

A. R. Reese.

Harvester Cutter.

N^o 17894

Patented Jul. 28, 1857.

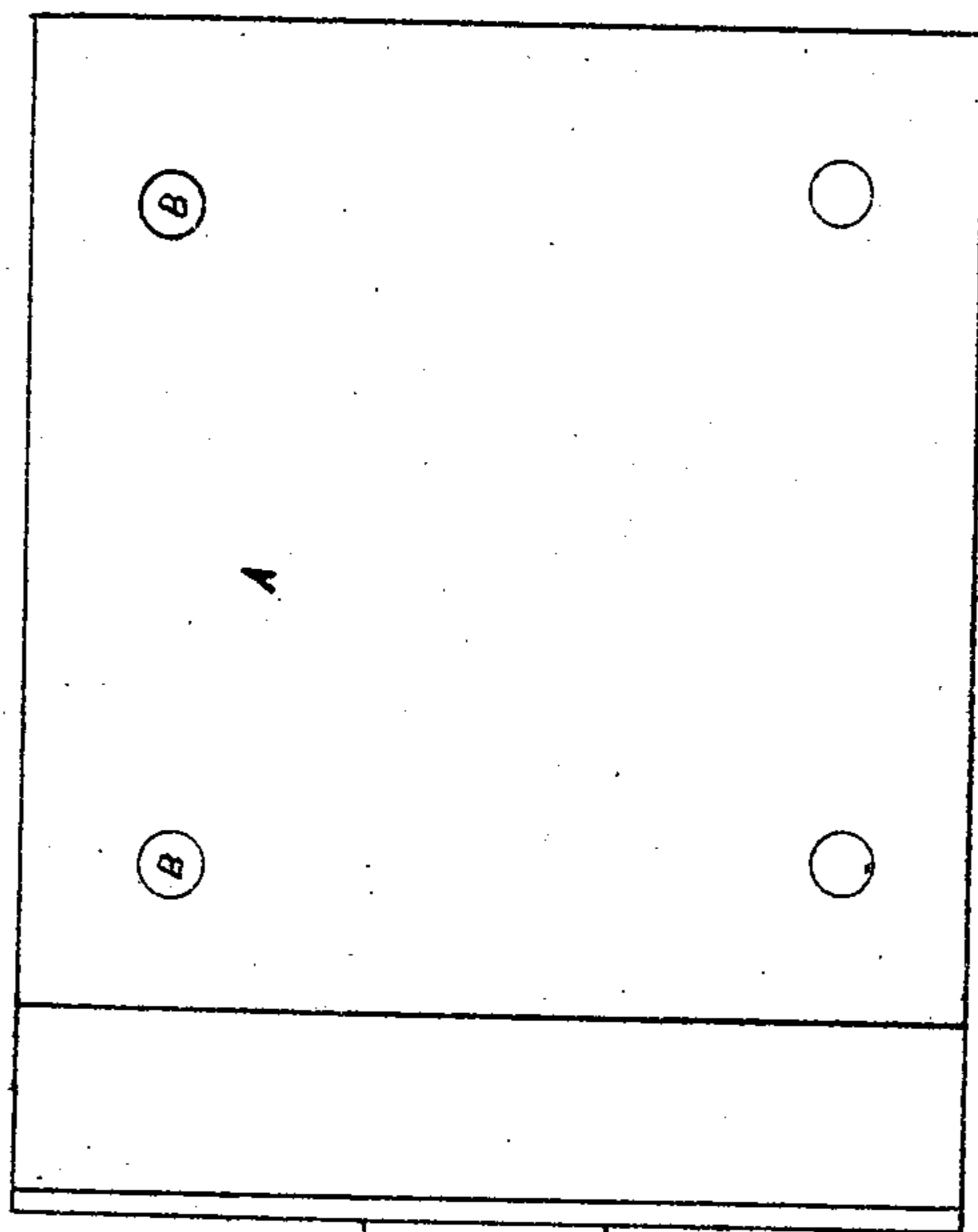


Fig. 1

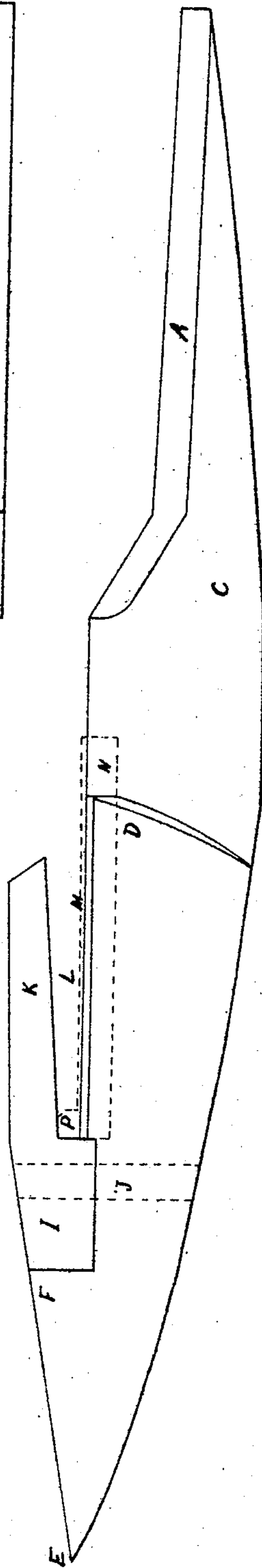
