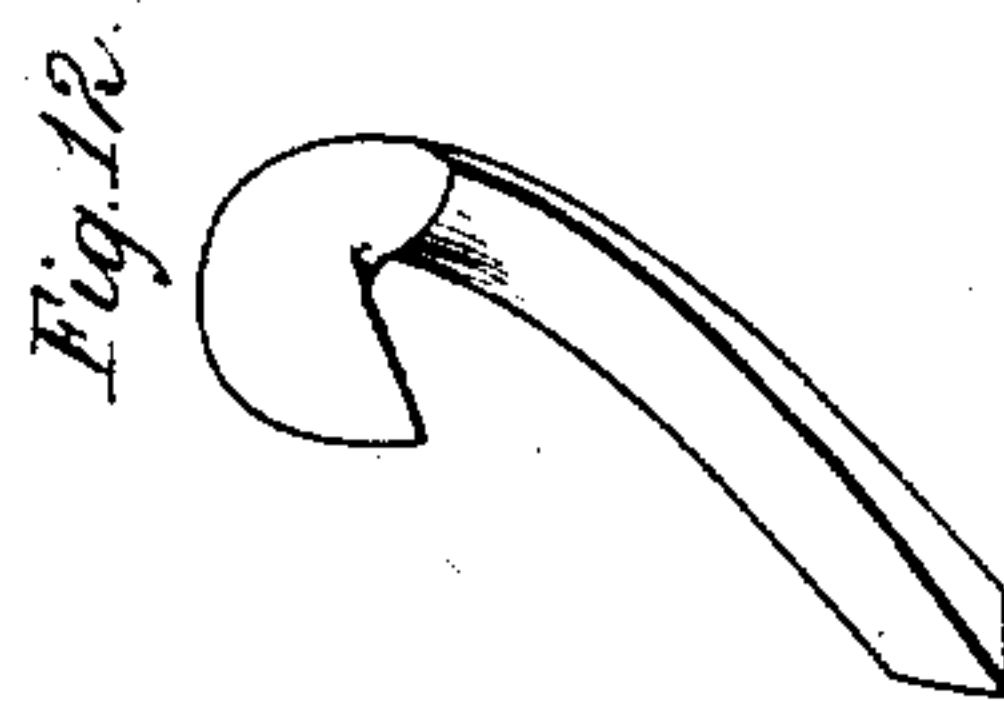
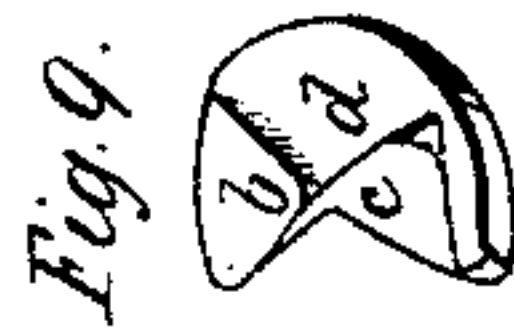
