. 3 is a section taken on the line *yy* in Fig. 2. Fig. 4 is a perspective view of the guard-slot plate. Fig. 5 is a side elevation of the swaged-up guard and a truing-up gage set in the knife-slot thereof. Fig. 6 is a perspective view of the gage. Fig. 7 is a bottom perspective view of the swage, and Fig. 8 is a transverse section of the renovated guard taken on the line *zz* in Fig. 5.

The devices I employ for renovating or sharpening dulled or worn-out harvester-guards or guard-fingers comprise a swage, A, a steel reinforcing anvil-plate, B, and a truing-up gage, C, which are used on the guards D, as presently described.

Harvester guards or fingers D, when dulled by the resistance offered to the cutting action of the knives working in their slot *d*, are worn away most at opposite edges and at the lower side of the knife-slot, as shown at *d'*, and are worn away or rounded a little at *d''*, at the upper side edges of the slot, and it is to produce

square true-cutting edges at these four places, but especially at the lower corners, *d'*, that I have provided the swage A, the plate B, and the gage C.

The swage A is made with a slot or groove, *a*, in its lower face, which corresponds in general form to that portion of the tapering lower face of the guard immediately under the knife-slot *d* thereof, but is a little narrower, so that the opposite sharp edges or angles, *a'* *a'*, of the slot or groove will fit onto the opposite side walls of the guard at some distance from or above the lower edge of the knife-slot when the guard is inverted, and the steel plate B is made to fit within the knife-slot of the guard when in such position, the plate being somewhat broader than the guard or its slot, all as shown in Figs. 1, 2, 3, and 7 of the drawings. The gage C is made with a tongue, *c*, adapted to the knife-slot of the guard, and a shoulder, *c'*, and face *c''*, adapted to the shoulder and face of the guard, which abut the cutter-bar when the guard is fixed to said bar.

The operation of renovating the guard D is as follows: The guard will first be brought to a welding or drawing heat in any approved furnace or forge-fire in the usual way, and the steel plate B will be placed in the knife-slot *d*, and the guard will then be inverted on an anvil, and the swage A will then be grasped by its handle *a''* and set onto the guard above its slot *d*, and while the swage is held truly on the guard, in the position shown in Fig. 1 of the drawings, it will be struck by a hammer to bring its slot *a* fully down upon the guard, which will cause the swage-cutting edges *a'* *a'* to draw down the metal of the guard onto the plate B and produce lips or lugs *b b*, where the metal is flattened or pressed onto the plate to obliterate the worn portions *d'* of the guard, and the pressure of the swage will also flatten the upper cap or tongue, *d''*, of the guard sufficiently to swage out the dullness or irregularities *d''* on the cap or tongue. The swage A and plate B will then be removed from the guard and a file will be passed over the guard to give it a true finish, and with sharp square-cutting corners at both edges of the slot *d*, and as is shown in Figs. 5 and 8 of the drawings. After the guard is swaged and trimmed, as above mentioned, the gage C will be applied

to it, as shown in Fig. 5 of the drawings, and forms a templet for assuring perfect truing-up of the guards, so that when they are replaced on the cutter-bar of the harvester or mowing-machine the knife-slots of all the guards will set in perfect alignment to assure true and easy operation of the sickle-bar of the machine.

It will be noticed that by the use of the double-edged swage A and the re-enforcing or anvil plate B all four dull edges, and particularly the two dulled lower edges, d' , of the harvester-guard are re-formed or shaped by a single operation of the swage and at one heat of the guard; hence this method of sharpening worn-out or dulled guards may be successfully practiced with guards faced at the knife-slot with steel plates, which, under other methods of sharpening, would be split off or injured, and the whole operation of renovating the guards may be performed very quickly and easily by any blacksmith of ordinary intelligence, while making the guards practically as good as new ones, as will readily be understood.

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

1. In harvester-guard renovators, the combination, with the guard, of an anvil-plate fitted in its knife-slot and a swage formed with a slot or groove having oppositeswaging edges

or shoulders normally fitting the opposite edges of the guard near its knife-slot, substantially as described, whereby when the guard is heated and the plate and swage adjusted to it and the swage is forced home the dulled edges of the guard will be upset and re-formed, as herein set forth.

2. In harvester-guard renovators, the swage made with a slot or groove forming opposite swaging-edges normally fitting opposite edges of the guard near its knife-slot, substantially as herein set forth.

3. In harvester-guard renovators, the swage made with a tapering semicircular slot or groove, forming opposite swaging-edges normally fitting opposite edges of the guard near its knife-slot, substantially as herein set forth.

4. In harvester-guard renovators, the combination, with the swaged guard, of a gage having a tongue adapted to the knife-slot of the guard, and also having a shoulder and face adapted to the shoulder and face of the guard fitting the cutter-bar, substantially as described, for the purposes set forth.

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