

No. 779,562.

PATENTED JAN. 10, 1905.

C. M. RANSOM.
INTRENCHING TOOL.

APPLICATION FILED JAN. 21, 1903.

3 SHEETS—SHEET 1.

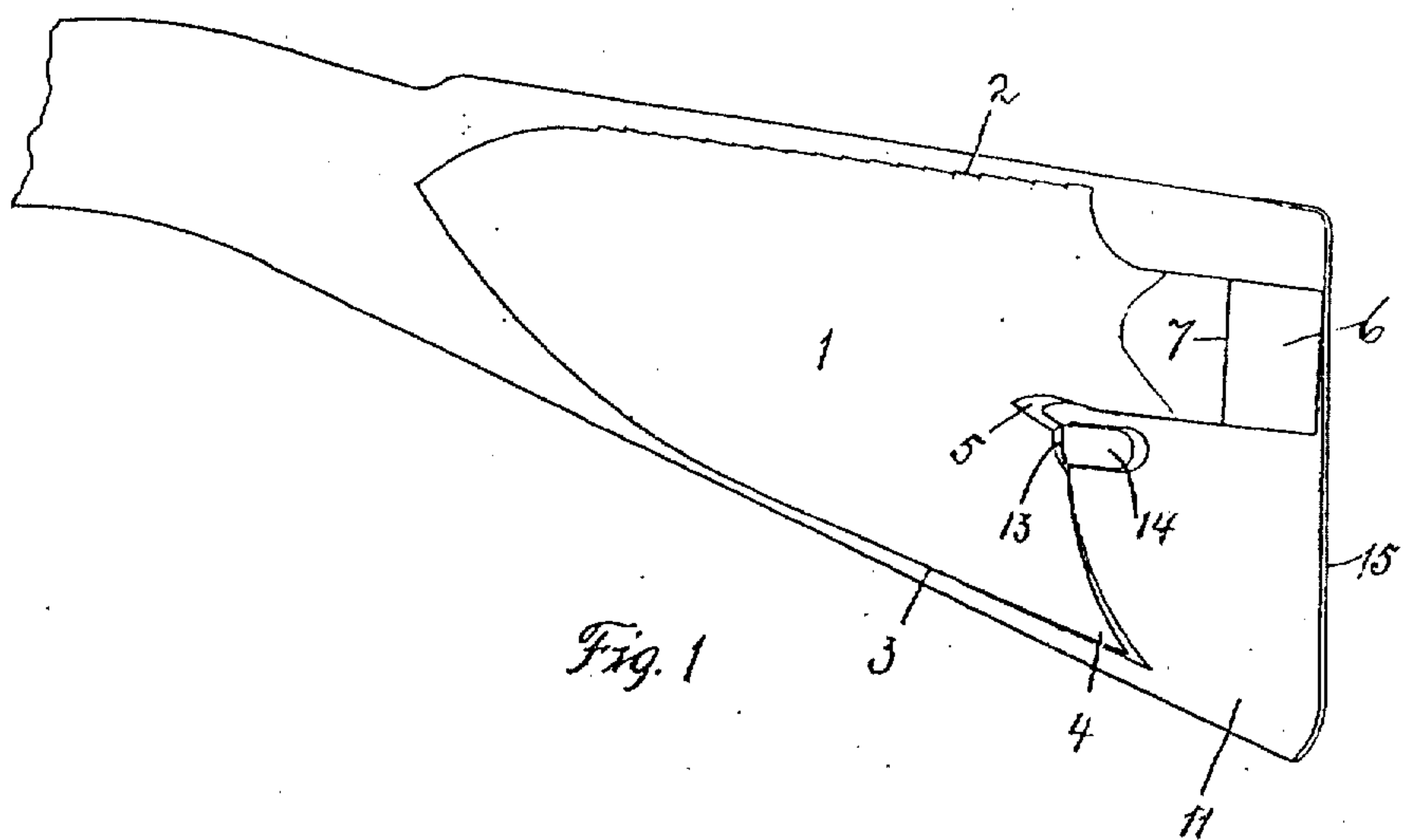


Fig. 1

