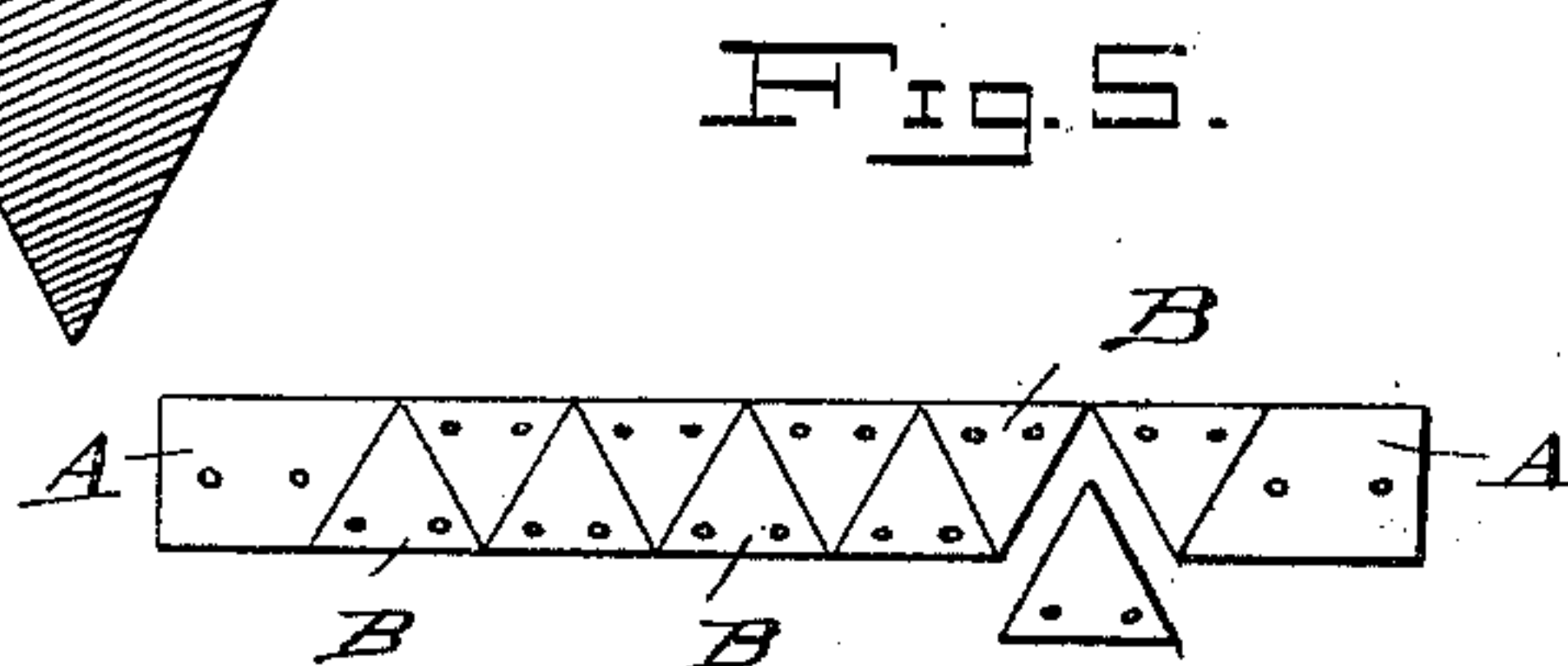
