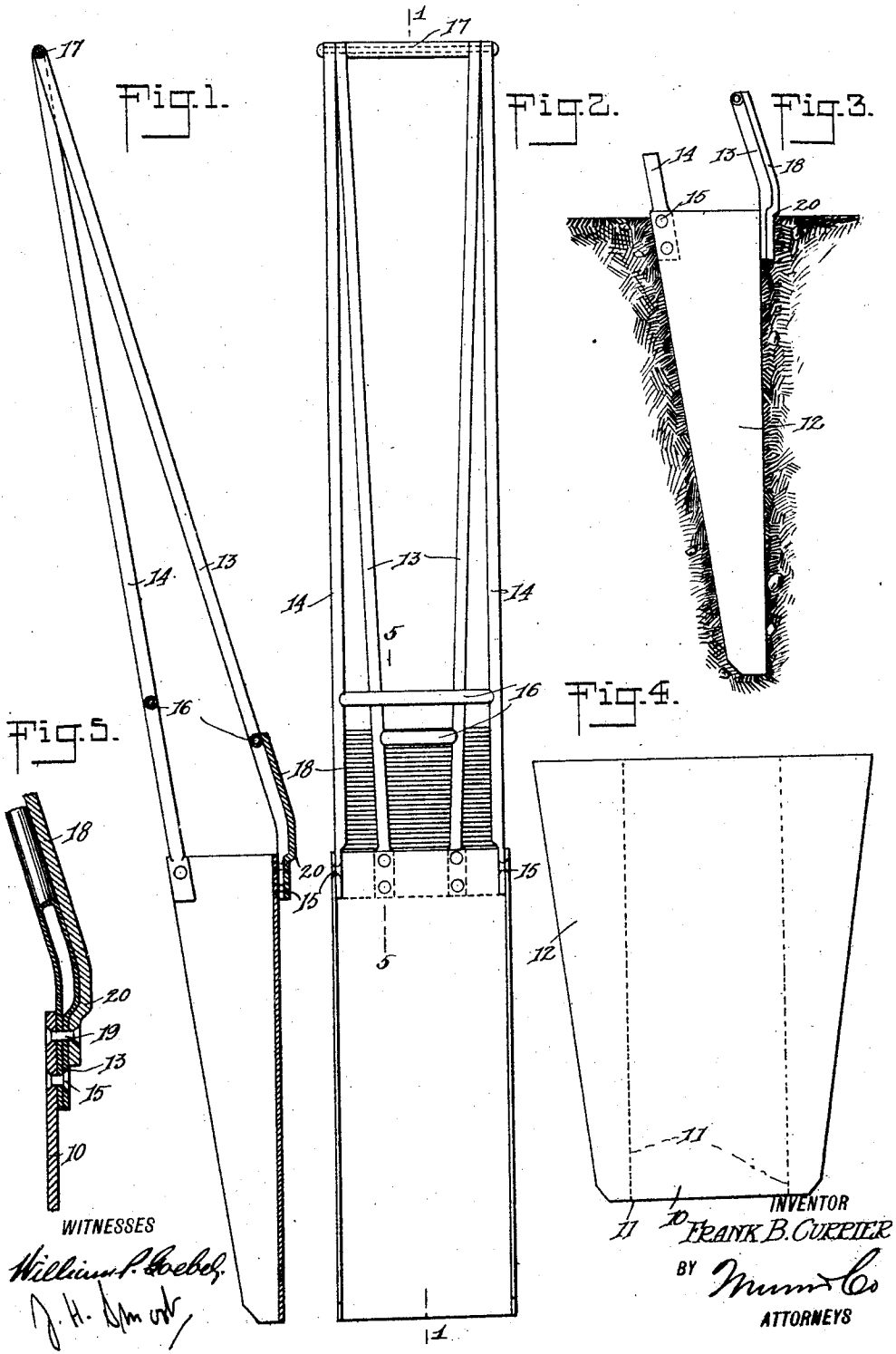


F. B. CURRIER.
SPADE.

APPLICATION FILED MAY 5, 1920.

1,411,166.

Patented Mar. 28, 1922.



UNITED STATES PATENT OFFICE.

FRANK B. CURRIER, OF NEWARK, NEW JERSEY.

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Specification of Letters Patent. Patented Mar. 28, 1922.

Application filed May 5, 1920. Serial No. 379,027.

To all whom it may concern:

Be it known that I, FRANK B. CURRIER, a citizen of the United States, and resident of Newark, in the county of Essex and State of New Jersey, have invented a new and Improved Spade, of which the following is a full, clear, and exact description.