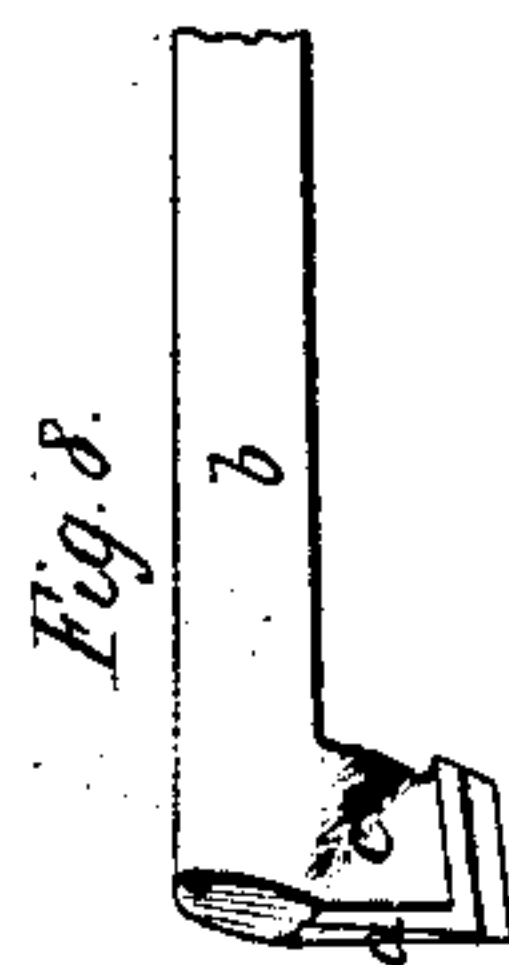
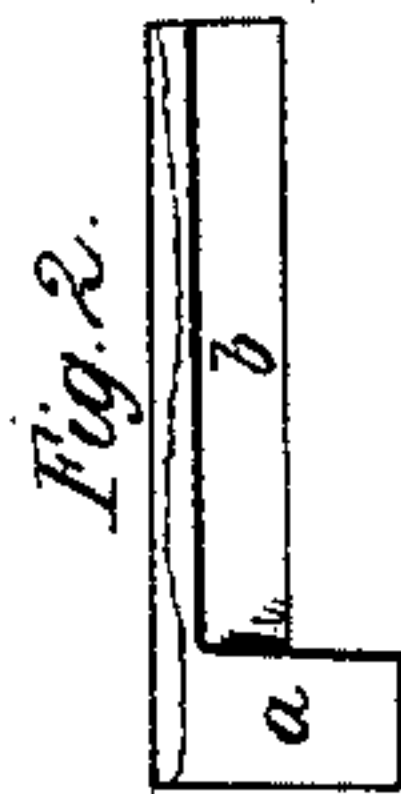