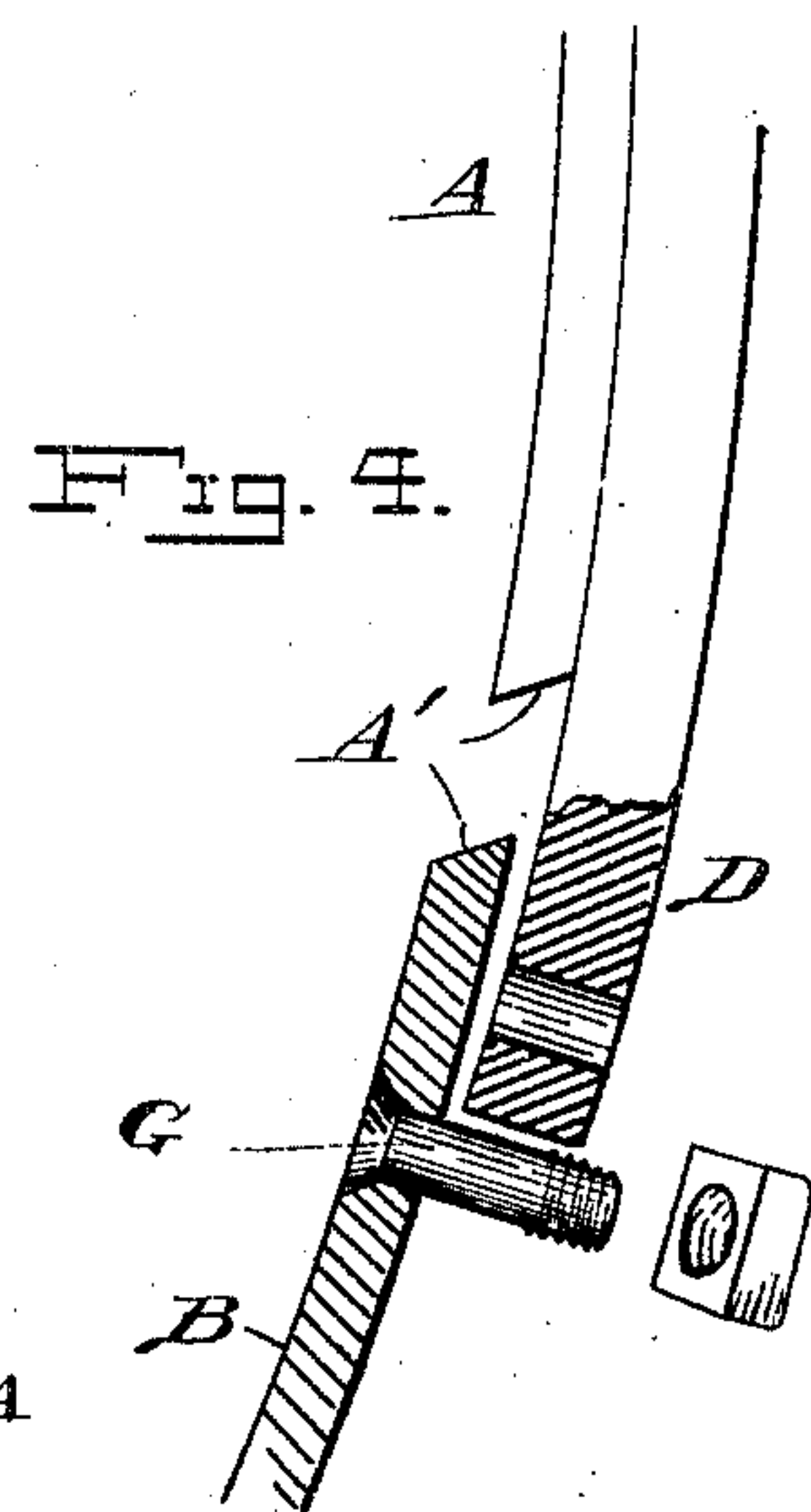
