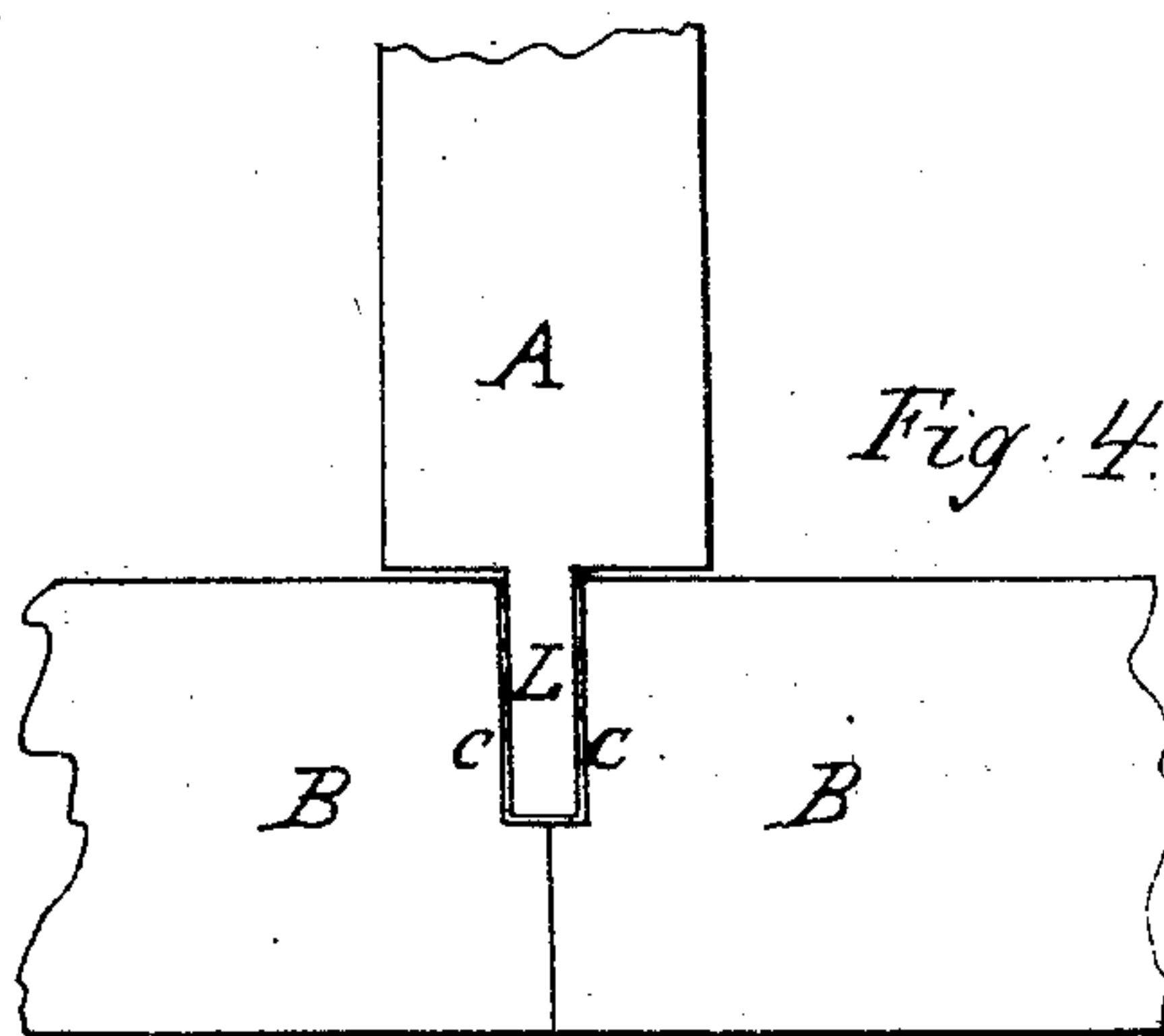