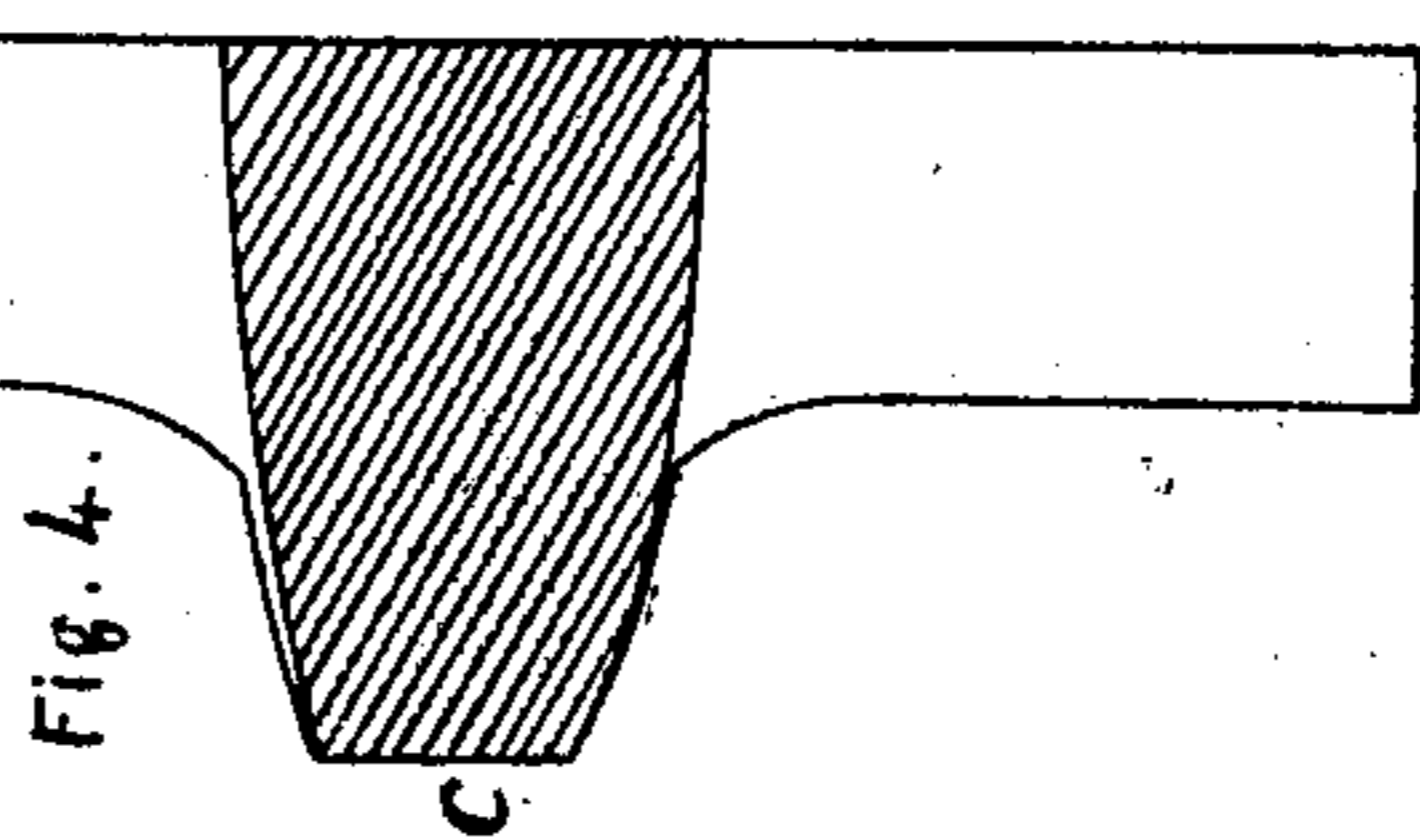