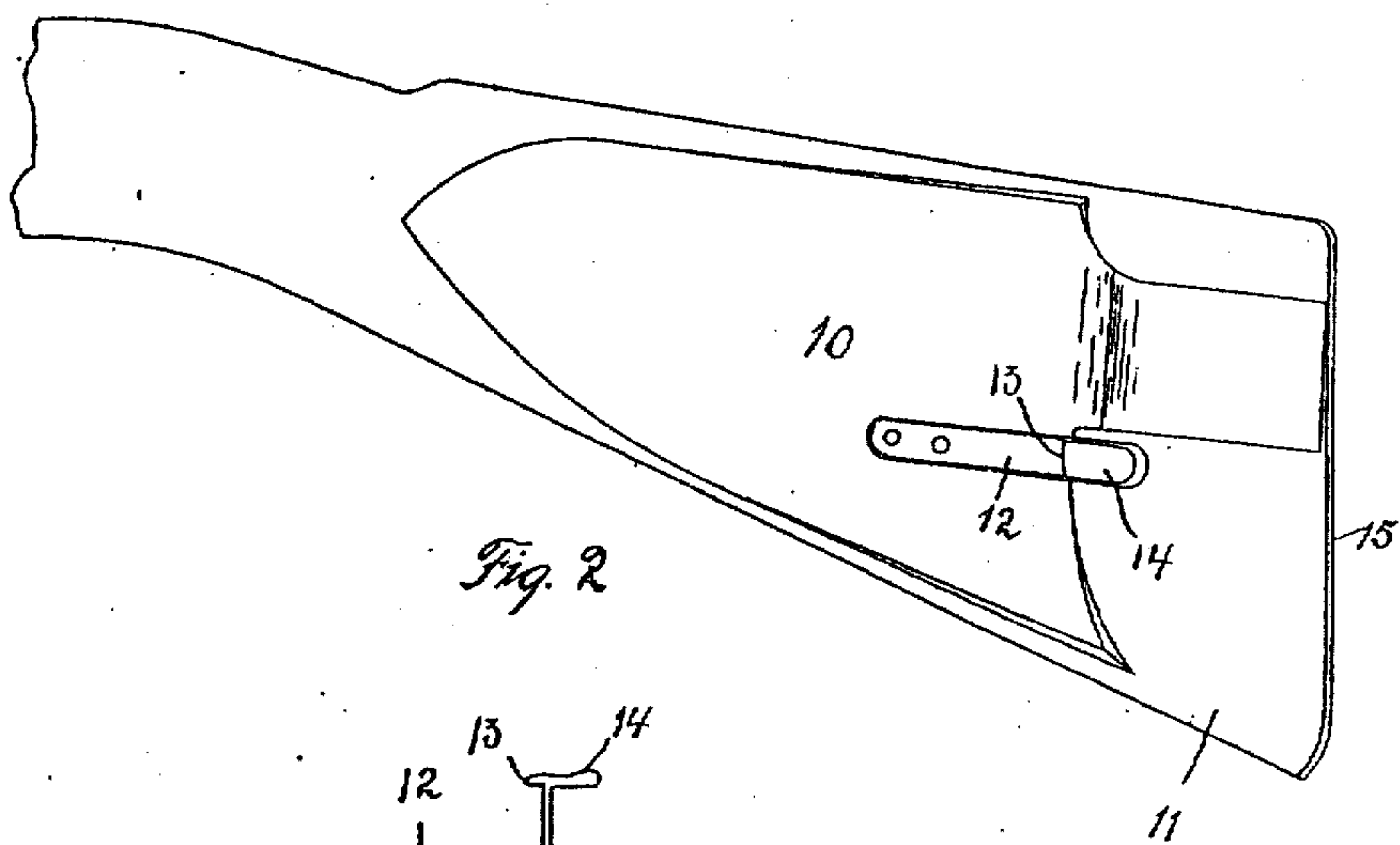


Fig. 2

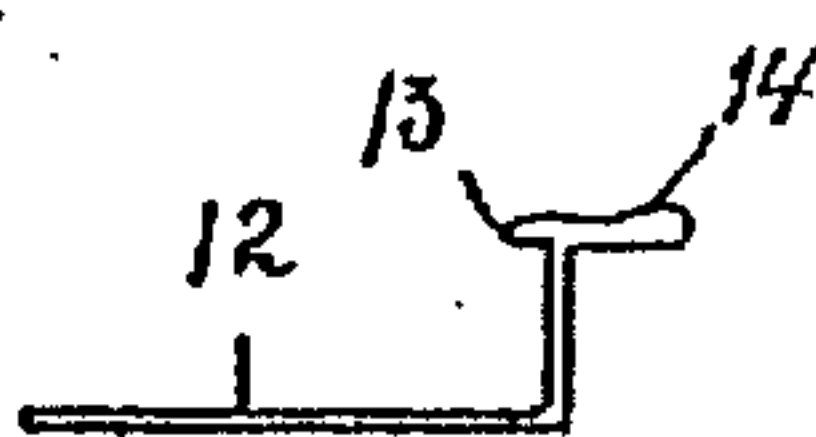


Fig. 3

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3 SHEETS—SHEET 2.