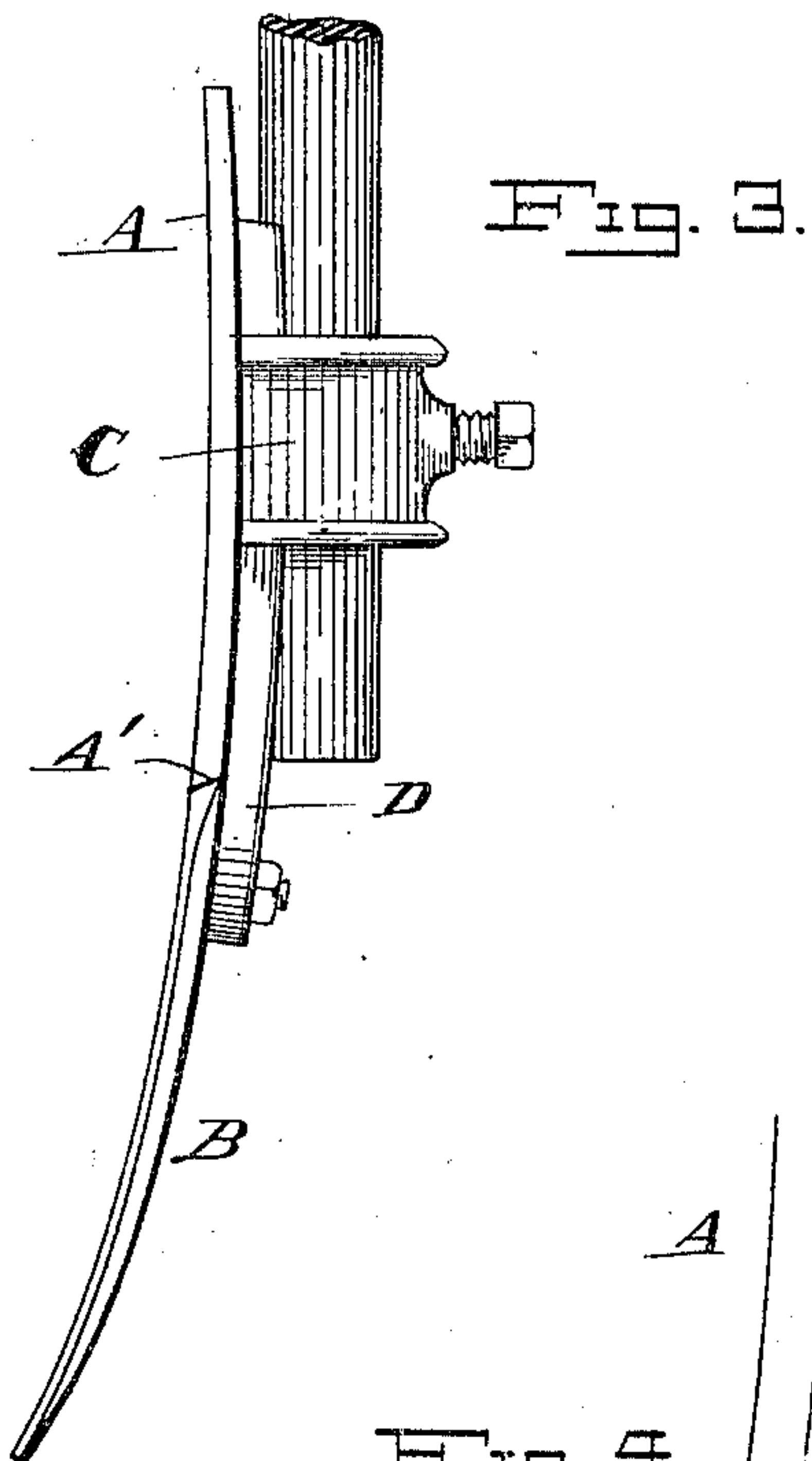
