

No 3450

United States of America



TO ALL TO WHOM THESE LETTERS PATENT SHALL COME:

Whereas Ezra Cornell, of the State of New York, has alleged that he has invented a new and useful

Machine for cutting trenches and laying pipes

which he states has not been known or used before his application; has made oath that he is a citizen of the United States that he does verily believe that he is the original and first inventor or discoverer of the said machine, and that the same hath not, to the best of his knowledge and belief, been previously known or used; has paid into the treasury of the United States the sum of thirty dollars, and presented a petition to the COMMISSIONER OF PATENTS signifying a desire of obtaining an exclusive property in the said machine and praying that a patent may be granted for that purpose.

These are therefore to grant, according to law, to the said Ezra Cornell his heirs, administrators, or assigns for the term of fourteen years from the twenty eighth day of February one thousand eight hundred and forty four the full and exclusive right and liberty of making, constructing, using, and vending to others to be used, the said machine in description whereof is given in the words of the said Ezra Cornell in the schedule hereunto annexed, and is made a part of these presents.

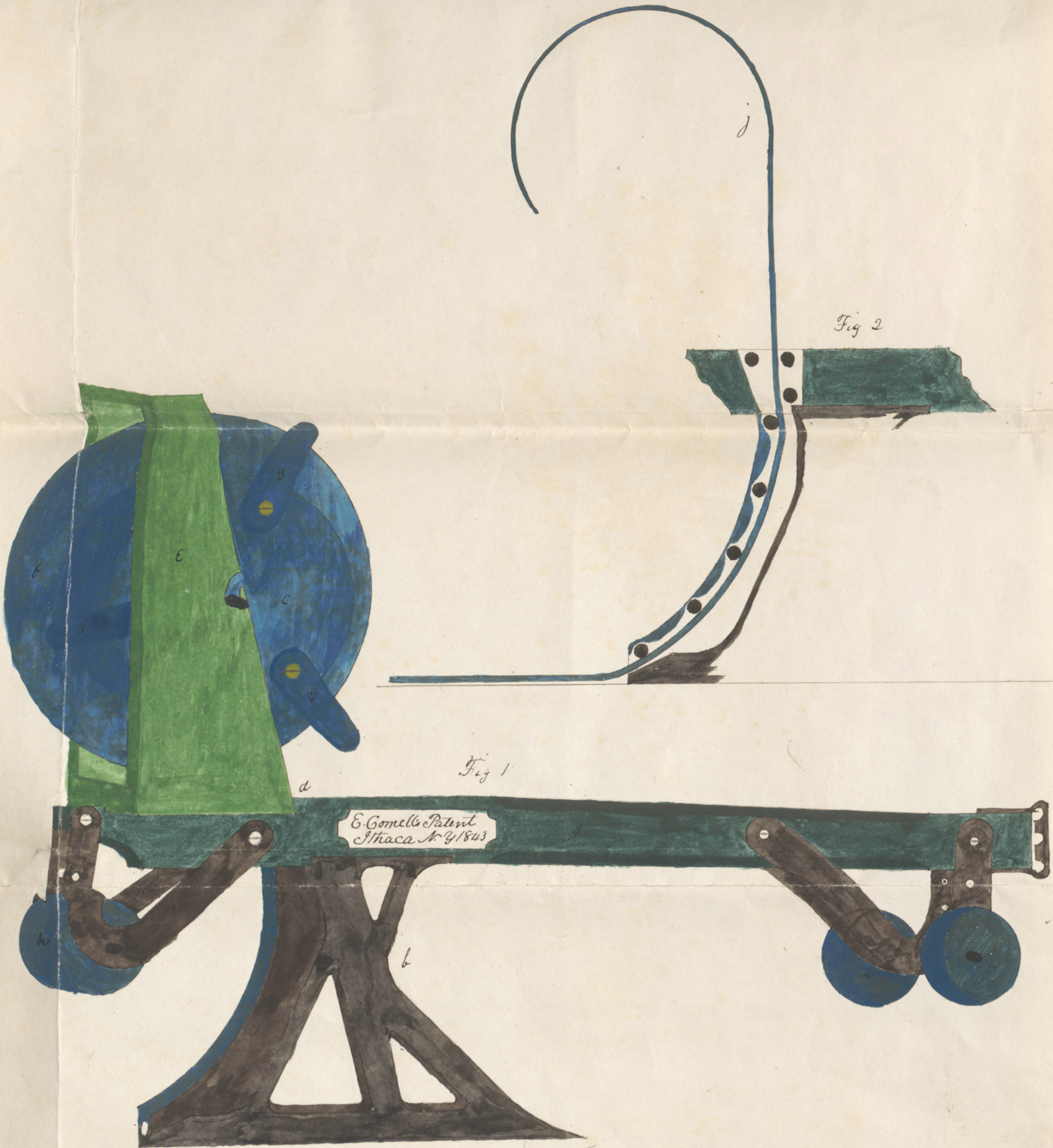
In Testimony whereof, I have caused these Letters to be made Patent, and the Seal of the PATENT OFFICE has been hereunto affixed. GIVEN under my hand at the City of Washington, this twenty eighth day of February in the year of our Lord one thousand eight hundred and forty four and of the Independence of the United States of America the sixty eighth A. M. W. W. Secretary of State.