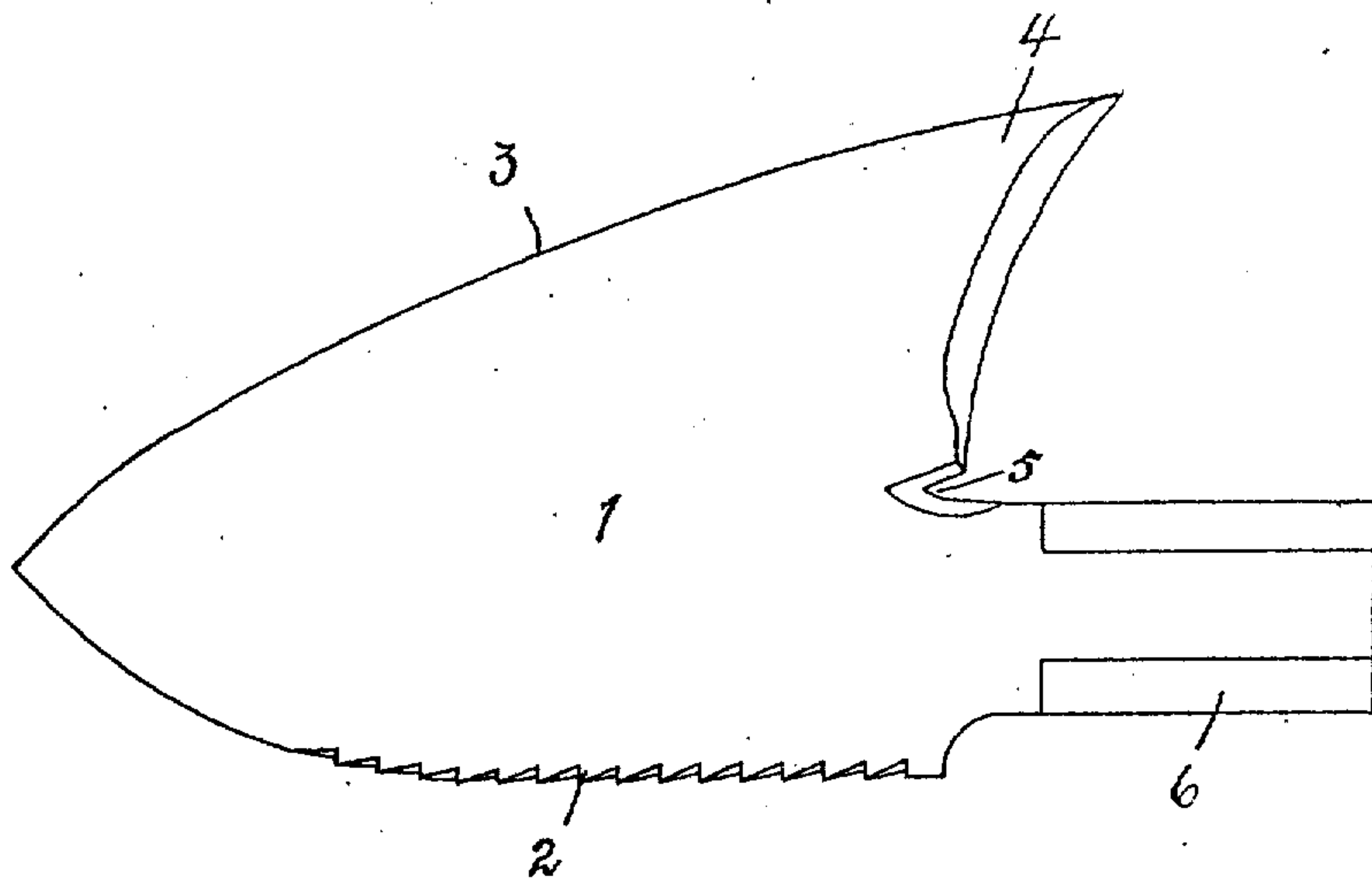


Fig. 4

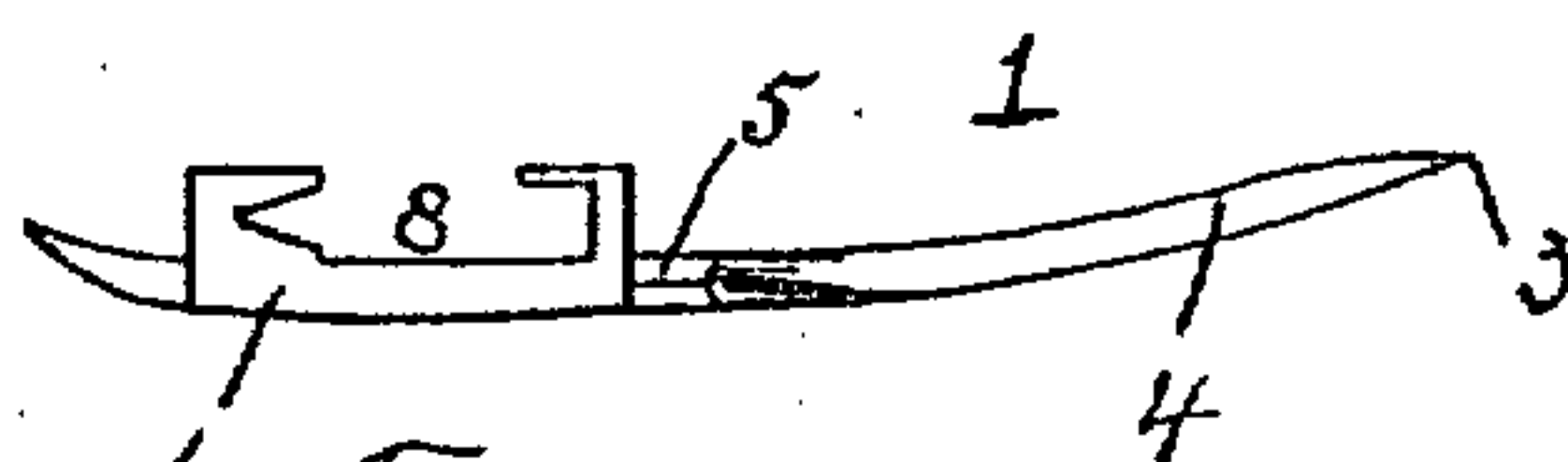


Fig. 5

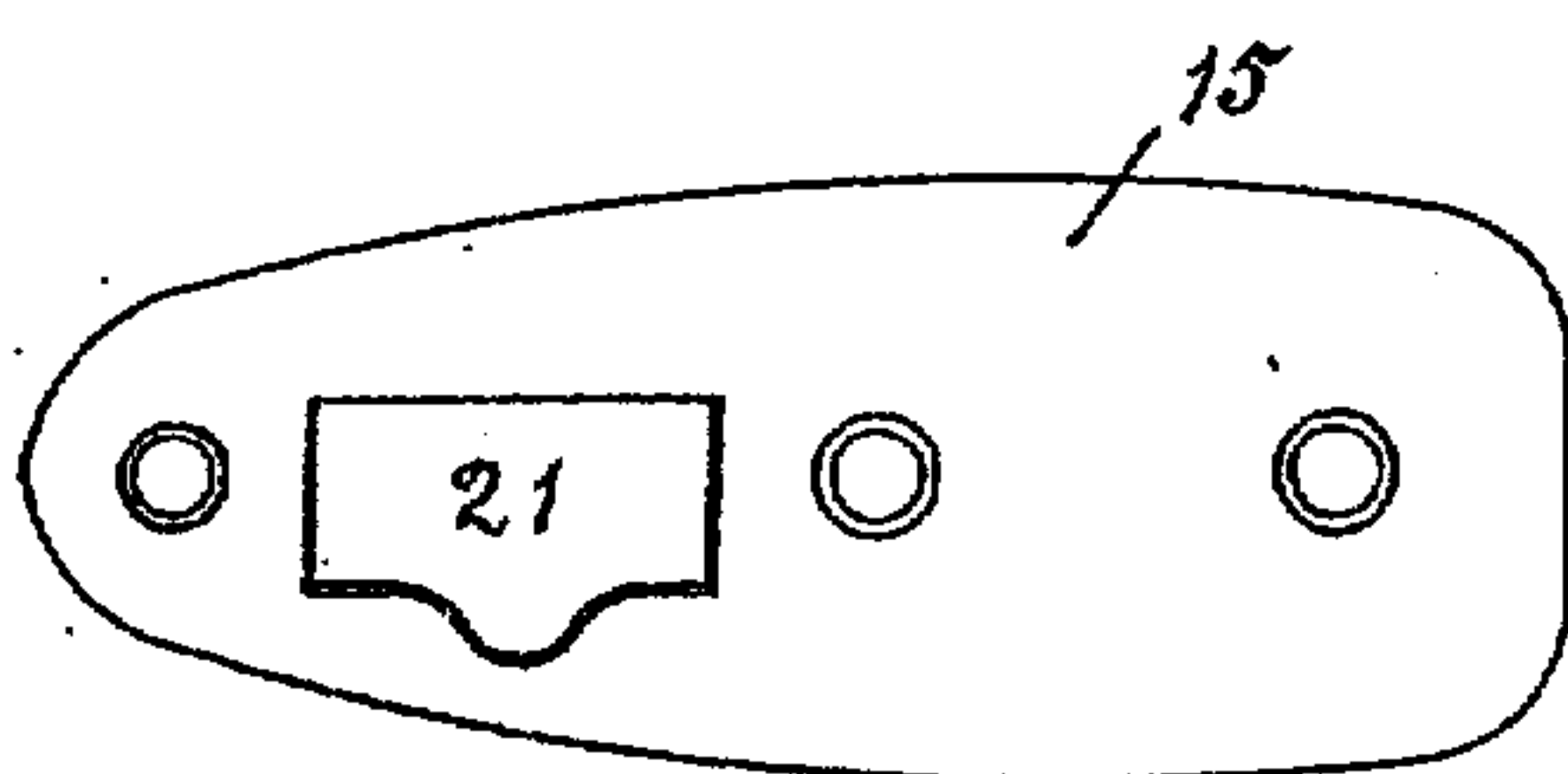


Fig. 6

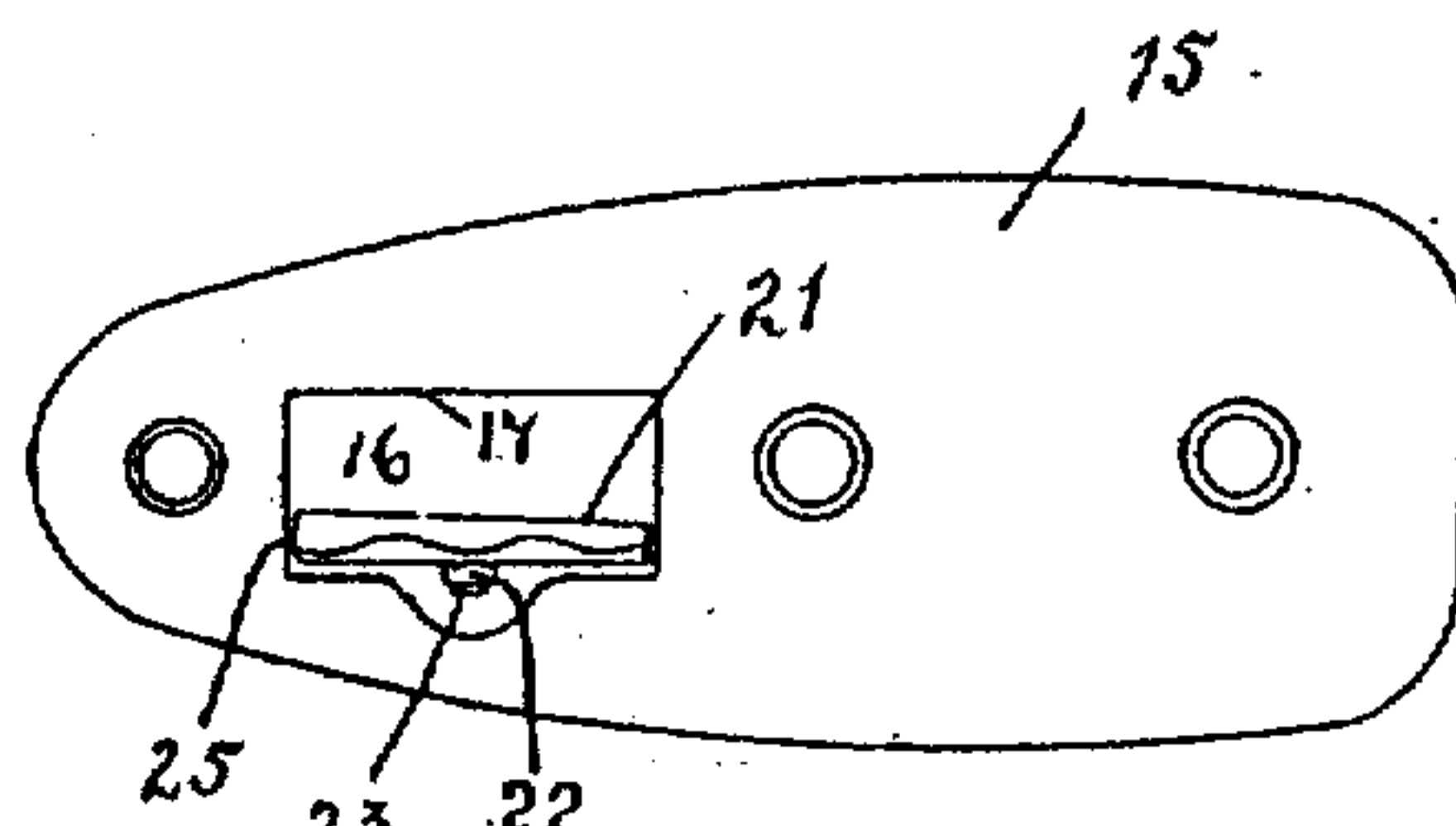


Fig. 7

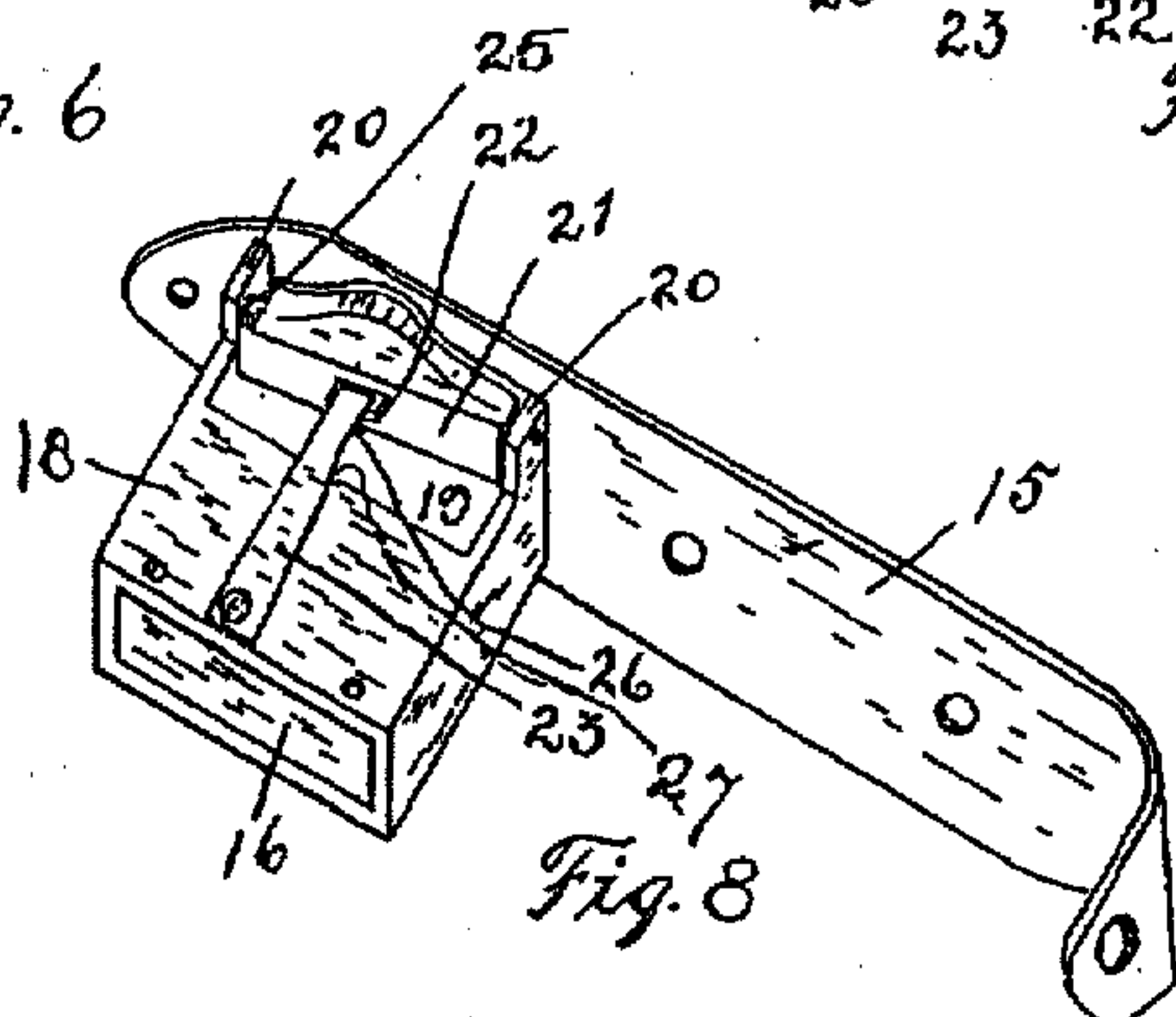


Fig. 8

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INTRENCHING-TOOL.

SPECIFICATION forming part of Letters Patent No 779,562, dated January 10, 1905.

Application filed January 21, 1903. Serial No. 139,908.

To all whom it may concern.

Be it known that I, CHARLES M. RANSOM, a citizen of the United States, residing at Buffalo, in the county of Erie and State of New York, have invented certain new and useful Improvements in Intrenching-Tools; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to figures of reference marked thereon, which form a part of this specification.

