

A. B. Sprout,

Derrick.

N^o 68,909.

Patented Sep. 17, 1867.

Fig. 3.

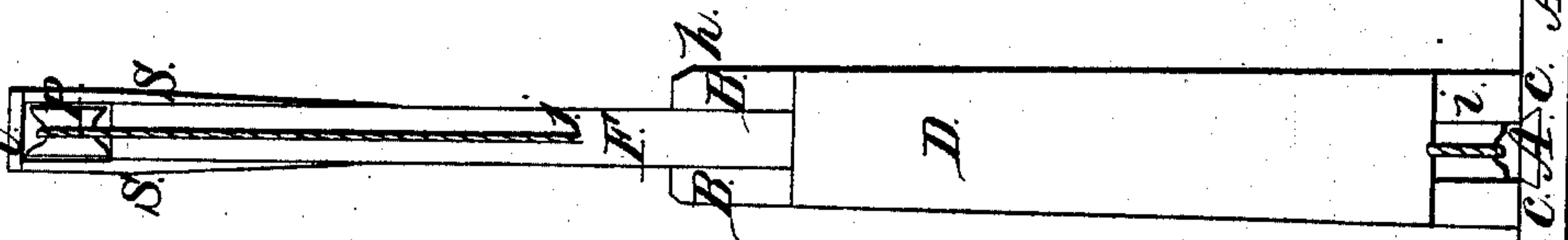


Fig. 2.

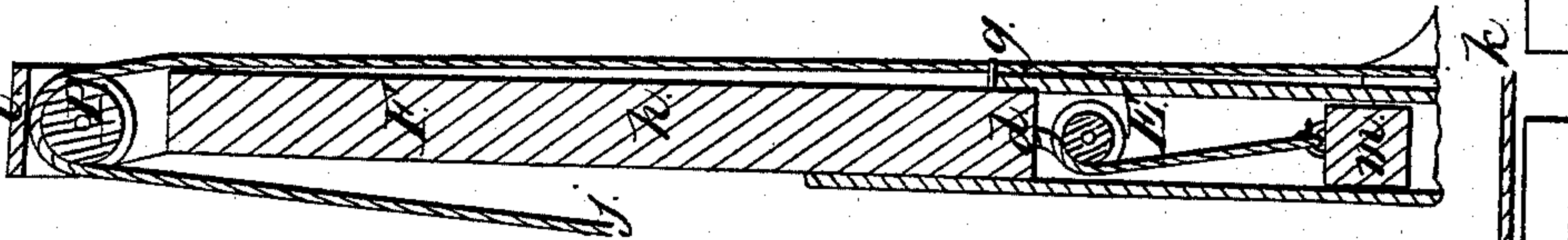
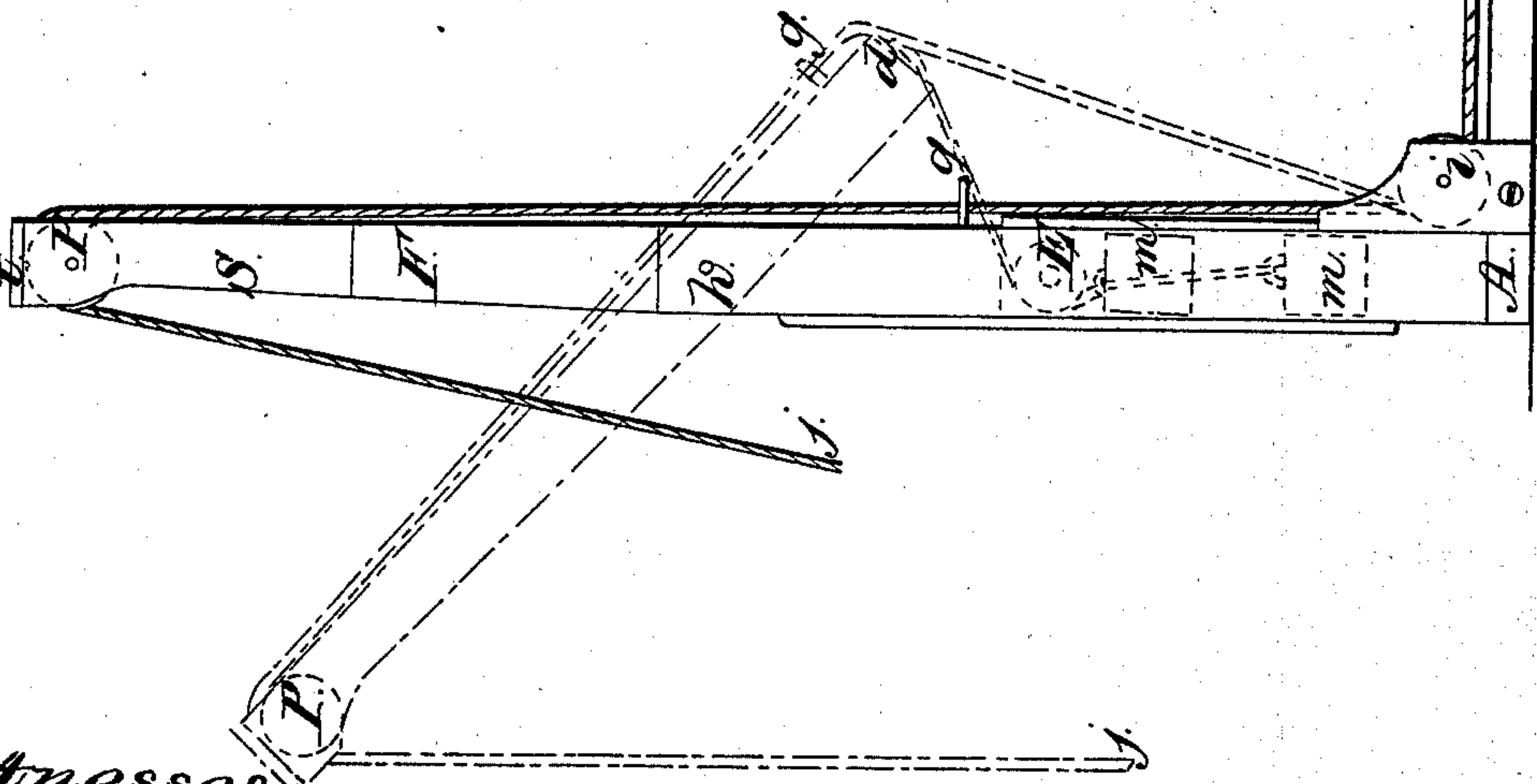