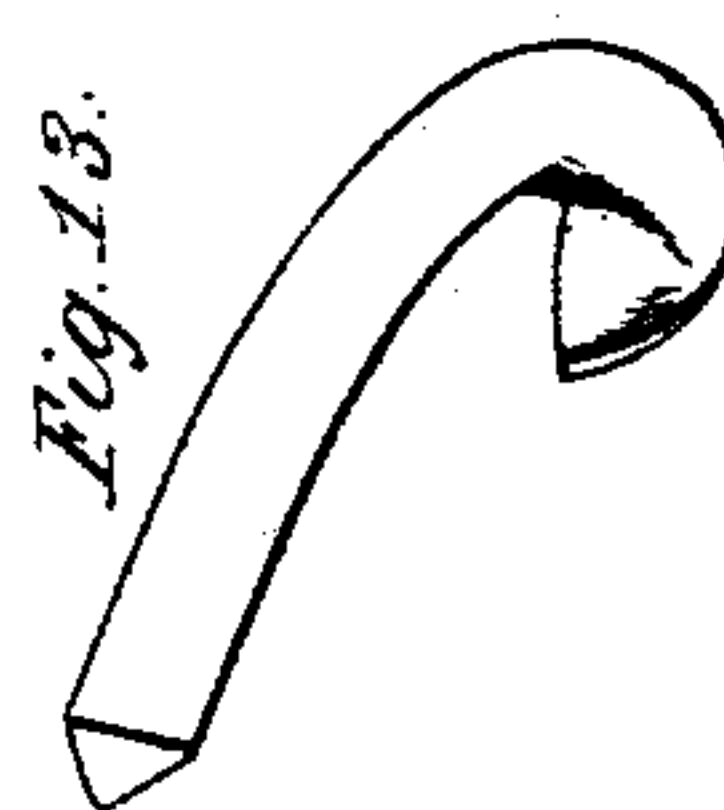
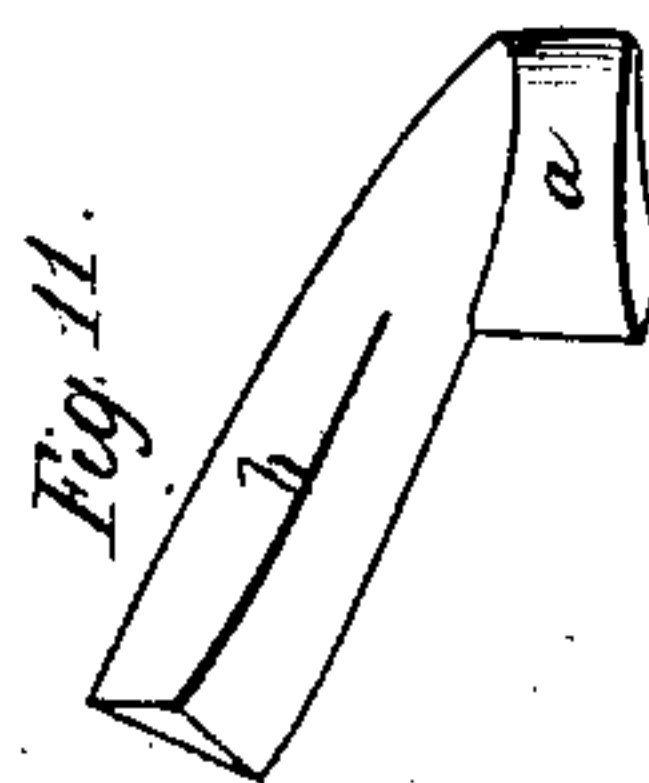
