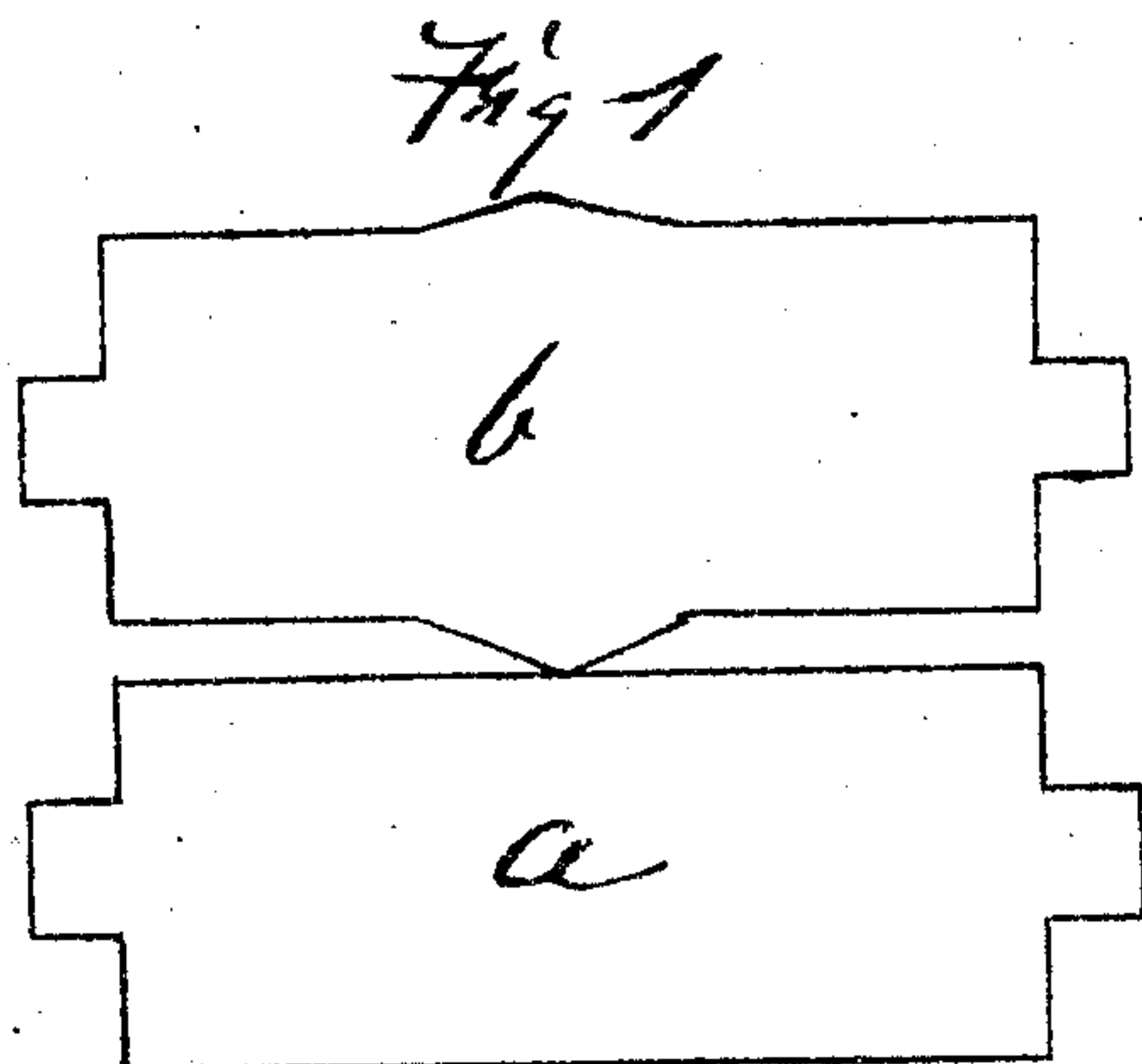


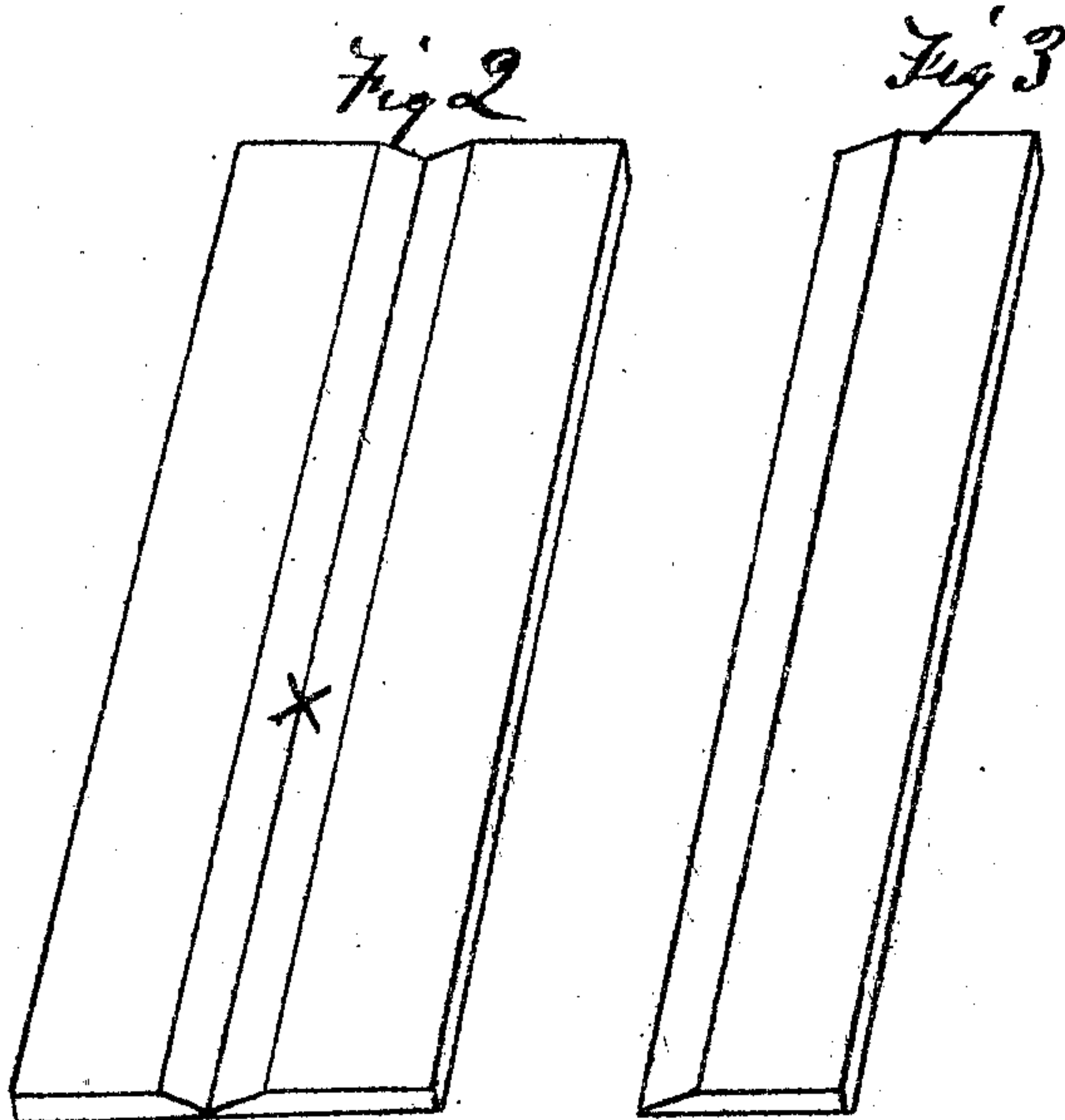
*Improved mode of manufacturing
Flow Saws*

73983



PATENTED

FEB 4 1868



*Witness
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United States Patent Office.