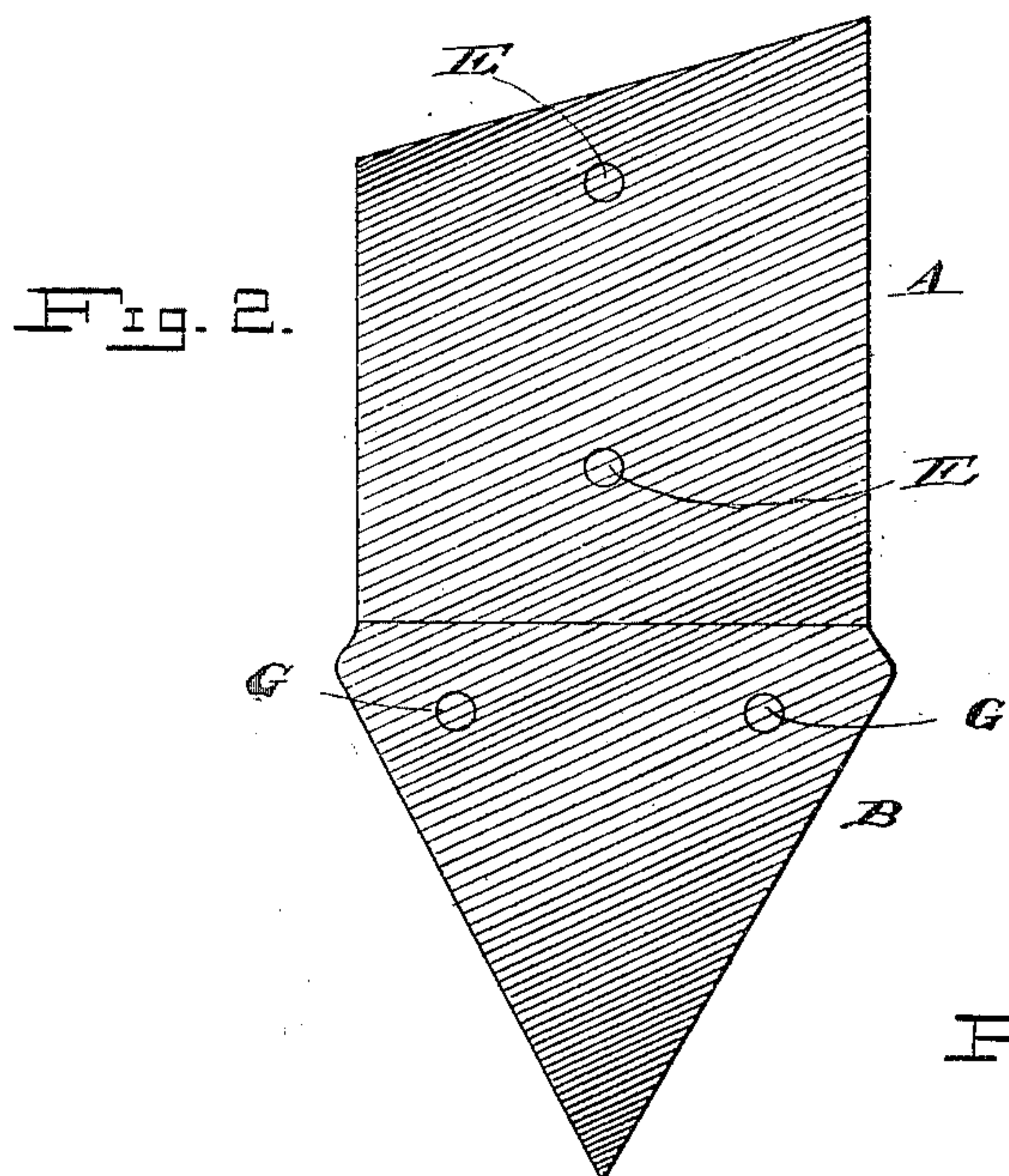