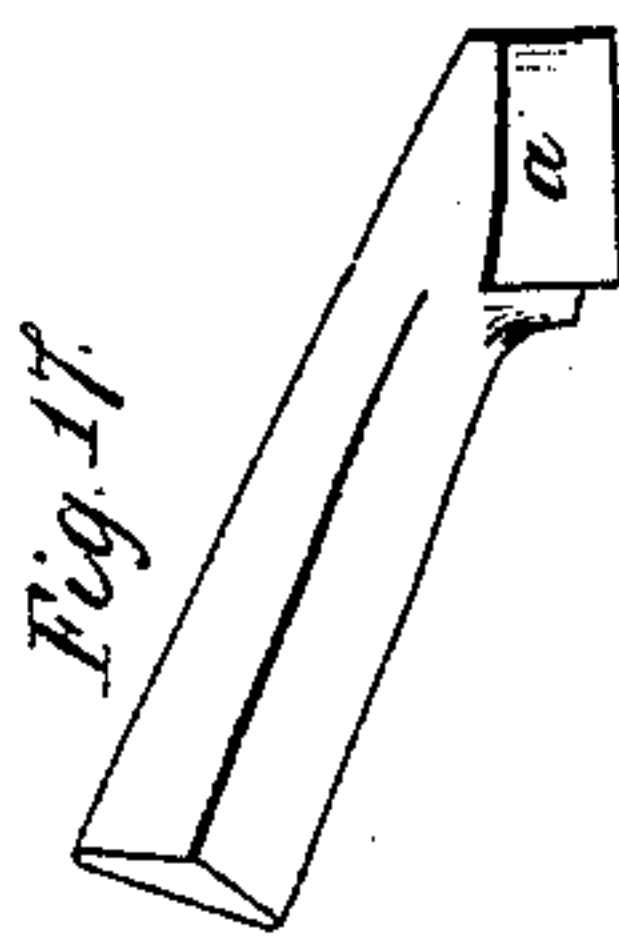
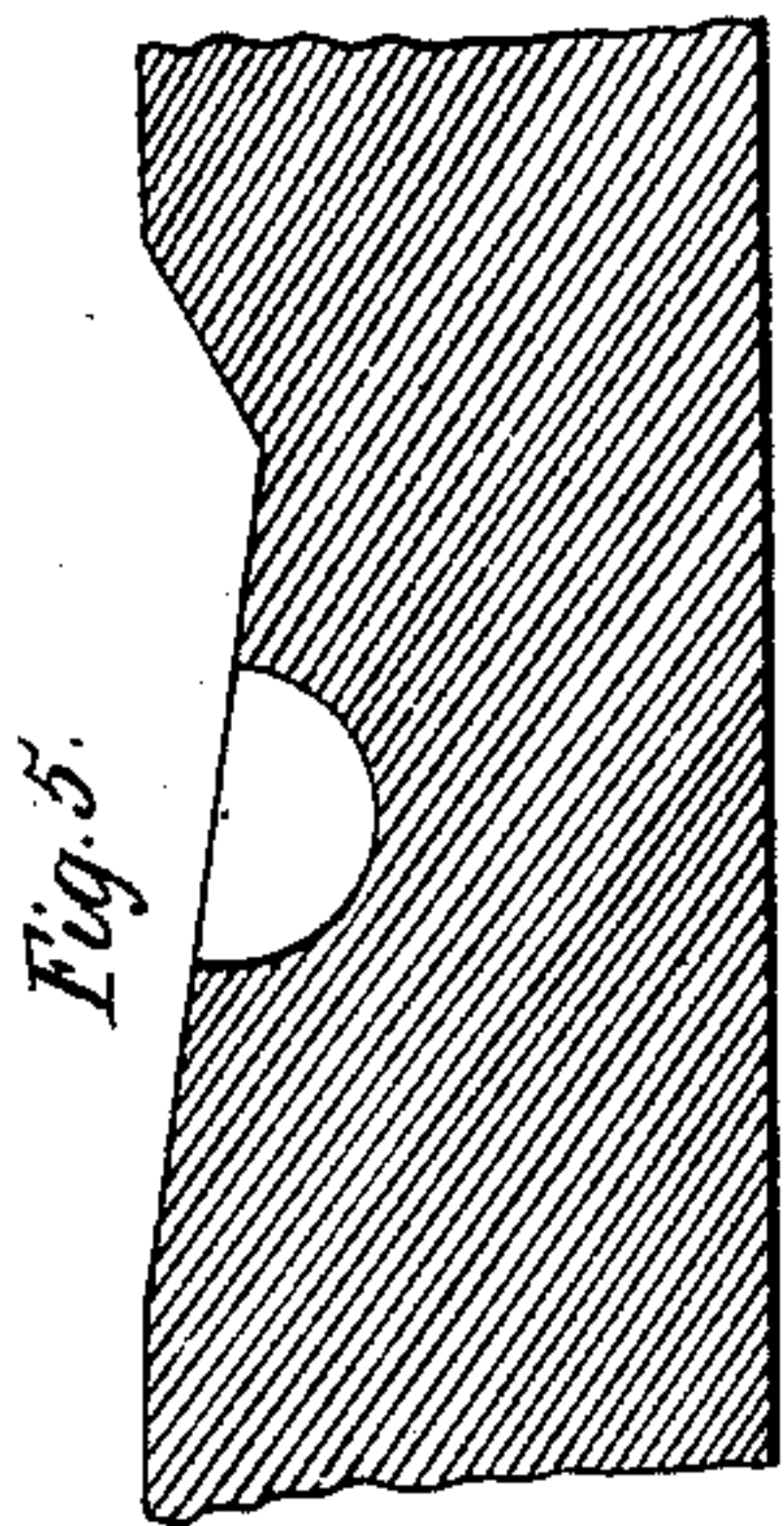
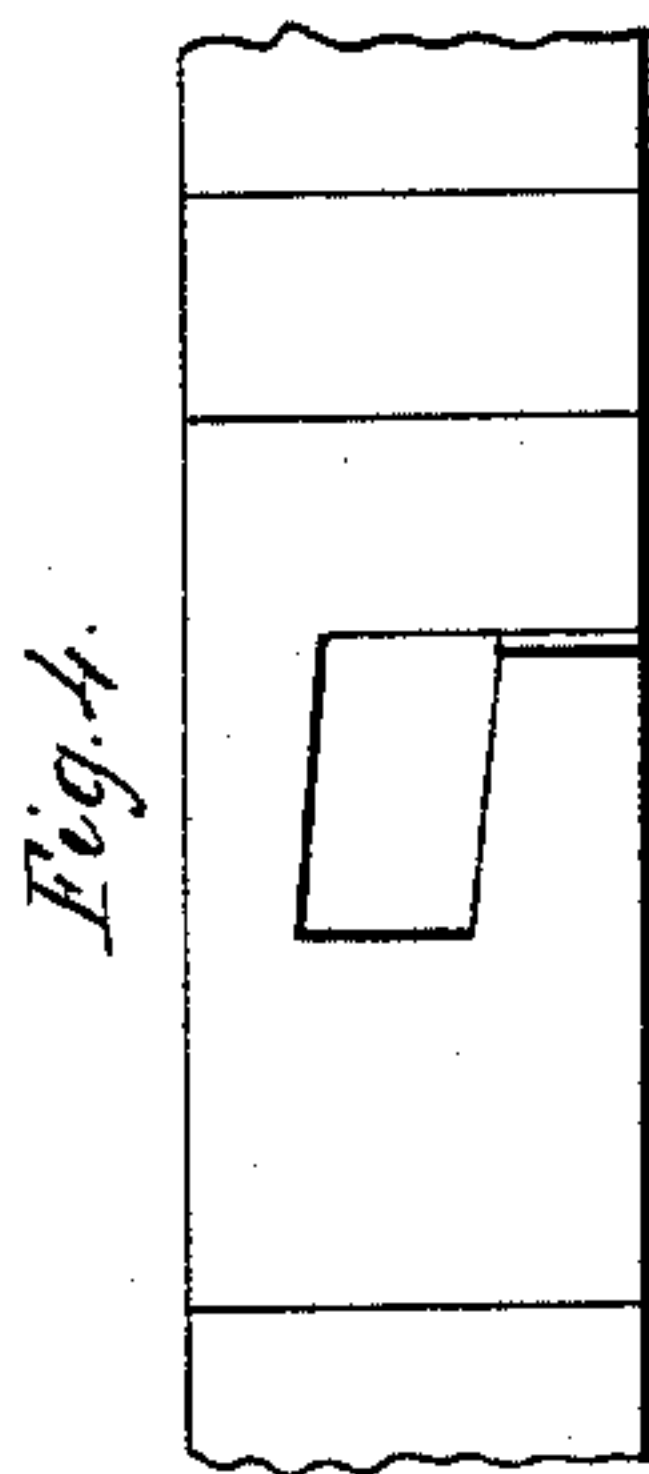
