

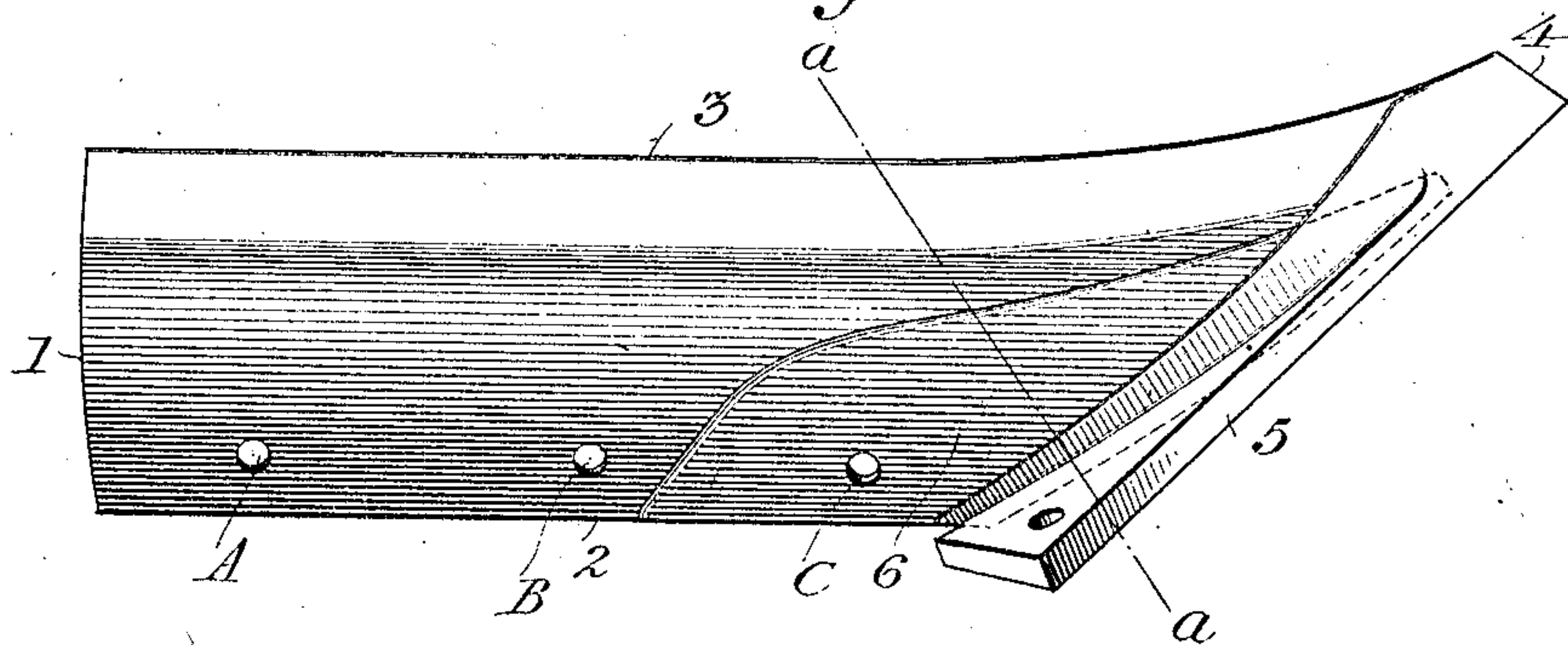
No. 860,308.

PATENTED JULY 16, 1907.