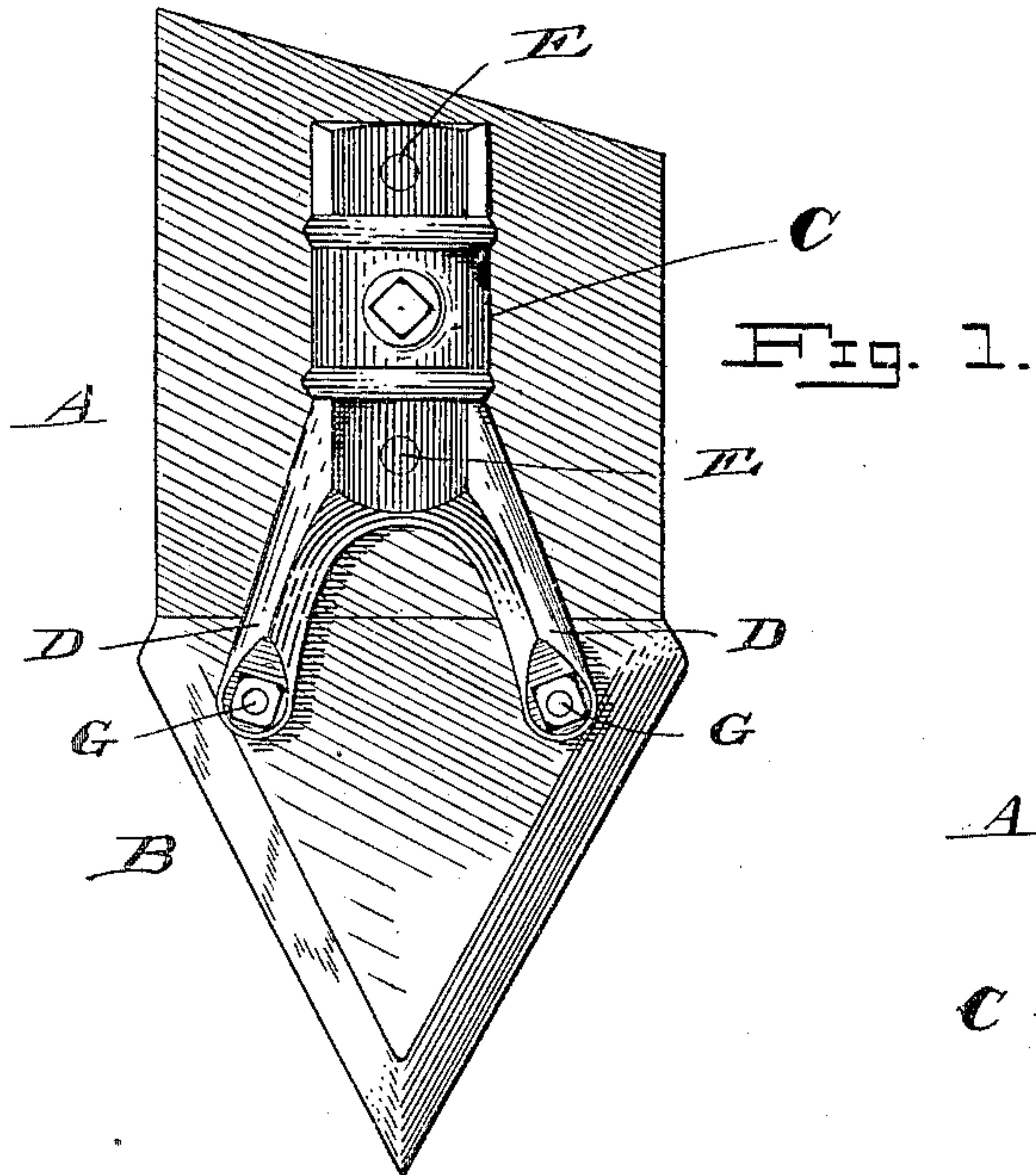