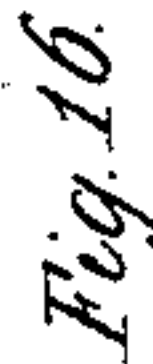
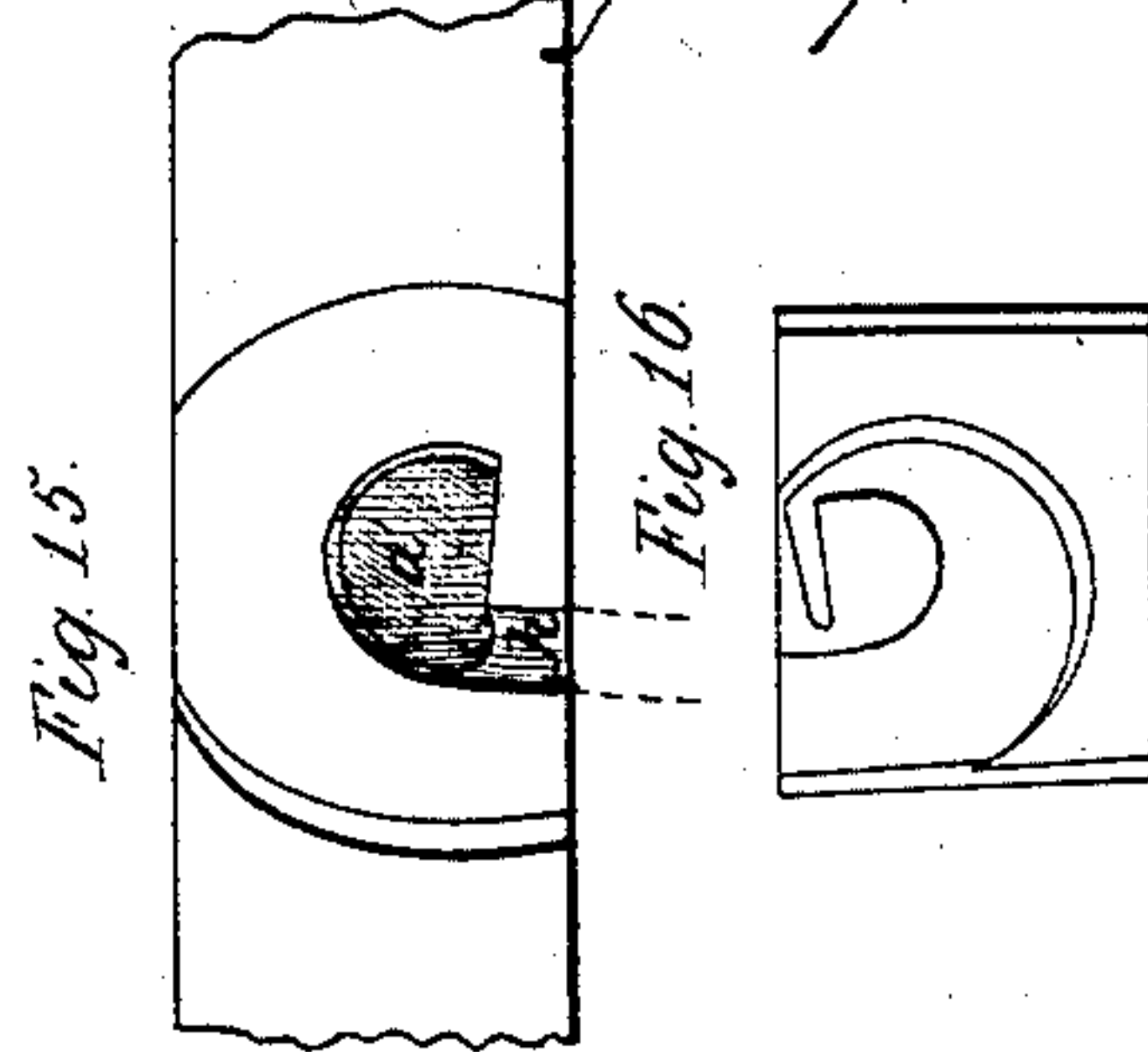