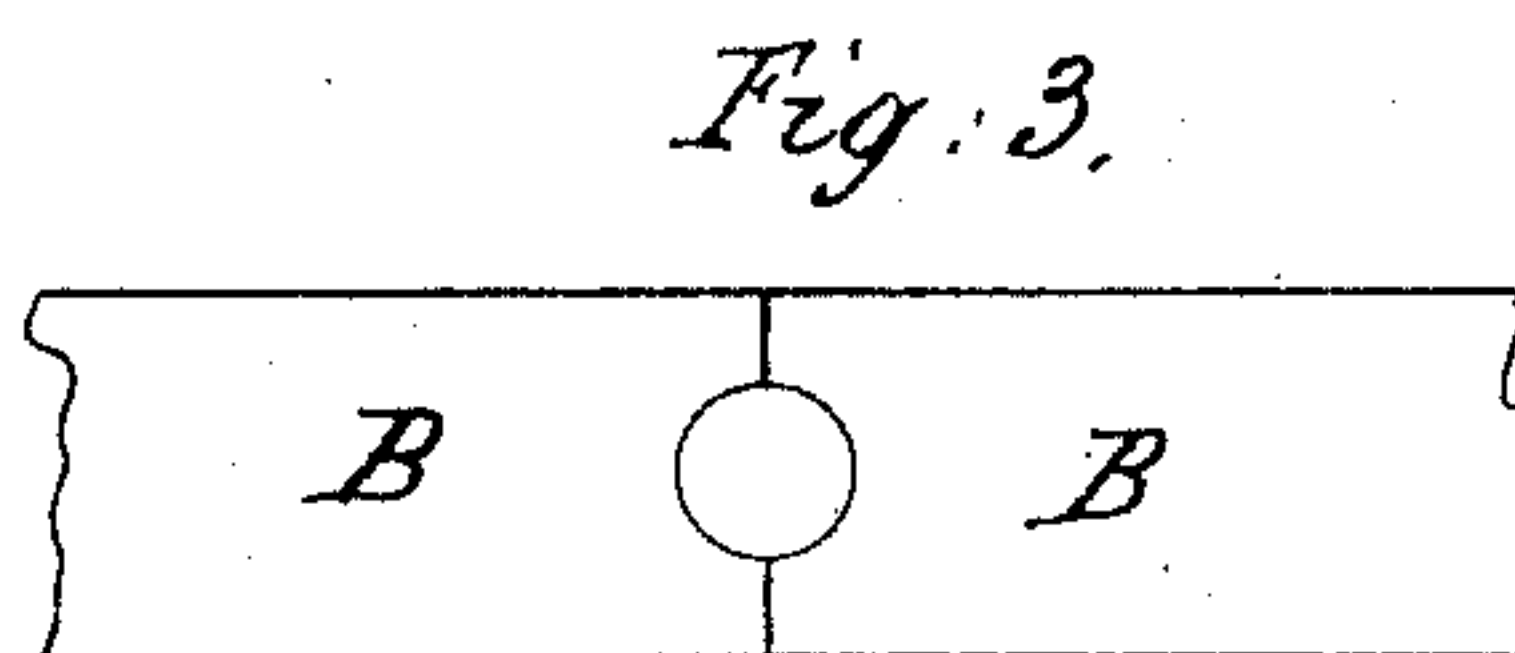
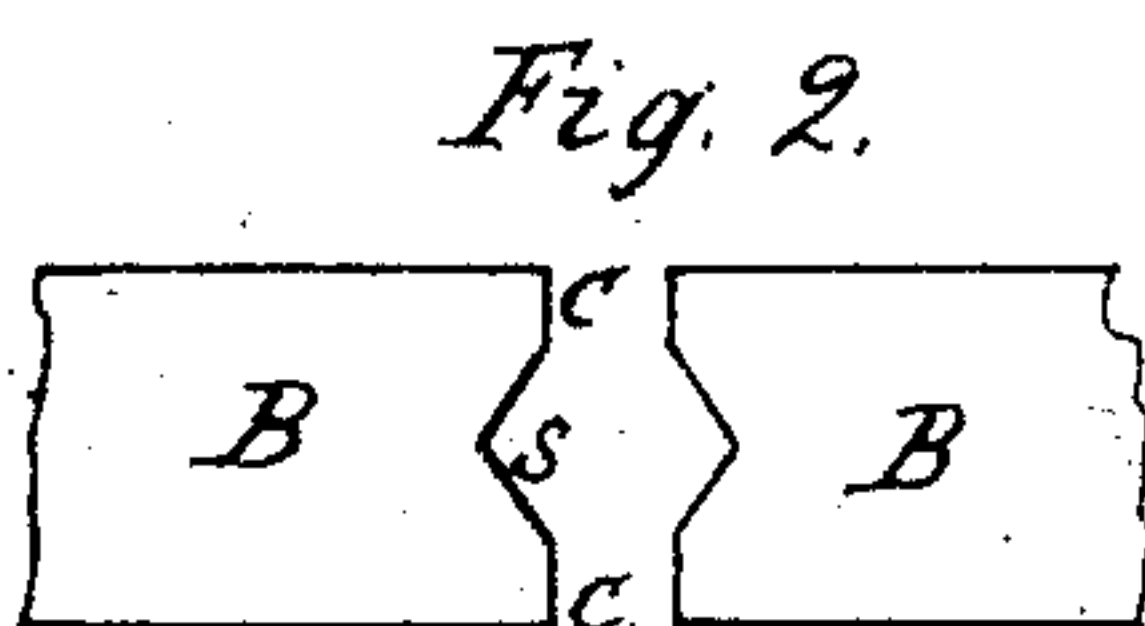