No. 697,897.

Patented Apr. 15, 1902.

T. H. SMITH.
CULTIVATOR SHOVEL.
(Application filed Aug. 1, 1901.)

(No Model.)



WITNESSES

H. Blusch
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THOMAS H. SMITH, OF MANITO, ILLINOIS, ASSIGNOR OF ONE-HALF TO
ELMER E. RANDOLPH, OF MANITO, ILLINOIS.

CULTIVATOR-SHOVEL.

SPECIFICATION forming part of Letters Patent No. 697,897, dated April 15, 1902.

Application filed August 1, 1901. Serial No. 70,442. (No model.)

To all whom it may concern:

Be it known that I, THOMAS H. SMITH, a citizen of the United States, residing at Manito, in the county of Mason and State of Illinois, have invented certain new and useful Improvements in Cultivator-Shovels; and I do hereby declare that the following is a full, clear, and exact description of the invention, which will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to improvements in cultivator-shovels.

The object of my invention is to construct a cultivator-shovel in two sections, so that the point of the shovel when rendered useless from wear or because of breakage can be removed and a new one substituted therefor in a few minutes.

A further object is to so construct a cultivator-shovel of two sections that when secured by the retaining means the point of the cultivating or working point cannot become loosened.

I am aware that a number of devices of this kind have been patented; but they are faulty in construction, as I shall presently show.

In the accompanying drawings, Figure 1 is a view of the back of the completed shovel. Fig. 2 is a face view of the same. Fig. 3 is an edge view. Fig. 4 is an edge view of a portion of the upper section of the shovel, a portion of the support therefor in part section, and a portion of the lower section also in section, showing a bolt for clamping the latter two parts together. Fig. 5 is a view showing the manner of cutting the shovel-sections from the steel-plate stock.

A represents the upper section of my improved shovel. B is the lower section, made in the form of a diamond, as usual. The lower edge of the former section and the upper edge of the latter are made to abut, as shown in Figs. 1 and 2; but in addition the edges are beveled, as shown in Figs. 3 and 4, at A', the purpose of which will appear presently.

At the back of the shovel is a fitting or clamp, which consists of the housing C, having the extensions or arms D D below. At

E E are two rivets which secure the said housing to the upper section A. The ends of the arms D D project below the lower edge of the upper section A, as shown in the several figures, and bolts G G pass through the said arms and the lower section B and serve to hold the latter firmly in place. As an additional means of locking the part B, the adjacent edges of the two parts A and B are beveled, as described and shown, and the direction of such bevel is such that when pressure comes against the point of the part B when at work in the ground the upper edge of A cannot move away from the support C. While the bolts are sufficient to rigidly hold the said part A, the beveled locking arrangement may also be employed. Either right or left hand shovels may be employed and the support and the bevel A' may be made to conform therewith, since the bend in the shovel is very slight in either case.

The several advantages of my improved shovel are that it is composed of but three parts. It is easily and quickly assembled. A broken or worn-out part can be quickly attached in a few minutes by my method, whereas in welding new points on the shovel a day or so was necessary. A small stock of the extra points may be kept on hand for the purpose of replacing the worthless sections as they are discarded.

The matter of cheapness and economy cuts a very important figure in the production and maintenance of this device, for the reason that the sections A and B can be cut from a strip of steel plate, as shown in Fig. 5. This plate need be but just the width to make the length of the portion B and the width of the portion A, and it will be readily seen that there can be no waste material whatsoever. The sections B are sheared from the piece, and the ends A, when left of the proportion shown, form the upper sections, the angle of the diamond point last cut leaving the shaped piece shown in Figs. 1 and 2. I am aware, however, that the method of cutting the steel shovels is not new; but I describe it here to give an understanding of the manner of doing it.

I desire to claim the support at the back of

the shovel, whose arms extend below the section to which it is attached and supports the lower section by said arms.

I claim—

5 1. A cultivator-shovel comprising an upper and a lower section, a support for the said sections, the same being attached to the upper one and which consists of the hollow housing C for attachment to the cultivator, the
10 diverging arms D D extending downward below the lower extremity of the upper section and to which the lower section is attached by bolts as shown, the adjacent edges of said sections being beveled substantially as and for
15 the purposes set forth.

2. A cultivator-shovel comprising an upper and a lower section A and B respectively, the same abutting at their edges and beveled as

shown, the one-piece support consisting of the hollow housing C for attachment to the cultivator and also having the upper section A 20 secured thereto, the downwardly and outwardly extending arms D D of said support projecting below the abutting edges of the sections and having the lower section B secured thereto by bolts, the said lower section 25 being detachable from said support substantially as described and for the purposes set forth.

In testimony whereof I affix my signature 30 in presence of two witnesses.

THOMAS H. SMITH.

Witnesses:

FRANK T. MILLER,
HARRY J. CRAMER.