

J. S. Hall.

Making Hoes and Rakes.

N^o 41,503.

Patented Feb. 9, 1864.

Fig. 1.

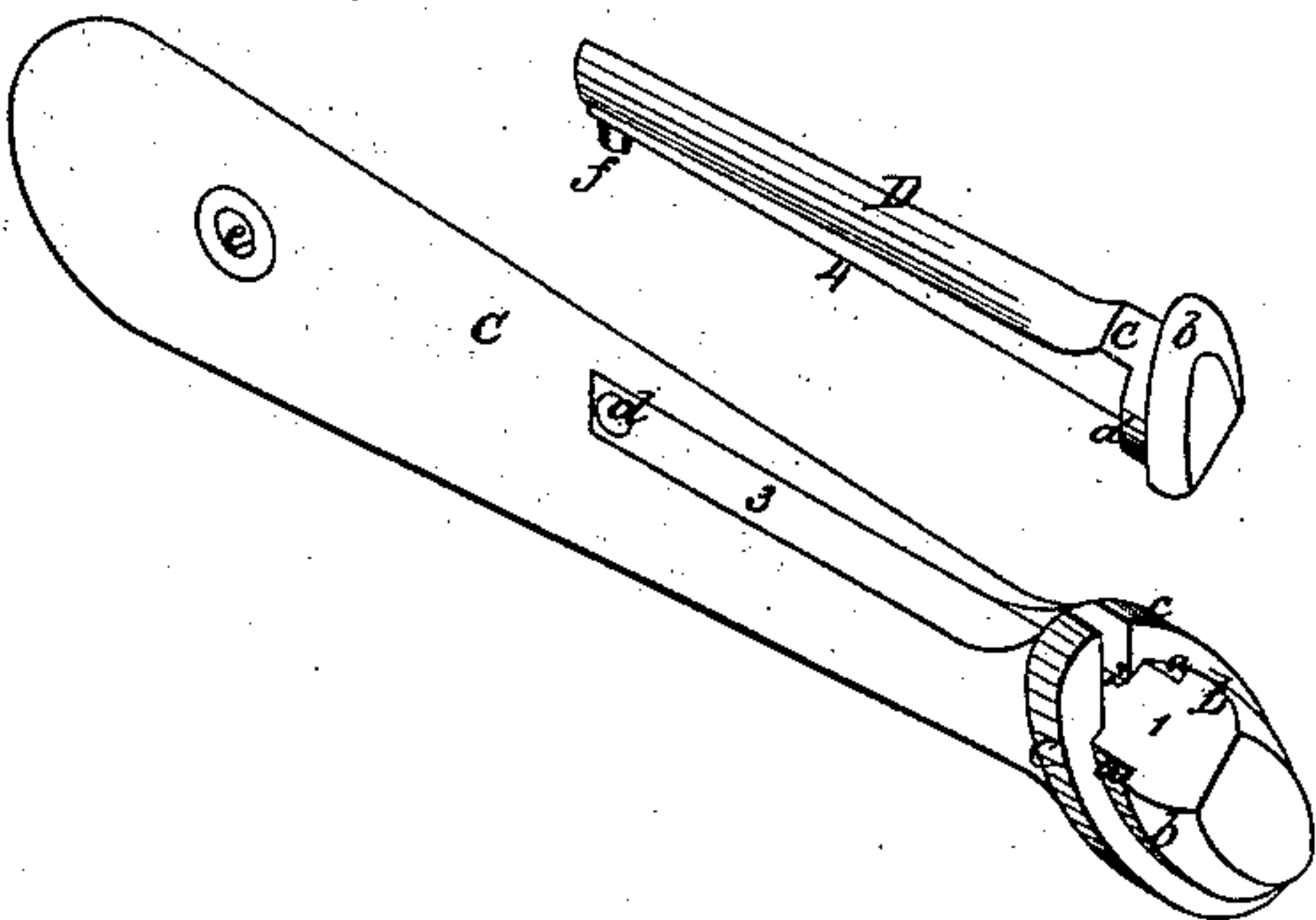


Fig. 2.

