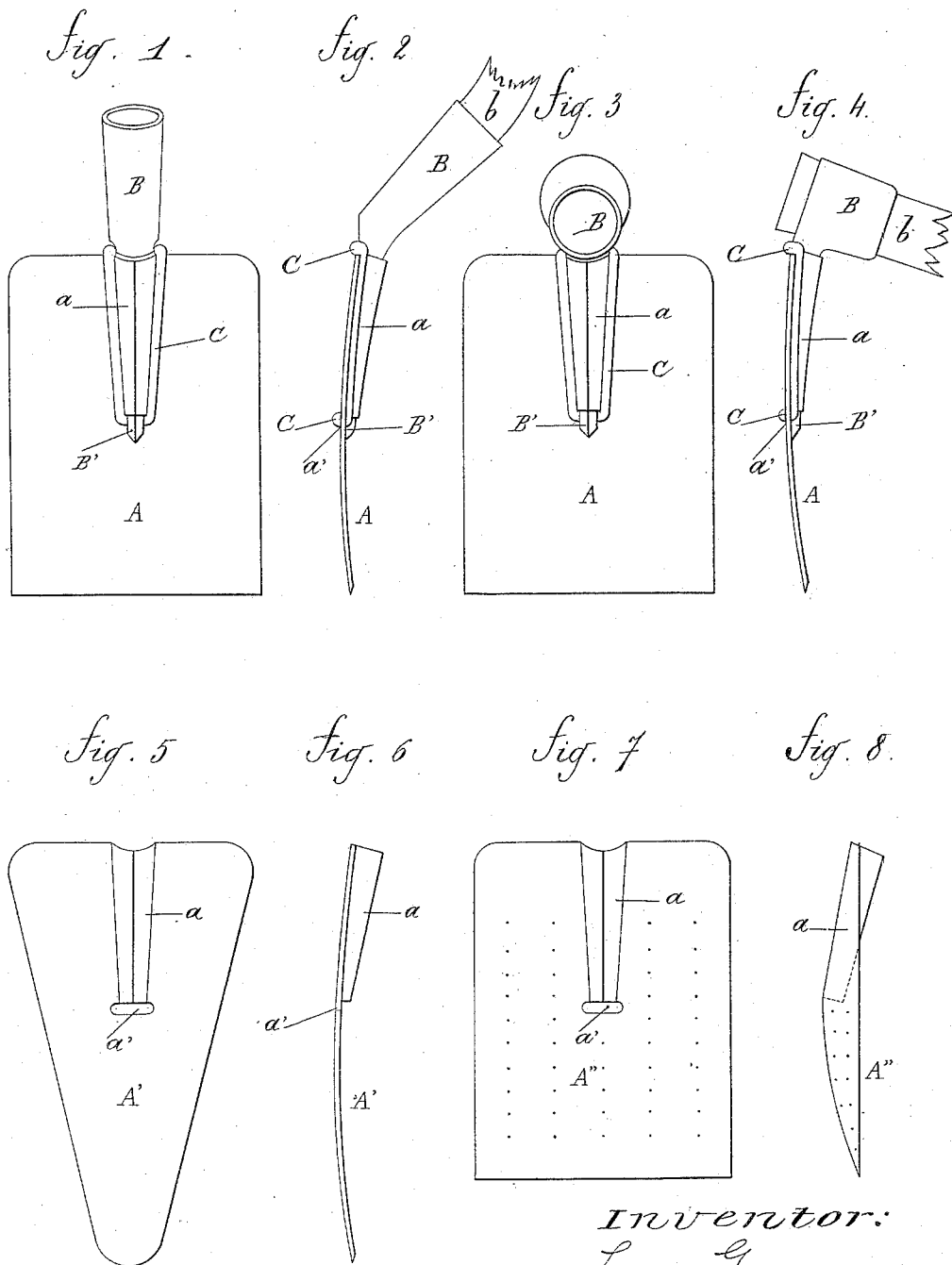


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HANDLE ATTACHMENT FOR SHOVELS, HOES, &c.

No. 474,121.

Patented May 3, 1892.



Witnesses:

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Inventor:

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Fig. 9

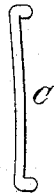


Fig. 10

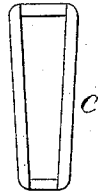


Fig. 11

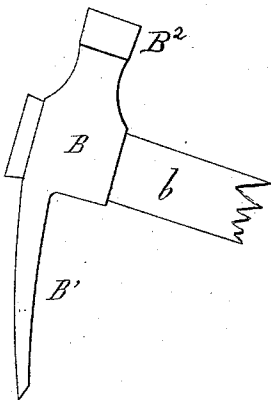


Fig. 12

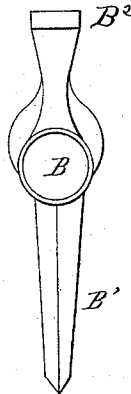


Fig. 13

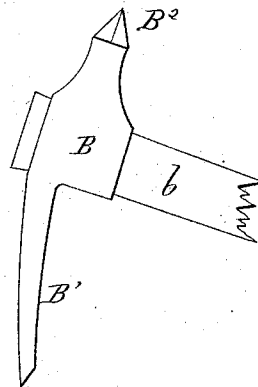
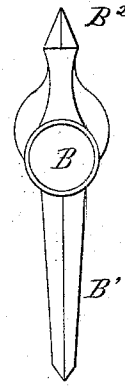


Fig. 14



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UNITED STATES PATENT OFFICE.