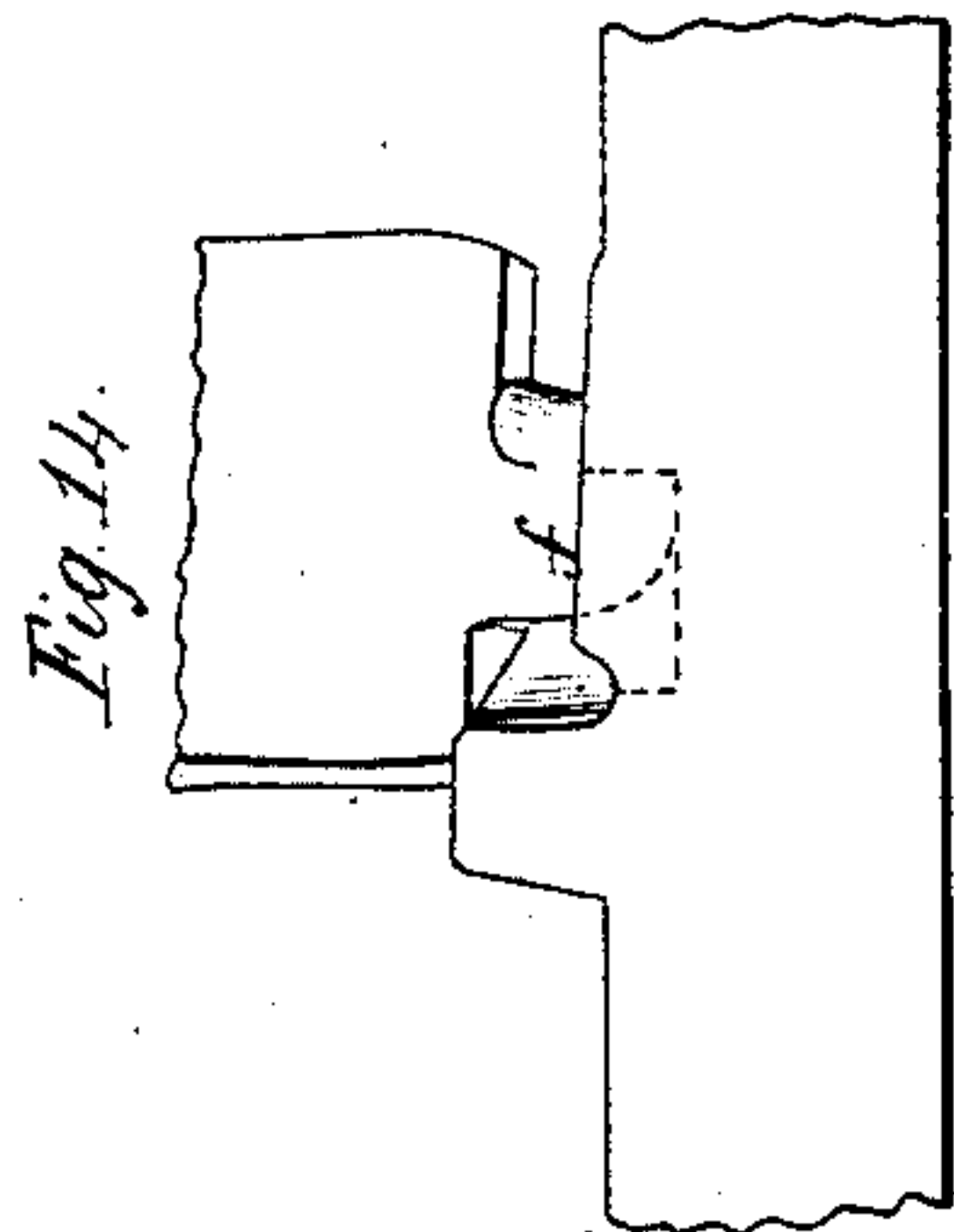
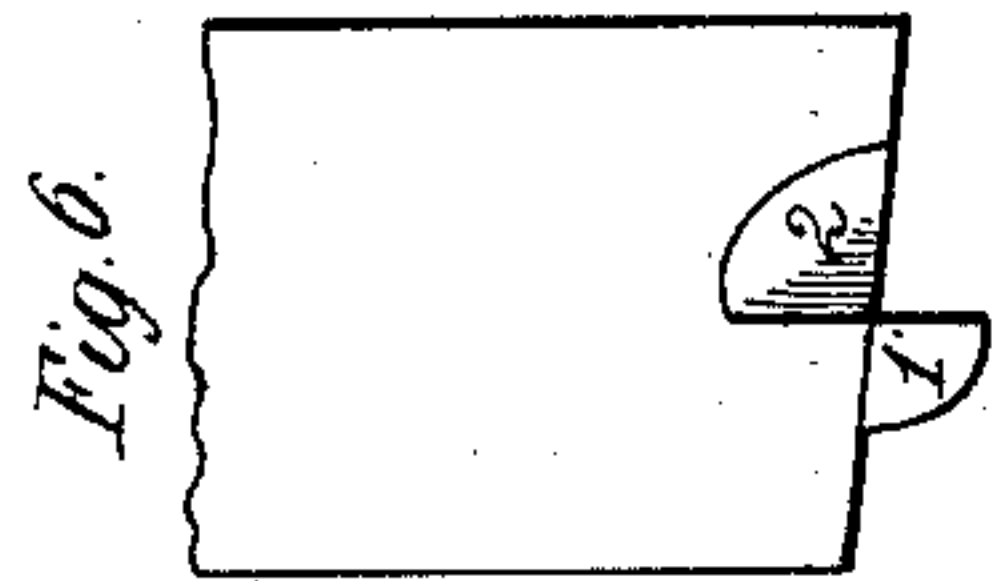