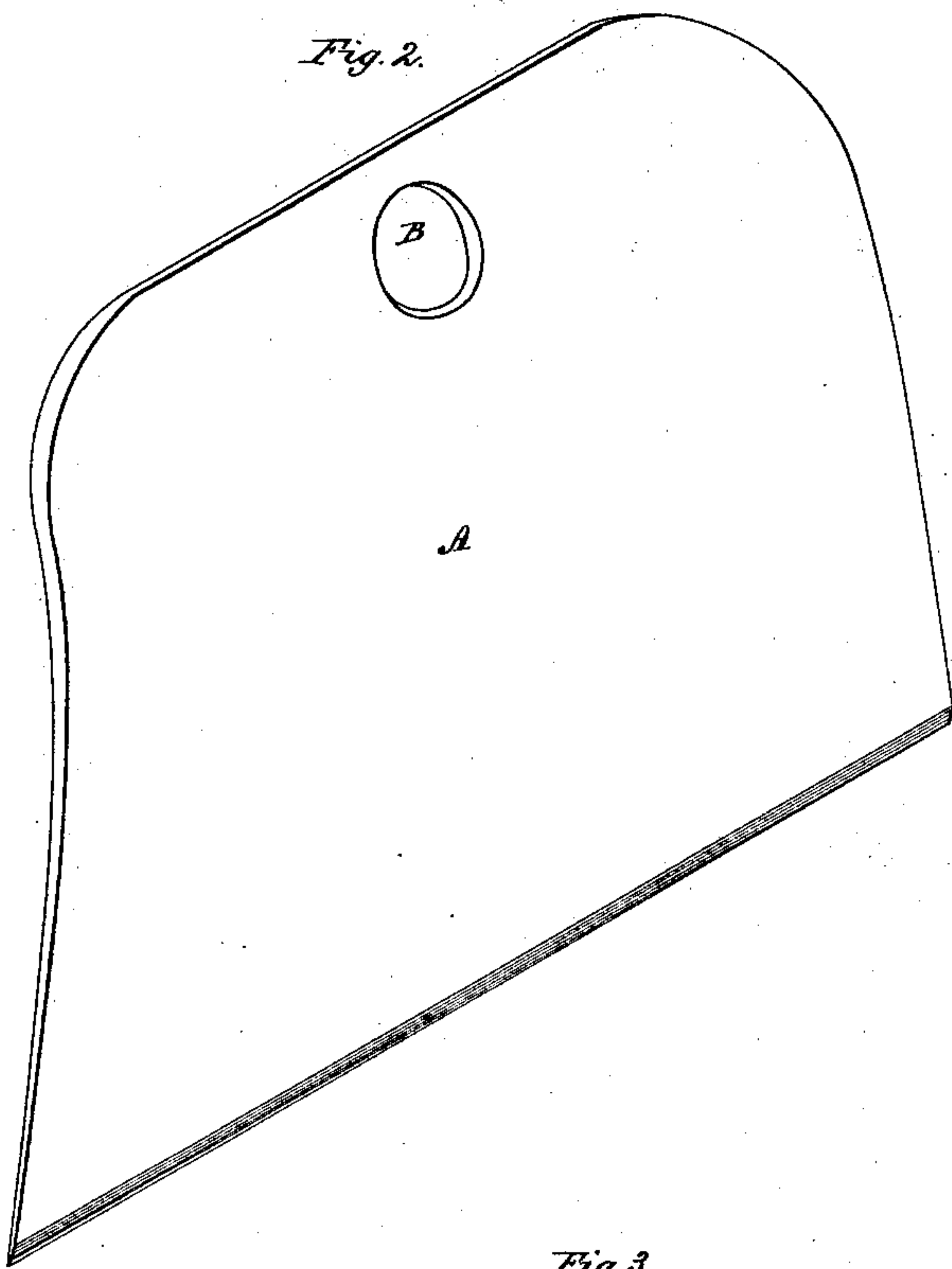
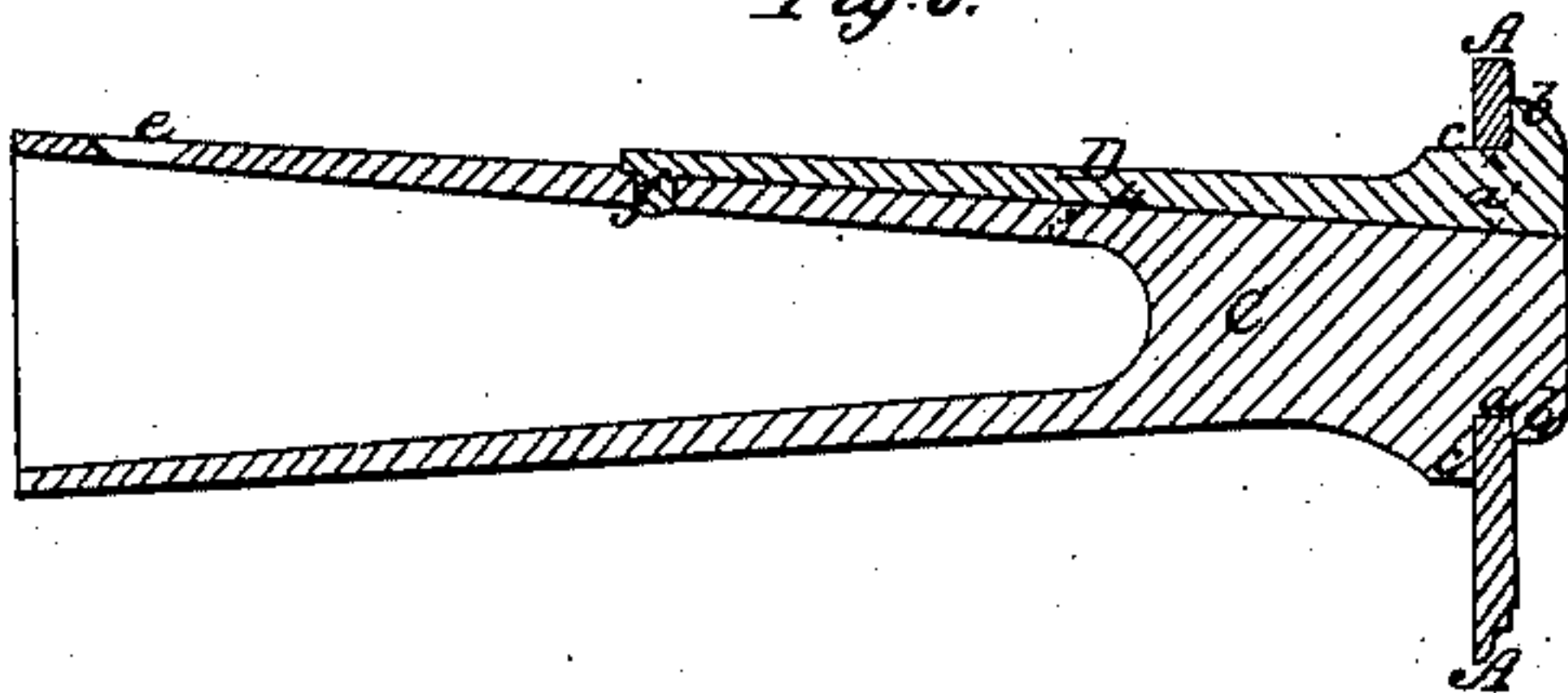