JOHN LANE, OF CHICAGO, ILLINOIS.

Letters Patent No. 73,983, dated February 4, 1868.

IMPROVED MODE OF FORMING PLOUGH-LAYS.

The Schedule referred to in these Letters Patent and making part of the same.

TO WHOM IT MAY CONCERN:

Be it known that I, JOHN LANE, of Chicago, in the county of Cook, and State of Illinois, have invented a new and useful Improved Mode of Manufacturing Plough-Lays; and I do hereby declare and make known that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawings, and the letters and figures of reference marked thereon, which form part of this specification.

My said invention relates particularly to the manufacture of steel plough-lays, the mode of sharpening, the use of the centre of the slab-blank for the cutting-edge of the lay, and the production, by rolling, of a sharpened plough-lay blank, as is hereinafter described and set forth.

The object of my invention is to enable me to produce a better plough-lay, and at less expense, than by any other method.

It is well known that the usual way of sharpening plough-lays, as heretofore practised, has been to draw them, sharpened, under a hammer, which is laborious, and will draw endwise, becoming convex along the edge, the reverse of what is desired, and that the sharpening has always been formed on one of the edges of the steel slab or blank; and it is also well known that the ends and edges of all slab steel are not as good in quality as is along the centre, and that no heretofore effort has produced, by rolling, a sharpened blank for plough-lays.

To enable those skilled in the art to understand how to manufacture and use my said improvement, I will now proceed to describe the same with particularity, making reference to the accompanying drawings.

I take a slab of steel, in width suitable for two lays, of any desired length, which, when heated to a working heat, I pass between two properly-constructed rolls that shall reduce the thickness along the centre of the slab, from end to end, to the desired shape of a sharpened plough-lay blank, one each side of the centre line. Referring to the drawings, Figure 1, the rolls are shown as I prefer to make them, the lower roll, *a*, being straight, the upper roll, *b*, having an enlargement in the centre, of the shape required to produce the desired shape of sharpening. Other-shaped rolls may be used, producing any desired shape of sharpening. Figure 2 shows the steel slab as, after having been reduced along the centre by passing between the rolls, now to be parted by cutting along the centre line *x*, producing two sharpened blanks of the shape desired for plough-lay blanks, one of which is shown in Figure 3, showing a bar of steel equal in thickness throughout, except a portion along one edge of the bar, which, in the rolling of the bar, has been bevelled down on one side, forming an edge for the plough-lay, and which bar may be of any desired thickness and size required for manufacturing plough-lays from, and from which plough-lays may now be cut, formed to shape, hardened, and finished for use, by any of the usual mechanical appliances for the doing of such work. The line of bevel, from edge to back of bevel, I make either straight, concave, or convex, as may be desired.

Other processes of rolling may be used for producing the blank shown in fig. 3.

The advantages resulting by use of my invention are great. By thus sharpening the plough-lays I am enabled to have the edge from the best portion of the steel. I am also enabled to counteract all tendency to become convex on the edge, as the thin web of the centre holds the sides from travel other than in a straight line. I am also enabled to sharpen plough-lay blanks at very much less expense than heretofore. The blanks being rolled to desired shape at the steel-mills in large quantities, are furnished to the plough-makers at only slight advance above common steel, unsharpened, doing away with the necessity of trip-hammers and hand-hammering in plough-works, for sharpening plough-lay blanks.

Having thus fully described my invention, what I desire to secure by Letters Patent, is—

I claim the method herein described of making plough-lays, that is to say, by first reducing, by means of rolls, a slab of steel along its centre, from end to end, to the shape described, then slitting said slab along the line of its greatest depression, and afterwards cutting the same crosswise, in suitable lengths for plough-lays, as set forth.

JOHN LANE.

Witnesses:

J. W. B. YOUNG,

GEO. H. LAUGHTON.