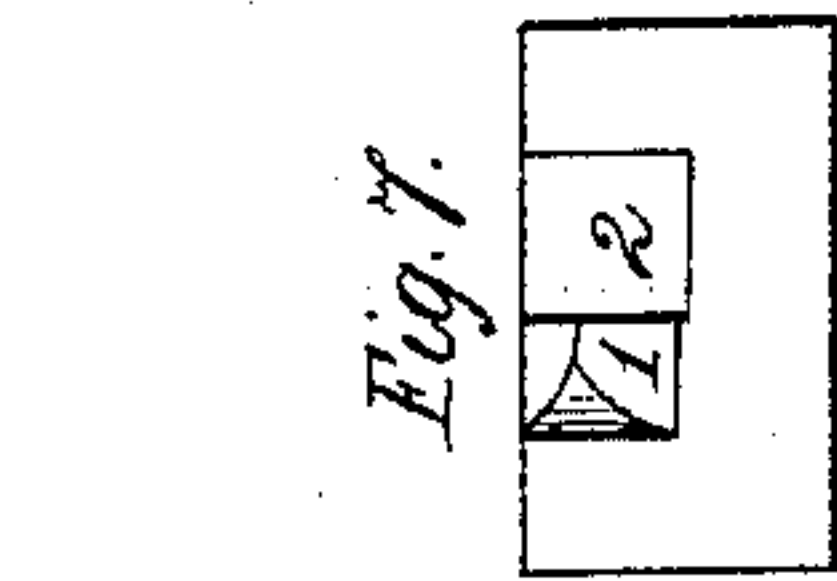
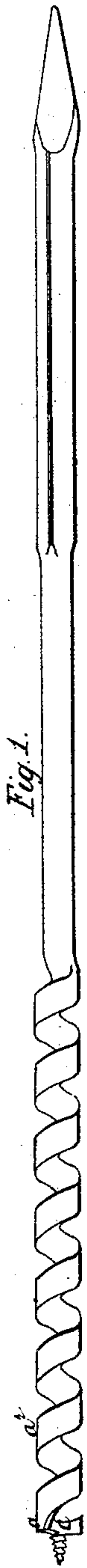