Fig. 3.



Witnesses:
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UNITED STATES PATENT OFFICE.

JOHN S. HALL, OF WEST MANCHESTER, PENNSYLVANIA.

IMPROVEMENT IN CONSTRUCTION OF HOES, RAKES, &c.

Specification forming part of Letters Patent No. **41,503**, dated February 9, 1864.

To all whom it may concern:

Be it known that I, JOHN S. HALL, of West Manchester, in the county of Allegheny and State of Pennsylvania, have invented certain new and useful Improvements in the Manner of Constructing Hoes, Rakes, &c., so as to facilitate their attachment to the handles thereof; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, making a part of this specification, in which—

Figure 1 represents the socket and key detached. Fig. 2 represents the blade of a hoe; and Fig. 3 represents a longitudinal section through the socket, key, and blade as they appear when put together and secured.

My invention consists in holding or securing a hoe or rake to a socket or tang by means of a collar and key, as will be hereinafter explained.

A represents the blade of a hoe, which has an oval or oblong hole, B, punched through it.

C is a socket, which may be made out of cast or malleable iron, or of wrought iron or steel. Near the end of the socket there is formed a groove, *a*, wide enough to receive the blade, and on each side of the groove there is a collar, *b c*, which also bears against the blade, the groove between them being of the same width as the hoe-blade has of thickness. The end *b* of the socket is of an oblong form, so that it may in one position be readily inserted in the hole B of the blade, and when so inserted and turned a quarter of a revolution the collars *b c* and the groove *a* will take in the blade and bind against it. The top of the collars and the top of the socket are dressed off, as shown at 1 2 3, Fig. 1, to make a place for a key, which, when inserted, firmly holds the hoe-blade to the socket.

At or near the end of the key-seat on the socket there is a hole, *d*, punched to receive a bit, which is formed on the key, and at the extreme end of the socket there is a hole, *e*, for a pin or screw to go in to hold the socket to the handle.

The key D may be cast or wrought, and of iron or steel, and when in its place fills up the cutaway portion of the socket, and not only tends to hold the blade to the socket, but prevents it from turning in its seat. The key has upon it a portion of the collar *b* and a portion of the collar *c*, or what may be called "continuations" of the collars *b* and *c*; but, instead of a groove between the collars, it has a flush portion, *a'*, which occupies the difference in space that there is between the long and short diameters of the oblong hole B, and which it and the neck under the groove *a* is designed to fill. The flat portion 4 of the key rests upon the seat 3 on the socket and the teat of projection *f* enters the hole *d* in the socket C, which secures everything tight in its place.

To attach the blade to the socket, insert the end of the socket in the hole B, then turn the socket a quarter of a revolution. Then slip in the key D and let its projection *f* spring into the hole *e*, and all is secure. To take off the blade from the socket, raise up the end of the key D until its projection *f* is clear of the hole *e*, and then start the key back by a tap upon its end, draw it clear out, and turn the socket backward a quarter of a revolution, and it will then slip out of the hole in the blade.

I have described this fastening in connection with a socket only. It can be as readily used in connection with a tang as with a socket, and I so contemplate using it.

Having thus described my invention, what I claim is—

Fastening a hoe or rake to a socket or tang by means of the collars and groove on the latter, and an oval or oblong opening in the former, in connection with a key to hold them together, substantially in the manner herein described and represented.

JOHN S. HALL.

Witnesses:

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