My invention relates to improvements in intrenching-tools for soldiers' use, and more particularly to that class which are intended to be carried upon and employed with the gun of the soldier.

The object of my invention is to equip each soldier who carries a gun with a combination-tool adapted for various uses—such as throwing up intrenchments, removing or leveling obstacles, &c.—such tool when idle to be removably seated in a recess in the butt of the gun and when in use to be adapted for operative engagement with the gun, which then serves as a handle.

The invention also relates to certain details of construction of the intrenching-tool.

To this end my invention consists, broadly, of an intrenching-tool carried upon and operated with a gun and specifically of certain details of construction, all of which will be fully hereinafter described and claimed.

In the drawings, Figure 1 is a side view of the stock of a gun with my improved intrenching-tool seated therein. Fig. 2 is a side view of the stock with the intrenching-tool removed. Fig. 3 is a detached detail of the holding-spring. Fig. 4 is a view of the intrenching-tool detached, presenting the face opposite to that shown in Fig. 1. Fig. 5 is an end view of Fig. 4. Fig. 6 is a view of the rear end of the gun-stock, showing the socket or opening for the shank of the intrenching-tool closed by a plate. Fig. 7 is a similar view showing the socket open and ready for the insertion of the shank of the intrenching-tool. Fig. 8 is a perspective view of the socket member and butt-plate detached from the gun-stock. Fig. 9 is