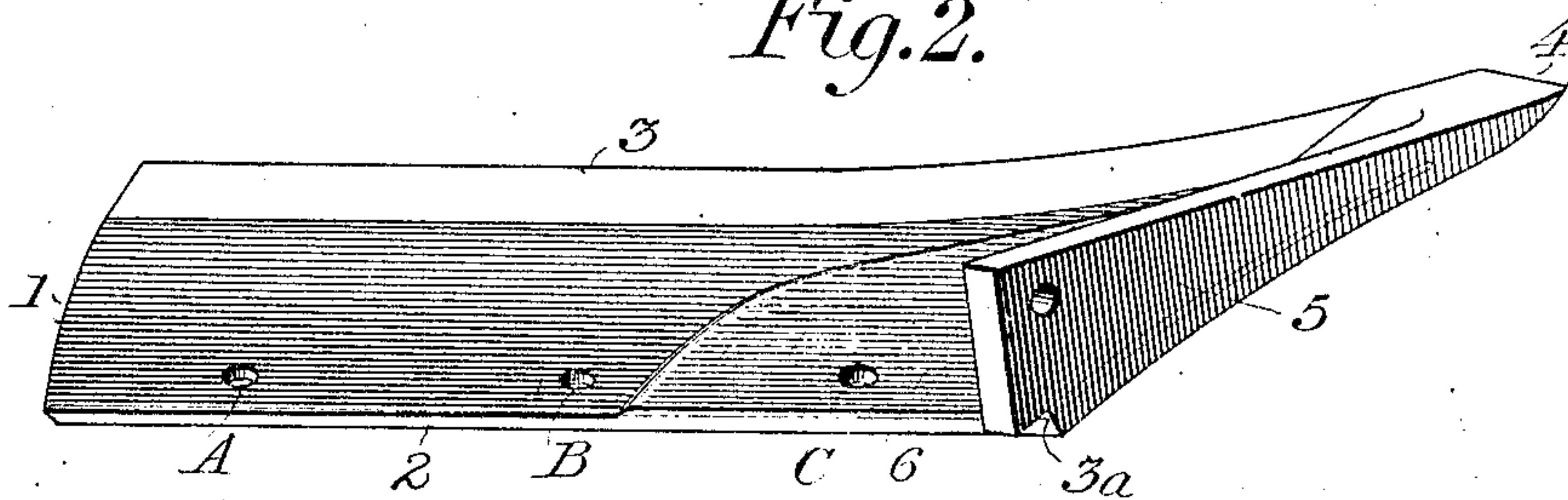
A. LINDGREN.  
PLOWSHARE.

APPLICATION FILED MAR. 23, 1907.