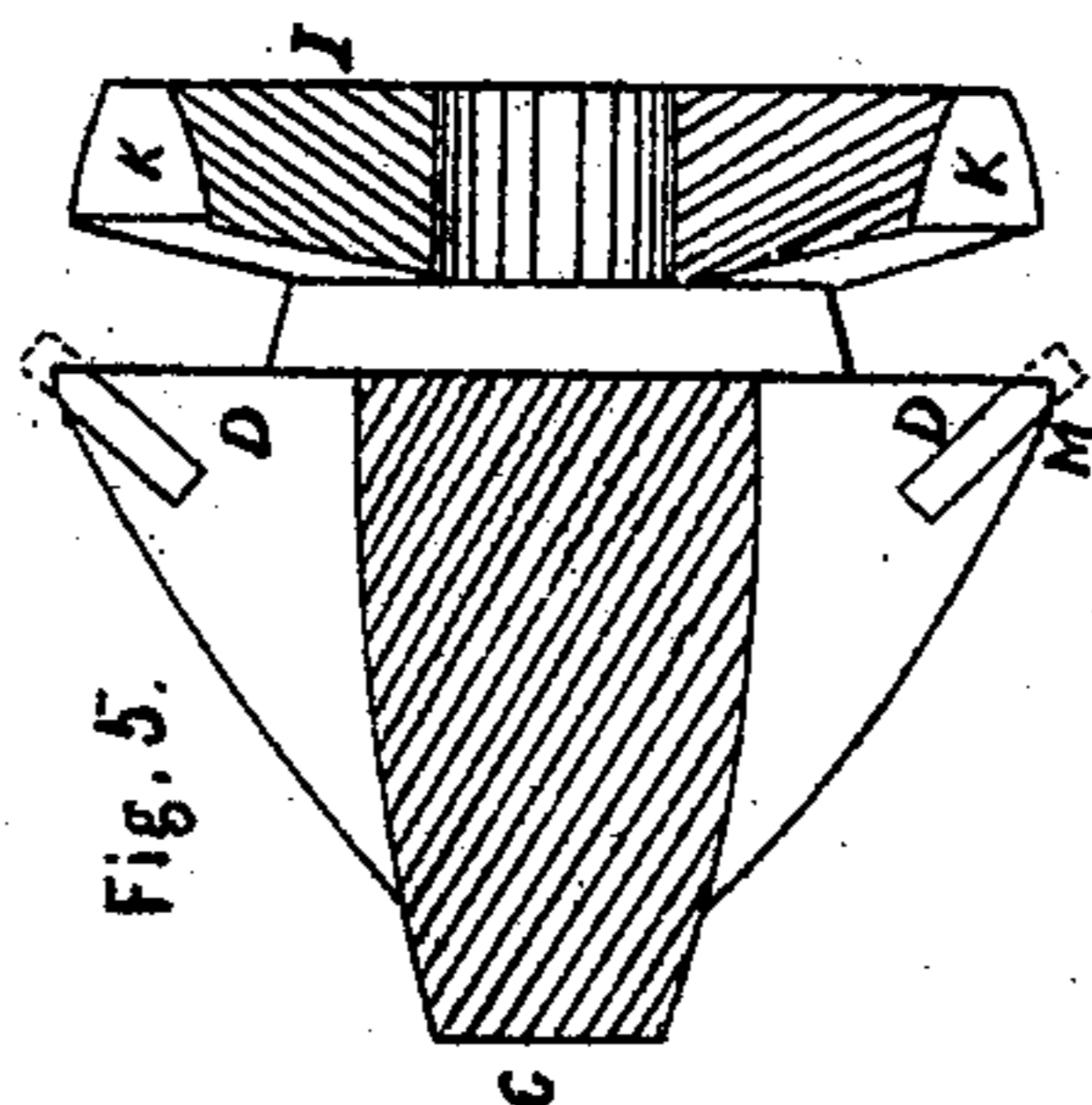
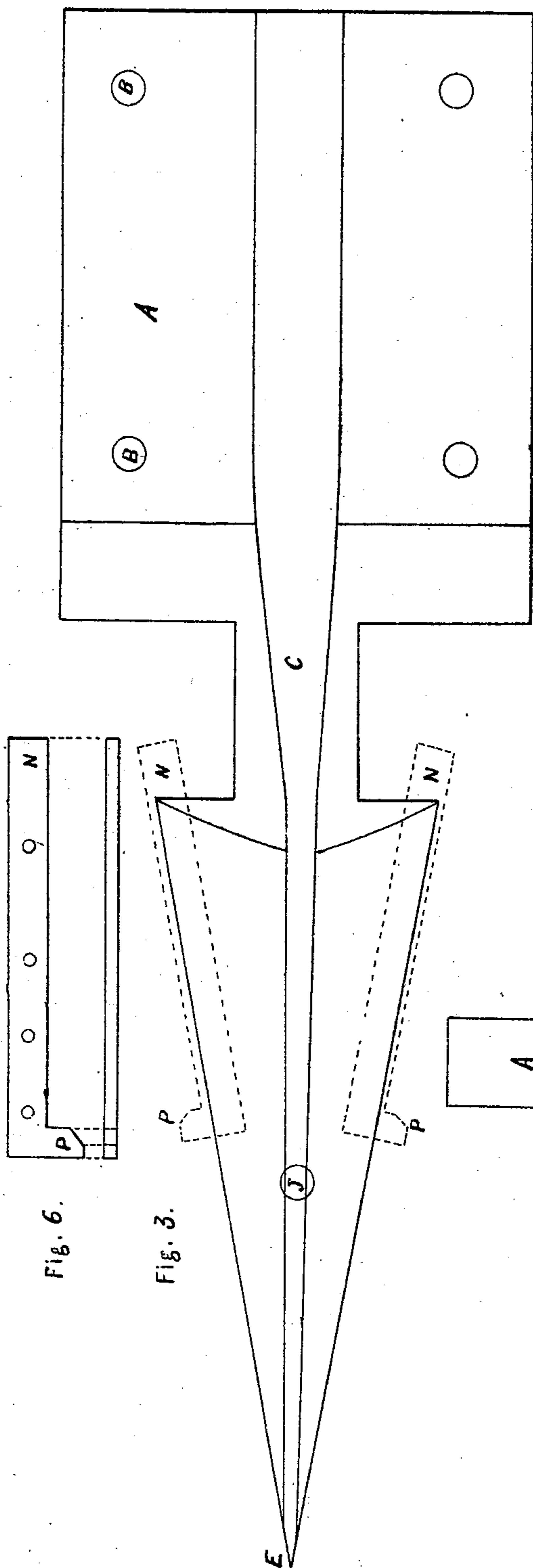