a fragmentary view of the stock with the intrenching-tool in operative engagement therewith. Fig. 10 is a longitudinal enlarged section of Fig. 9, taken on the line *x x*. Fig. 11 illustrates my improved intrenching-tool removably attached to the bayonet of a gun.

Referring to the drawings in detail it will be seen that the preferred form of my improved intrenching-tool, which is fully illustrated in Figs. 1, 4, and 5, has a substantially trowel-shaped body 1 for effective use in loosening and throwing up earth to form intrenchments. One side edge of the tool is formed with a row of teeth 2 to be utilized as a saw, the opposite edge 3 being in the form of a blade for cutting purposes. The cutting edge 3 is extended rearwardly and curved back toward the median line to form the lateral hook 4 for engaging and pulling down overhead obstructions. A notch 5 is formed in the transverse edge wall of the hook 4 and preferably at the inner side of the hook, which is intended for engagement with wire fences or the like obstructions to sever and remove the same.

6 is the rectangular shank of the tool for holding engagement with the stock or butt of the gun, by means of which the intrenching-tool may be utilized, the gun serving as a handle. Across one side of the shank 6 (see Fig. 1) is the transverse shoulder 7 for engagement with the locking device in the stock or butt of the gun. The socket 8 (see Fig. 5) in the shank 6 is for the reception of the bayonet 9, (see Fig. 11,) which may, if desired, serve as a handle in lieu of the gun. The socket is preferably formed by two grooved flanges, which extend laterally from the shank, as shown in Fig. 5.