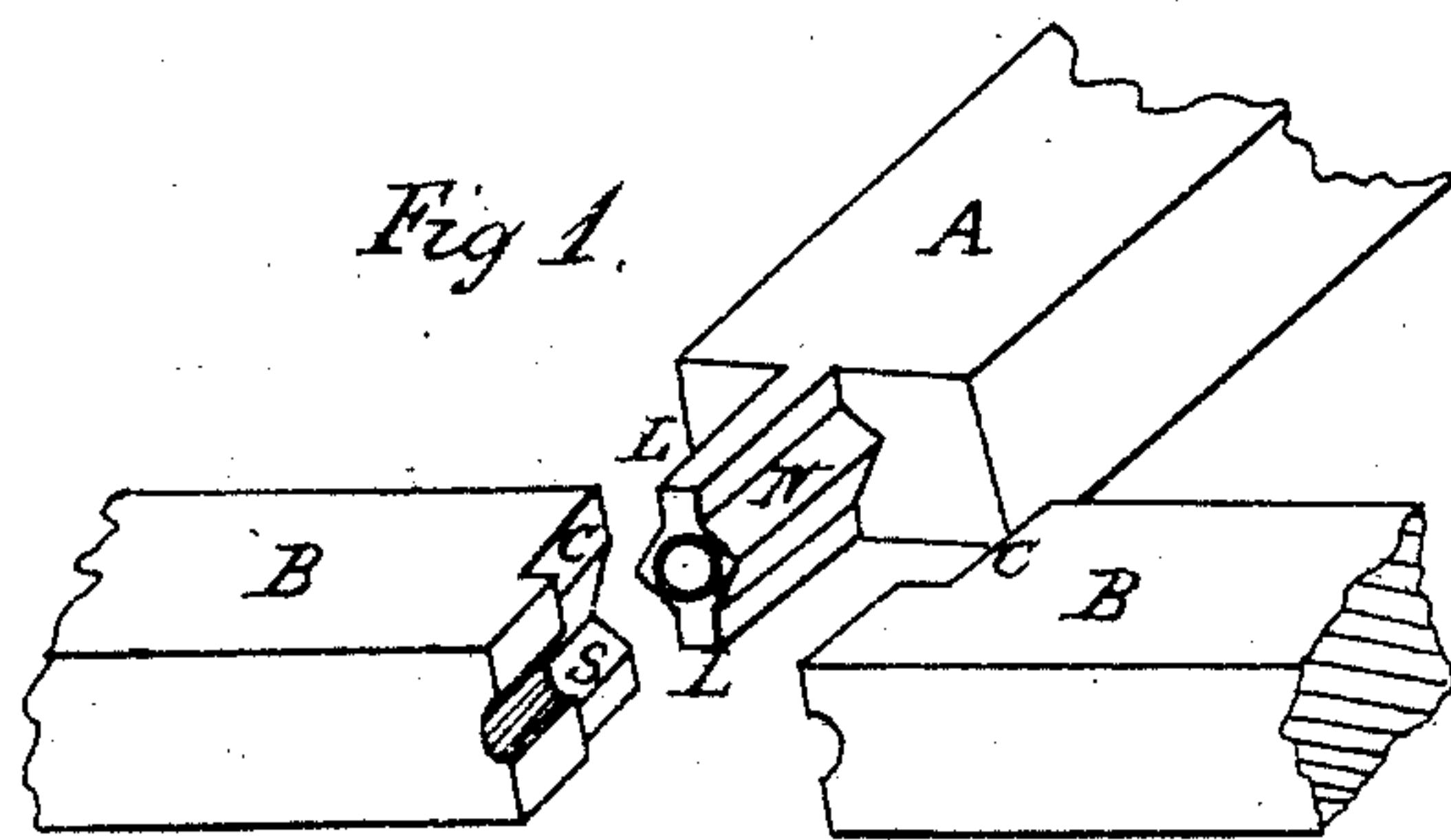