E. L'Hommedieu,

Making Augers,

N^o 11,613.

Patented Aug. 29, 1854.



UNITED STATES PATENT OFFICE.

EZRA L'HOMMEDIEU, OF CHESTER, CONNECTICUT.

DIE FOR MAKING AUGERS.

Specification of Letters Patent No. 11,613, dated August 29, 1854.

To all whom it may concern:

Be it known that I, EZRA L'HOMMEDIEU, of Chester, in the county of Middlesex and State of Connecticut, have invented a new and useful Improvement in Dies for Manufacturing Spiral-Twist Augers; and I do hereby declare that the same is fully described and represented in the following specification and the accompanying drawings, letters, figures, and references thereof.

In the kind of auger to the manufacturing of which my invention is applicable is represented in side view in Figure 1. The lower end of the spiral twist, a^2 , is provided with what is usually termed the head, a ; which head may be made either with or without a conical screw nib. This head as heretofore made has had its hollow or part, c , partly formed by a male die. When the blank for an auger was first made it was customary to forge it with the head, a , standing at or about at right angles to the shank, b , as seen in side view in Fig. 2, and in end view in Fig. 3, of the aforementioned drawings. In this form it was laid in a female die (shaped as seen in top view in Fig. 4, and in longitudinal section in Fig. 5,) and by means of a male die (formed as seen in side view in Fig. 6, and in bottom view in Fig. 7,) it received the form as shown in side view in Fig. 8, and in end views in Figs. 9, and 10.

The part, c , of Fig. 9, was formed by the part, 1, of Figs. 6, and 7, while the shank, b , entered the recesses, 2, of such figures. This did not form the whole of the hollow or recess of the auger head as it left what was below the shank or the part, d , to be subsequently removed by a file or chisel.

The purpose of my present invention is to form the whole of the hollow of the head, viz, not only that by the side of the shank, but under it, at one operation by improved dies, and besides this to form the head on the shank so that the shank shall stand in the proper relation or angle to the head for direct application to the twisting machine. When the dies hereinbefore described were employed, the head before the shank could be applied to the twisting mandrel had to be bent down to the proper angle with the shank or so as to stand in relation to it as seen in Figs. 11, 12, and 13, the former of which is a front view of it, while the other

two respectively represent bottom and top views of it.

In Fig. 14, I have exhibited a front elevation of the two improved dies as used by me. Fig. 15, is a top view of the lower or male die, while Fig. 16, is an underside or bottom view of the upper or female die of the pair.

The piece of metal to have its head formed by the said dies is forged out in the form as represented in Figs. 17, and 18, the former being a side and the latter a top view of it. When so formed its head, a , is laid in the sunken recess or chamber, a' , of the female die and with its shank, b , projecting (as shown by dotted lines in Fig. 15,) through a passage, h , leading out of such chamber; the bottom surface of the head, a , being made to rest on the bottom of the chamber, the sides of the chamber completely inclosing the sides of the head. The male die is arranged so that its recess former, f , shall pass down into the chamber, h , and when it is forced down upon the metal blank it forms the whole of the hollow or recess of the head at once, there being no necessity of any part of it being formed by chipping or filing as in the old way, the rest of the recess and head being simply subjected to the file for the purpose of being finished or worked up smooth.

In my improved dies, I have arranged the shank entrance, h , of the matrix or die chamber, a' , so that it shall stand with respect to the bottom of the mold at the turning angle of inclination to the shank and bottom of the head. The male die is arranged to work downward perpendicularly to the bottom surface of the chamber, a' , (Fig. 15). This arrangement constitutes my improvement, as it affords me the opportunity of making the auger to much better advantage than by the old way, and the old construction of dies as above described.

I am aware that the swaging of the lip and head of an auger by dies is not new. When employed they have not formed the whole of the hollow or recess of the auger head, as what was below the shank, or the part d , afterward had to be removed by a file or chisel.

I therefore do not claim the mere employment of dies in such way to swage out the

lip and head of an auger and a part only of the recess or cavity of the head but,

What I claim as my invention is—

5 The above described peculiar arrangement of the shank entrance of the matrix, that face of it against which the hollow surface of the auger head rests and is formed, and the male die, which forms the hollow or recess of the head, the same enabling me to
10 make an auger head not only with the whole of its recess stamped or formed by

dies, but having its shank at the proper turning angle with respect to it as described.

In testimony whereof, I have hereunto set 15 my signature this twenty seventh day of May, A. D. 1854.

EZRA L'HOMMEDIEU.

Witnesses:

WALDO P. VINAL,
JULIAN L'HOMMEDIEU.