10 is a recess (see Fig. 2) in one side of the stock or butt 11, corresponding in configuration with the intrenching-tool and in which such tool is removably seated when not in use. The spring 12 (see Figs. 2 and 3) is secured at one end of the floor of the recess 10, its other or free end being provided with the shoulder 13 for holding engagement with the intrenching-tool. (See Fig. 1.) The thumb-piece 14 opposite the shoulder 13 is manipulated in disengaging the intrenching-tool.

When the intrenching-tool is placed in its

recess 10, its outer point is first inserted in the groove 10^a, formed in the side wall of said recess, (see Fig. 10,) which provides an overhanging flange that, together with the spring-catch 12 13, serves to hold such tool securely against accidental displacement. This groove is preferably formed at the forward extremity of the recess so as to engage or receive the point of the tool, as shown, and the spring-tensioned locking-catch near the opposite end to catch over the edge of the hook 4.

In the end of the stock or butt is cut a rectangular recess, into which is fitted and secured a socket member and locking device for receiving and holding the intrenching-tool in operative position. Said socket member is in the form of a box, which is rigidly attached to the butt-plate of the gun. Figs. 6, 7, 8, and 10 clearly illustrate its construction, of which 15 is a metal butt-plate or end piece screwed upon and covering the end of the gun-stock.

16 is a rectangular socket member or box, which is attached to and forms a part of the butt-plate 15 and rests within the recess in the stock. This socket 16 opens out through the butt-plate 15, as at 17. (See Fig. 7.) One of the side walls 18 of the socket 16 has the opening 19, and in the lugs 20 20, extending from the socket, is pivoted the locking-plate 21, adapted to close the opening 17 in the absence of the intrenching-tool and to be swung away from such opening to permit of the insertion of the shank 6 of the intrenching-tool.

On the inner face of the plate 21 is a rectangular lug 22, against one side of which the leaf-spring 23 has contact to hold the plate 21 in the plane of the end piece 15 to close the socket 16. (Shown in Figs. 6 and 8.)

When the plate 21 has been thrown into the position shown in Figs. 7 and 10, the shank 6 of the intrenching-tool is thrust within the socket 16 until the shoulder 7 has passed the farther edge of such plate, when the leaf-spring 23 will force the plate 21 against the shank and in locking engagement with the shoulder 7. The play of the plate 21 under the pressure of the spring is permitted by reason of the slot 24, in which the carrying-trunnion 25 of the plate 21 has play sufficient for the purpose. A pin 26 on the plate 21 engages with a groove 27 (see Fig. 10) when the plate swings outwardly to limit its outward movement.

In the manner hereinbefore described the intrenching-tool is held firmly in the stock or butt of the gun, as shown in Figs. 9 and 10, and can be easily removed when desired and

deposited in its carrying-recess in the side of the stock or butt.

My improved intrenching-tool, with the gun serving as the handle, is extremely useful in the hands of a soldier in throwing up intrenchments and breastworks, in cutting, sawing, pulling down or aside any and all obstructions which impede his progress through forests underbrush, jungles, or barbed-wire trochas. It is also equally serviceable in the hands of a hunter in a variety of ways. When the stock of the gun is too long for effective service, the bayonet can be substituted therefore, and in the absence of the bayonet a stout stick or bar can be inserted in the socket in the shank to serve as an emergency-handle to render the tool effective.

One of the advantages is that the shank of the intrenching-tool is exteriorly formed for insertion into a socket and interiorly formed for the reception of a bayonet or the like, thereby adapting the device for both interior or exterior attachment.

I claim—

1. The combination with an intrenching-tool having a shank provided with a shoulder, of a gun having a socket to receive said shank, and a pivoted spring-plate normally closing the socket and adapted to be pressed back by the entrance of the shank into the socket and to lock against the shoulder.

2. An intrenching-tool having a trowel-shaped body provided with opposite cutting and sawing edges and a lateral hook.

3. The combination with the butt of a gun provided with a recess in its side, a socket in its end and a pivoted spring-pressed plate in the outer end of the socket, of an intrenching-tool removably carried in the recess in the side of the butt and provided with a shank for insertion within the socket in the butt, such shank having a shoulder for locking engagement with the pivoted spring-pressed plate.

4. An intrenching-tool having a hook and a wire-cutting notch at the inner side of said hook.

5. An intrenching-tool having a trowel-shaped body and a shank extending therefrom and having laterally-extending grooved flanges constituting a socket.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

CHARLES M. RANSOM.

Witnesses:

C. B. BUTLER,
W. T. MILLER.