W. J. Lewis.

Die for Heading Bolts.

N^o 76210

Patented Mar. 31, 1868.



Witnesses:

Joshua W. Ellis
J. M. Green

Inventor

Wm J. Lewis

United States Patent Office.

WILLIAM J. LEWIS, OF PITTSBURG, PENNSYLVANIA.

Letters Patent No. 76,210, dated March 31, 1868.

IMPROVED DIES FOR HEADING BOLTS.

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

TO ALL WHOM IT MAY CONCERN:

Be it known that I, WILLIAM J. LEWIS, of Pittsburg, in the county of Allegheny, and State of Pennsylvania, have invented a new and useful Improvement in Heading Dies; and I hereby declare that the following is a full, clear, and exact description of their construction and operation, reference being had to the accompanying drawings, forming part of this specification, and to the letters of reference marked thereon.

The nature of my invention consists in such formation of the dies as that the head of the bolt will be embraced by the closing of the "grippers" on four sides of a hexagon, leaving the two remaining sides open, to allow the surplus metal to be forced out in that direction by the action of the heading-die, and as the dies open preparatory to another stroke, the bolt, on being turned one-sixth way round, will bring the metal that was driven out at the open space against a solid portion of the dies, which, on the closing of the dies a second time, will force the projecting metal into the body of the head, while the overlapping of the header in the space between the grippers, drives in the "flash" or "fin," or thin sheet of metal that would otherwise be left on the head.

To enable others to understand and make my improvement, I will proceed to describe the construction or shape of the dies, by reference to the accompanying drawings, wherein—

Figure 1 represents a perspective view of the front or operating ends of the header and gripping-dies.

Figure 2 represents the back of the grippers, as seen when closed.

Figure 3 is a front view of the same.

Figure 4 represents a top view of all the dies.

The various drawings are lettered, and similar letters denote the same parts in the several views.

I construct my machine for operating the dies in any of the well-known ways, and in precisely the same manner as those for which a patent was granted to me on the fifteenth day of March, 1864. But in order to effect the result hereinbefore mentioned, instead of the inside of the gripping-dies B B being perfectly plain, I have cut an angular groove, S, in the face of each, which is intended to give form to the head, while the surplus metal is forced out in the space C C, made by cutting away a portion of the gripping-dies B B at the top and bottom, equal to two sides of the hexagon. The header A has, on each side, an angular projection, N, as shown at fig. 1, corresponding in shape with the recesses S, cut in the grippers, while the central vertical parts L L exactly fill the space C, and overlap the edges of the bolt-head in a manner that drives in the "flash" or "fin" on the turning of the bolt.

I claim constructing the dies B B and header A, as hereinbefore described, so that said dies will embrace four sides of the bolt-head, and leave two openings for the two remaining sides, and space for the surplus iron, said dies and header being so arranged with relation to each other, that by turning the bolt one-sixth way round, the surplus iron and the "flash" or "fin" will be brought in contact with a solid portion of said dies and header, and thereby be driven into the head of the bolt, substantially as herein described and for the purpose set forth.

WM. J. LEWIS.

Witnesses:

JOSIAH W. ELLS,

B. MCGINN.