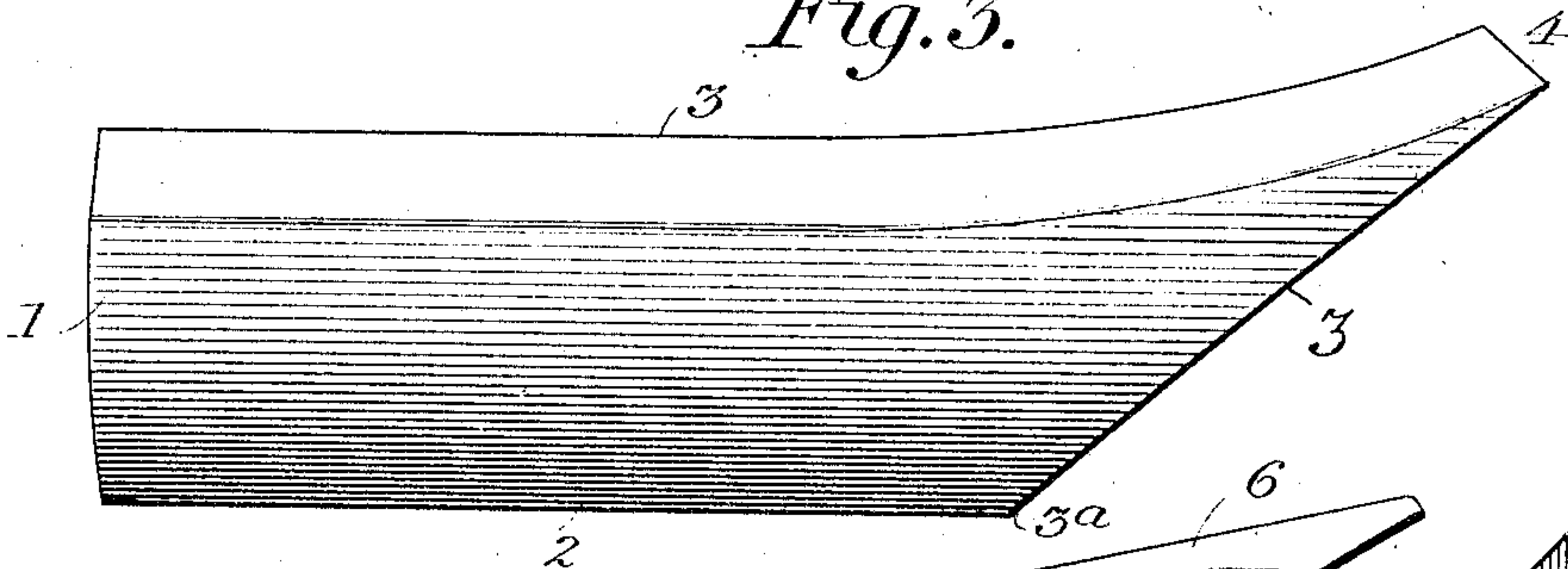
*Fig. 1.*



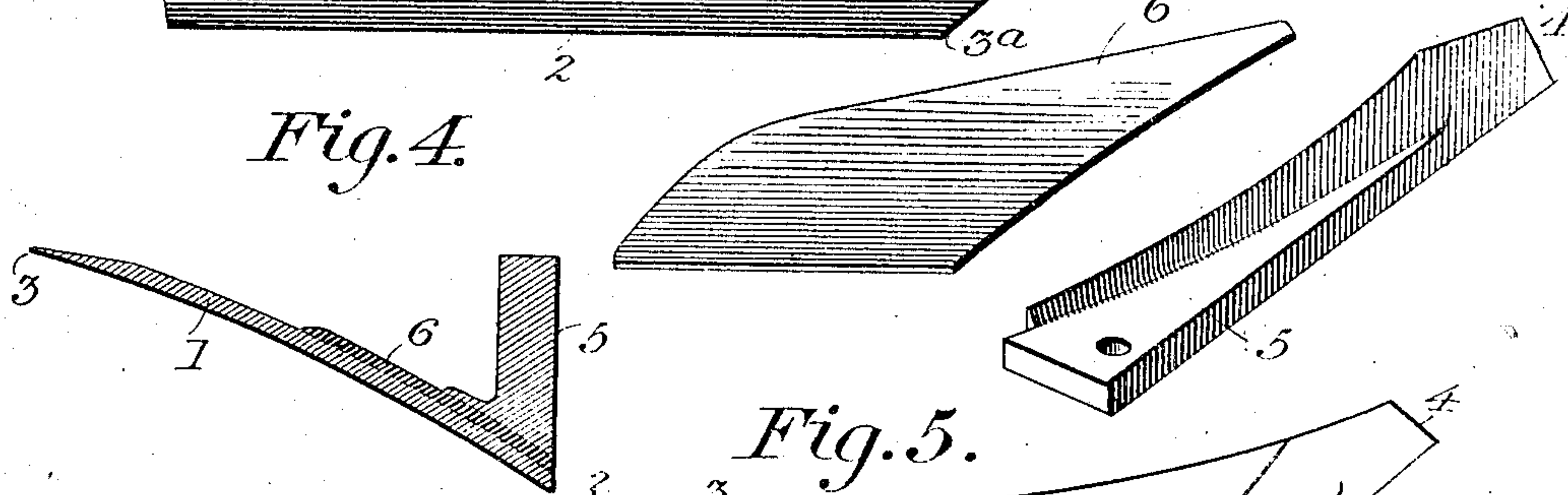
*Fig. 2.*



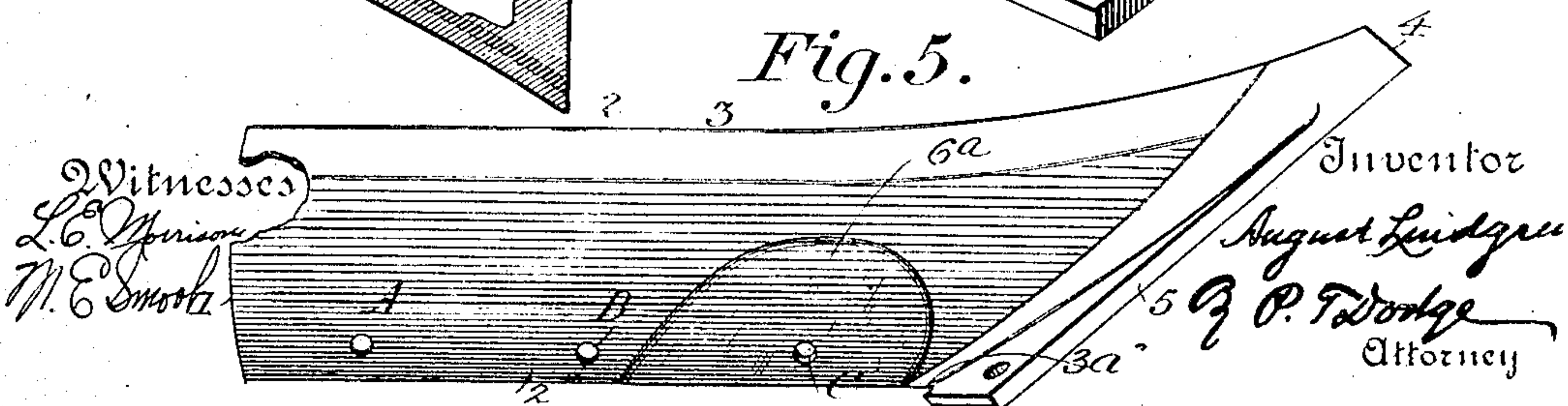
*Fig. 3.*



*Fig. 4.*



*Fig. 5.*



Witnesses  
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# UNITED STATES PATENT OFFICE.

AUGUST LINDGREN, OF MOLINE, ILLINOIS, ASSIGNOR TO MOLINE PLOW COMPANY, A CORPORATION OF ILLINOIS.

## PLOWSHARE.

No. 860,308.

Specification of Letters Patent.

Patented July 16, 1907.

Application filed March 23, 1907. Serial No. 364,096.

*To all whom it may concern:*

Be it known that I, AUGUST LINDGREN, of Moline, county of Rock Island, and State of Illinois, have invented a new and useful Improvement in Plowshares, of which the following is a specification.

Plowshares, such as are now extensively used, are composed of a comparatively thin plate of high grade steel of a hard, brittle texture. This latter property, while necessary in order to insure proper wearing and scouring of the share, renders the latter extremely liable to breakage in use, this breakage usually occurring near and in rear of the point of intersection of the upper edge of the landside with the share. Furthermore, because of the hard brittle nature of the steel composing the share, more or less difficulty is encountered in the operation of welding the landside to the share.

My invention has for its objects to overcome, in a comparatively simple inexpensive manner, the above difficulties by strengthening the share at the point of greatest weakness, that is, at the point where breakage generally occurs, and at the same time, provide a relatively soft surface to which the landside may be readily welded.

To these ends the invention resides in welding to the under or reverse side of the hard metal share, a soft metal reinforcing section or patch of requisite extent or area to cover the surface of the share for a suitable distance aft of the point of intersection of the upper edge of the landside with the share—and preferably also forward of said point of intersection for some distance.

The invention further resides in the novel features of construction and combination of parts more fully hereinafter described.

In the accompanying drawings:—Figure 1 is a bottom plan view of a plow share having my invention embodied therein. Fig. 2 is a perspective view of the same looking at the under or reverse side. Fig. 3 is a plan view showing the share, reinforcing patch and landside section disconnected. Fig. 4 is a transverse section on the line *a-a*, Fig. 1. Fig. 5 is a bottom plan view of the share, showing the reinforcing patch in slightly different form.

Referring to the drawings:—1 designates the plowshare composed as usual of a thin plate of high grade steel, and of ordinary form, having an upper edge 2, to which the moldboard is attached, and an inclined forward cutting edge 3, terminating at its front end in a point 4, from which there extends rearwardly, on a line parallel with the line of draft, a landside 5 welded to the lower face of the share.