Fig. 2.

A. R. Reese.
Harvester Rake.
N^o 17894 Patented Jul. 28, 1857.



UNITED STATES PATENT OFFICE.

ADAM R. REESE, OF PHILLIPSBURG, NEW JERSEY.

IMPROVEMENT IN GUARD-FINGERS FOR HARVESTERS.

Specification forming part of Letters Patent No. 17,894, dated July 28, 1857.

To all whom it may concern:

Be it known that I, ADAM R. REESE, of Phillipsburg, in the county of Warren and State of New Jersey, have invented a new and useful Guard-Finger for Harvesting-Machines; and I do hereby declare that the same is described and represented in the following specification and drawings.

To enable others skilled in the art to make and use my invention, I will proceed to describe its construction and use, referring to the drawings, in which the same letters indicate like parts in each of the figures.

Figure 1 is a plan or top view of the guard-finger. Fig. 2 is an elevation. Fig. 3 is a plan of the under side. Fig. 4 is a section to the right of the line $z z$, Fig. 1. Fig. 5 is a section to the left of the line $z z$, Fig. 1. Fig. 6 is a plan and elevation of one of the pieces of steel inserted in the mold when the guard-finger is cast, so that the melted iron will run upon and around it.

The nature of my invention consists in the peculiar mode of making a cast or malleable iron guard-finger with steel cutting-edges.

The guard-finger for harvesting-machines which I have invented may be made in the form shown in the accompanying drawings, or of such other form as will answer the purpose; but I prefer to make it with a broad flat shank, A, perforated with a proper number of holes, B B, for the screws to fasten it to the finger-bar. The rib C on the under side of the shank A projects below the shank, as shown in Fig. 2, and extends forward to the point E. That portion of the finger which extends forward from the shank is enlarged at D D on the upper surface about one and a half inch from the shank, as shown in the drawings, and tapers gradually from D D to the point E. It is also enlarged on the upper side gradually from the point E to the shoulder F, as shown in Fig. 2, which enlargement has a score, G, in it for the toe H of the top piece, I, which top piece is made in the form shown in Figs. 1 and 2, with two arms, K K, extending back over and nearly parallel to the steel-cutting-edges M M, so as to prevent the sickle-teeth from bending the stalks of the crops cut over the edges M M, and compel the sickle-teeth, in conjunction with the edges M M, to sever the stalks and cut them off with facility. This top piece, I,

is fastened to the finger by the rivet J, as shown in the drawings.

I will now describe the best method known to me of making the guard-finger which I have invented, to wit: First make a pattern of wood or some other material of the finger and top piece in the form preferred, so that each piece can be molded separately and with convenience in a two-part flask. The enlargements or projections D D are grooved, so as to receive the pieces of steel M M, (see plan and elevation, Fig. 6, and cross-section, Fig. 5,) and hold them in a proper position while the sand is rammed around them to form the mold. The ends N N and spurs P P project from the pattern, as shown by dotted lines in Figs. 1, 2, and 3, so as to form places in the mold for themselves to be replaced in the mold after the pattern is withdrawn, so that the mold will hold them in the position required when the melted metal is poured into the mold and runs around them, entering the indentations shown in the plan Fig. 6, so as to hold them fast and firm when the metal cools upon them. After the finger and top piece are cast they may be converted into malleable iron by some one of the well-known processes in common use for that purpose, and finished by cutting off the spurs P P and the ends N N, and grinding or filing off the steel upon each side and on the top of the finger, and the top can be easily ground or filed a little hollow or lower than the edges, as the iron between the edges is softer than the steel. The top piece, I, should be fitted on and the hole bored for the rivet J and the holes B B in the shank, when that portion of the finger containing the pieces of steel may be heated and dipped in water to harden or temper the steel edges. The top piece, I, may now be riveted on, when the finger will be complete, ready to be fastened to the finger-bar of the harvesting-machine.

The guard-finger which I have invented may be made very cheap, while at the same time it has hard steel edges, to aid in cutting the crops, with soft iron between the steel edges, which can be easily filed or ground lower than the edges, so as to leave them prominent for the sickle-teeth to act in conjunction with, so as to cut the crops with facility and with the expenditure of a small amount of power. Besides, it is found that the iron is so much softer than

the steel edges that the sickle-teeth in passing over it wear it hollow, so as to keep the steel edges always prominent and in good cutting order.

It will be observed that the steel edges M M are placed oblique to each other, as fully shown in Fig. 5, thereby permitting the edges to be sharpened with greater facility, and at the same time make the guard-finger last much longer than if they were placed flat upon the finger. Besides, it permits the edges to be readily sharpened both at once by grinding the top of the finger upon a stone.

Having thus described my improved guard-finger for harvesters, I will state that I do not wish to be understood as claiming broadly the

use of steel plates or cutting-edges as applied to cast or malleable iron guard-fingers, for I am aware that such use is old; but

What I claim as new, and desire to secure by Letters Patent, is—

The combination, with a cast or malleable iron guard-finger, of the steel plates or cutting-edges M M, when the same are united to the finger in the peculiar manner above described, and arranged to operate in relation to each other and to the cutters, as fully shown in Fig. 5, for the purposes herein set forth.

ADAM R. REESE.

Witnesses:

WILLIAM HAYDEN,
W. SCOTT JOHNSTON.