Samuel E. Smith Commissioner of Patents.



Count... and... with... of the Patent Office.

Ezra Cornell.



Drawing correctly attached.
A. L. McIntire D^r. P^off.

schedule referred to in these Letters Patent, and making part of the same

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to all whom it may concern: Be it known that I Ezra Cornell of  
 Ithaca in the County of Tompkins and State of New York have  
 invented a new and useful machine or implement for laying  
 stables pipe in the earth which I denominate Cornell's Improved  
Re-layer. And I do hereby declare that the following is a full  
 and exact description of the construction and operations of the  
 same reference being had to the annexed drawings making  
 part of this specification in which Fig. 1. is a perspective view  
 of the part thereon marked a is the beam by which the im-  
 plement is drawn and making a part thereof the part  
 marked b is a cast or wrought iron furrow or trench cutter the  
 main part of which is a hollow curvature either cast with the  
 main body of the cutter or formed separately of plate iron  
 and affixed to the main body by screws or bolts said curvature is also  
 presented by the sectional drawing hereto annexed and made  
 a part of this specification at Fig 2<sup>nd</sup>. It is supplied with sheaves or  
 friction pulleys having concave edges of suitable size to receive  
 a section of the pipe as it passes from the reel or drum through  
 said curvature to the earth. The part marked c. is a drum or  
 reel from which the pipe is drawn through an aperture in the beam  
 which aperture is also protected by sheaves or friction pulleys  
 and forms a part of the hollow curvature heretofore described  
 the part marked d. The part marked e is the frame within  
 which said drum or reel moves upon its axes said drum or  
 reel is withdrawn from and replaced in said frame at pleasure  
 and as necessity may require for loading the same with pipe.  
 Upon one end of said drum or reel stops are affixed or a rim  
 of wood is attached marked f to prevent the pipe from sliding  
 off and disorganizing its coil. And on the opposite end  
 of said drum are three or more stops or arms which are confined  
 by a single bolt or screw so as to admit of being shifted or turned  
 towards the centre of said drum that the drum may  
 receive a coil of pipe in a mass and the pipe being thus placed  
 upon the drum said movable arms or stops which are  
 marked g in said drawing are turned to a position that  
 is perpendicular or nearly so to the curved surface of the drum  
 and thereby confine the coil of pipe upon the drum; h represents

E. C. Cornell

the wheels which may be used to steady the machine and regulate the depth at which the pipe is deposited in the earth. i, represents the braces by which the wheels are attached to the beam of the machine and which are so contrived as to raise or lower the wheels and thereby regulate the depth at which the pipe is deposited. j represents a section of the pipe passing from the drum through the hollow curvature in the beam and back part of the trench cutter to the earth.

The motion of the machine when drawn forward with the pipe once confined in the ground draws the pipe from said drum or reel through the before described aperture in the beam thence through the hollow curvature above described from the interior surface of which the pipe is defended as well as its progress facilitated by the sheaves or friction pulleys before described and separates from the machine as it passes out of said curvature at the bottom thereof being the point in depth to which the pipe is deposited in the earth. By attaching two trench cutters to the same beam, or by multiplying divisions in the above described curvature two or more pipes may be laid by the same implement at the same time.

What I claim as my invention and wish to secure by Letters Patent is a furrow or trench cutter in combination with a curved channel or groove of one or more divisions (for laying one or more pipes at the same time) as herein described; and these I claim in combination with the drum as above described for the purpose of depositing pipe at any desired depth, the whole being constructed and operating substantially as herein set forth.

Witnesses  
Chas. Monroe  
Thos. C. Avery

E. Cornell