In accordance with the invention, there is welded to the under or reverse face of the hard steel share, preferably prior to applying the landside 5, an extended

reinforcing section or patch 6, composed of relatively soft steel, and of requisite area to extend over the surface of the share both forwardly and rearwardly of the point of intersection 3<sup>a</sup> of the upper edge of the landside with the share, that is, to be more specific, from a point near the longitudinal center of the upper edge 2, to a point adjacent the forward end of the landside, which latter is, after the application of the patch, welded over the same to the share.

In action, the patch serves to effectually strengthen the share by totally obviating or at least reducing to a minimum, liability of the share being broken in use, while at the same time, the specific location of the patch is such as to give the requisite strength and reinforcement at the point where breakage is, as has been demonstrated in practice, most liable to occur. Furthermore, the patch affords a relatively soft and thick surface to which the landside may be welded more readily than to the hard thin surface of the share, whereby the time, labor and expense incident to the operation in question is materially reduced, it being apparent that under the construction disclosed, and by the provision of the soft steel patch applied as explained, I not only effectually strengthen the share against breakage, but provide for convenient attachment of the landside and moldboard.

For the attachment of the moldboard to the share, it is usual in practice to form in the share near its upper edge, a number of bolt holes A B & C to receive fastening bolts by which the mold board is secured at its lower edge thereto. Customarily the forward bolt hole C is located adjacent to but back of the point of intersection of the upper edge of the landside with the share, which point of intersection is indicated by the numeral 3<sup>a</sup> in Fig. 1. In a share of this specific construction, the break or fracture occurs over this forward bolt hole, and to prevent such breakage the soft metal patch, applied in accordance with my invention, is extended over the point where this bolt hole is formed, preferably both fore and aft of and below the same, so as to reinforce and strengthen the share in the vicinity of the hole.

While I prefer to extend the soft metal patch far enough forward to underlie the landside, so that the latter may be welded on top of the patch at this point, this forward extension of the patch is not absolutely necessary, because the share could be thickened at this point by other means than the patch, and the latter would need only to extend over the region of the share where breakage usually occurs, that is back of the intersection of the upper edge of the landside therewith, or in the specific form of share here shown, just over the forward bolt hole, C. This modified form of my invention is illustrated in Fig. 5 where it will be seen that the patch 6<sup>a</sup> does not extend forward far enough to have the



landside welded to it, but terminates at or about the point where the upper edge of the landside intersects the share.

Having thus described my invention, what I claim is:—

1. A plowshare composed of hard metal, and having a soft metal reinforcing patch welded to its lower or reverse face, said patch being of an area to extend over the surface of the share rearwardly of the point of intersection of the upper edge of the landside therewith.

2. A plowshare composed of hard metal, and having a soft metal reinforcing patch welded to its lower or reverse face, said patch being of an area to extend over the surface of the share both forwardly and rearwardly of the point of intersection of the upper edge of the landside therewith.

3. A plowshare composed of hard metal, having a relatively soft metal reinforcing patch welded to its lower or reverse face, and a landside welded to the share over the soft metal patch, the latter being of an area to extend forwardly and rearwardly of the point of intersection of the upper edge of the landside with the share.

4. A plowshare comprising a body of high grade thin steel, and a reinforcing patch of relatively soft steel welded to the lower or reverse face of the share, and extending from its upper edge transversely furrowward, and both forwardly and backwardly of the point of intersection of the upper edge of the landside with the upper edge of the share; whereby the share is strengthened and thickened, thereby avoiding breakage and facilitating the attachment of the landside and moldboard.

5. The improved plowshare composed of hard steel having a soft metal reinforcing patch welded to its lower or reverse face, said patch being of an area to extend backward from the landside edge of the share adjacent the top edge, to a point back of the first bolt hole, and a landside welded to the share over the soft metal patch, thereby avoiding breakage and facilitating the attachment of the landside.

In testimony whereof I hereunto set my hand this 2nd day of March, 1907, in the presence of two attesting witnesses.

AUGUST LINDGREN.

Witnesses:

L. C. BLANDING,  
C. A. BARRISTER.