LEON GAYON, OF PARIS, FRANCE.

HANDLE ATTACHMENT FOR SHOVELS, HOES, &c.

SPECIFICATION forming part of Letters Patent No. 474,121, dated May 3, 1892.

Application filed July 2, 1891. Serial No. 393,212. (No model.)

To all whom it may concern:

Be it known that I, LEON GAYON, a citizen of the French Republic, residing at Paris, France, have invented certain new and useful Improvements in Handle Attachments for Shovels, Hoes, and Analogous Articles, of which the following is a full, clear, and exact description.

Until this day the hoes, shovels, and analogous flat utensils having an eye for attaching the handle have been made by cold-hammering a thin sheet of sheet-iron or steel, in which, not without trouble, the necessary eye was made with the hammer. This work, which is executed on a thin sheet of metal, presents quite great difficulties in execution, and the metal thus worked when cold cracks and breaks frequently near the said eye. Moreover, with a tool thus manufactured it often happens that the most costly part (that which touches the handle) is thrown aside as soon as the working end is worn, and that, too, without being changed in the least.

The object of my invention is to obviate the different drawbacks; and it consists in dividing each of these tools into three distinct elements, of which the two most costly can serve almost indefinitely. For this purpose I manufacture separately the flat part or pallet of the shovel, hoe, or other tool, and I connect with an eye by means of an intermediate piece forming a stirrup, which can be applied to a whole series of similar articles.

To facilitate the understanding of the description, I will refer to the accompanying drawings, which show, as example, the face and side view of a certain number of utensils of the same type made according to my invention.

In the drawings, Figures 1 and 2 are a face and side view of a shovel. Figs. 3 and 4 are a face and side view of a hoe. Figs. 5, 6, 7, and 8 show the face and side of utensils slightly modified in form. Figs. 9 and 10 show a side and face view of the stirrup, which serves to unite the handle with the tool. Figs. 11, 12, 13, and 14 show side and face views of certain variations which can be made in these different utensils.

The same letters of reference refer to the same parts in the different figures.

If we take, for instance, as sample the tool

shown in Figs. 1 and 2 of the accompanying drawings, we see that the shovel, instead of being of one sole-piece with its eye for the handle, comprises, on the contrary, three distinct parts—the shovel A, the eye B, and the stirrup C. The shovel A is cold-hammered, with a central angular groove *a*, obtained by simple stamping, and which is more distinctly seen in Figs. 5, 6, 7, and 8, and an opening *a'* of suitable form, easily obtained with a matrix. The eye B comprises the eye proper, destined to receive the handle *b* of the tool, and a part B', having the form of a triangular pyramidal body slightly curved, (shown more distinctly in Figs. 11, 12, 13, and 14,) which penetrates into the groove *a*, where it is held by a stirrup C, (shown apart in Figs. 9 and 10,) which applies on both sides of the groove *a*, projecting to the outer side of the tool, on one side by the opening *a'* and on the other side by passing beyond the upper rim of the shovel, as is easily seen from Figs. 1 and 2. This eye is made of iron by hammering when hot in the ordinary manner. It is forged as this part is generally forged in shovels or spades. It is not generally cast, as it would not present enough solidity. It might, however, be cast in malleable iron; but forging is my preferred form. The part B' of the eye passes partly on the stirrup, partly in the groove *a*, to come out a second time on the stirrup above the opening *a'*. The whole is consequently held very solidly in place.

Figs. 3 and 4 show the same tool transformed into a hoe. It suffices for this to change the form of the eye B B', the other parts keeping the same form and position.

Figs. 5 and 6 show a tool A' mounted in the same manner, but particularly arranged to work compact earths, in which the tool A of Figs. 1, 2, 3, and 4 would penetrate with difficulty.

The tool A² of Figs. 7 and 8, also mounted as before, is arranged in form of a skeel to work and load wet sands.

In certain cases, where the workman may have roots to cut or clods to break, I make the eye B B' of my tools with an upper part B², made either with an edge or diamond point to accomplish this work, as shown in Figs. 11, 12, 13, and 14.

As will be easily understood from the fore-

going description, the same eye can serve for several different tools. It is also seen on the other hand, that this part and the stirrup would hardly undergo any wear, since they do, 5 so to say, no work. It will consequently suffice to replace when worn the shovel proper A A' A'', which, being of very simple construction, will always be very cheap. This new system of construction permits of using the 10 same handle for different utensils, these having all the same eye, and these utensils being obtained by means of matrices, allowing a precision which renders all these openings interchangeable with one and the same handle 15 bearing the eye of these different utensils.

Having thus described the subject of my invention and the manner in which the same is to be performed, what I claim is—

1. The herein-described shovel or analo-

gous implement, the same consisting of a blade 20 having an eye or socket secured solely thereto by an intermediate stirrup, whereby bolts, rivets, and like fastening devices are entirely dispensed with and the socket can be removed from the blade by simply detaching the stir- 25 rup, substantially as set forth.

2. A shovel or analogous implement having an eye, with a portion engaging the groove of the blade, a blade with central angular groove, and a continuous stirrup, the latter detach- 30 ably holding the eye to the blade, as set forth.

In witness whereof I have hereunto set my hand in presence of two witnesses.

LEON GAYON.

Witnesses:

ROBT. M. HOOPER,
JULES DAYOLLET.