In connection with spades, and more particularly that type of spade used in connection with handling salt marsh sod, it is appreciated that it has been extremely difficult to properly handle the same in view of the extreme cumbersome nature of spades heretofore constructed for this purpose.

Another defect has been experienced due to the unusual heavy work to which this type of tool is subjected, in that the parts quickly become loosened, which has resulted in the spade become useless.

With this in mind, I have constructed a spade which shall be extremely rigid in construction, so that no play will exist between the parts insuring a long life to the tool.

A further object of my invention is the construction of a spade of this type which shall weigh but a fraction of the weight of the tools heretofore used for this purpose, and by means of which it will consequently be possible to handle the same with far greater ease and rapidity than has been the practice heretofore.

A still further object of my invention is the provision of a spade which shall incorporate certain construction permitting of the cutting and removing of the sod in a far more efficient manner than has been possible with spades formerly intended for this purpose.

Reference is had to the attached sheet of drawings as illustrating one practical embodiment of my invention, and in which drawings,

Figure 1 is a sectional side view of a spade constructed in accordance with my invention, and taken along the lines 1—1 of Figure 2.

Figure 2 is a front view thereof.

Figure 3 is a fragmentary side view showing my device in use.

Figure 4 is a front view of the blank by means of which the spade scoop is formed and

Figure 5 is an enlarged side view taken along lines 5—5 of Figure 2.

In these views the reference numeral 10 indicates the scoop or blade portion of the spade, which is folded along lines 11 to form side walls 12. In devices of this character the greatest amount of play between the parts has come into being between the elements forming the handle, and with a view of overcoming this objection, I conveniently form my handle of two pairs of bars 13 and 14 respectively, which are, as has been indicated in Figure 5 preferably tubular to eliminate surplus weight, and to generally strengthen this part of the tool.

The lower ends of the parts have been flattened, as has been shown, and for a purpose hereinafter more fully specified, the ends of the bars 13 conveniently lie flush against the under face of the scoop or blade portion, the flattened ends of the bars 14 bearing against the inner faces of the side walls 12 and being secured in this position preferably by rivets 15.

Adjacent their lower ends the pairs of bars 13 and 14 are connected to one another by suitable cross braces 16, their upper ends extending beyond this point, merging together and terminating in line with one another, as has been shown in Figures 1 and 2, a suitable type of hand grip 17 being interposed between the upper ends of these bars.

A fulcrum plate 18, conveniently extends along the under side of the bars 13 terminating at a point beyond the upper edge of the spade or blade portion 10; rivets such as 19 conveniently passing through the lower ends of the bars 13, plate and blade portions to retain these parts in proper position.

Now with a view of obtaining the rigidity desired, the fulcrum plate 18 is conveniently "spot welded" to the undersides of the bars 13, "spot welding" also being resorted to between the points of connection between the cross braces 16 and bars 13 and 14. By this construction it will be appreciated that no play between these parts, which are subjected to the greatest stress, can come into being.

It will now be understood that the spade is inserted into the marsh turf in the manner

shown in Figure 3, and with a view of providing means which will permit the laborer to feel when the spade has been buried to its extreme depth, it will be noted that the plate 18 is formed with an extended portion 20 conforming to the inclined part of the bars 13 adjacent their point of flattening.

It will be obvious that the blade, as has been illustrated in Figure 3, upon reaching its full depth will offer increased resistance upon the extended portion 20 of the fulcrum plate 18 coming into engagement with the upper surface of the turf, and the laborer will become instantly cognizant of this fact so that it will be only necessary for him to throw his weight away from the handle of the spade, which will cause the blade of the same to move upwardly by virtue of fulcrum bearing afforded by the plate 18, so that a great amount of sod may be removed upon each stroke.

It is obvious that numerous modifications

of structure might be resorted to, and that "spot welding" may conveniently be adapted at any point of connection desired.

What I claim as new is:—

In a spade of the character described, a scoop having a base portion and an upwardly inclined flange on each side thereof, said flanges being tapered from one end toward the other, a bar secured to each flange at the upper end thereof and extended upwardly in a line parallel to the edge of the same, a transverse bar or handle secured to the free ends of said bars, a pair of bars extending from said handle and secured to said base portion, a fulcrum plate secured to the lower end of said last mentioned bars and to said base portion, and said fulcrum plate being provided with a shoulder adjacent the lower end thereof to warn the operator when the scoop has entered the sod its full length.

FRANK B. CURRIER.