Fig. 1.



Witnesses.

*Wm B. Waugh
A. B. Cate*

Inventor.

A. B. Sprout

United States Patent Office.

A. B. SPROUT, OF PICTURE ROCKS, PENNSYLVANIA.

Letters Patent No. 68,909, dated September 17, 1867.

IMPROVEMENT IN DERRICK.

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, A. B. SPROUT, of Picture Rocks, in the county of Lycoming, and the State of Pennsylvania, have invented a new and useful Derrick for Raising Hay and other material which I style a Hay or other Derrick; and I do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the annexed drawings, making a part of this specification.

The nature of my invention consists in so constructing a hay or other derrick that when the weight is being drawn up only one straight shaft is required, the weight passing along the side and on a straight line with said shaft, and when the weight is sufficiently raised, then forming an arm from the upper portion of the derrick by means of a joint in the same by which said upper portion of the derrick is turned from a straight line to an angle and the weight deposited at the place desired.

To enable others skilled in the art to make and use my invention, I will proceed to describe its construction and operation.

I first make a frame of the shape of the letter T out of pieces of timber three by seven inches, and one piece about sixteen feet long, and the other eight, as seen at A A A A, in Figures 1 and 3, and put two mortises in said frame at the place where the pieces join, as seen at *c c*. I then take two pieces of timber marked B B, fig. 3, and put them together in a firm manner by fastening to them boards, one seen at D, fig. 3, and another on the opposite side. The pieces B B, I make of timber about three by seven inches at one end and two by seven inches at the other, and make tenons on the large ends and set them in the mortises, as seen at *c c*. I then take a piece of timber marked F F F, as seen in figs. 1, 2, and 3, about twelve feet long, three by seven inches, and taper it about two-thirds of its length so that the small end is about three by four inches, and at the small end I put a pulley marked P P P, as seen in figs. 1, 2, and 3, with side pieces *s s* and top piece *t*, as seen in figs. 1 and 3, which pulley I place projecting over the edge of the piece F toward the side of the derrick where the weight is to be deposited, so that when the horse is backed the weight causes the upper portion of the derrick to take the position denoted by the red lines, as seen in fig. 1. Near the end of piece F, I put an eye or staple, as seen in figs. 1 and 2, marked *g g*. I then slip the piece F between the pieces B B, so that the tapered end on which the pulley P is on is about eight feet above the point where the pin *h* is seen in figs. 1, 2, and 3. I then bore a hole entirely through the three pieces and put therein the pin or bolt marked *h*. I then take a rope about six feet long and at one end attach a weight, as seen at *m*, figs. 1 and 2, and at the other end of the rope I attach an eye or staple, which is driven into the end of the piece F, as seen at *d d*, figs. 1 and 2, which rope passes over the pulley E, which pulley is placed between the pieces B B about six feet from the pulley *i*, as seen at E, figs. 1 and 2. This weight and rope are to hold the swinging piece F in position in the following manner: When the weight *m* is at the lower part of the derrick they hold the piece F in a straight line with the pieces B B. When the weight *m* is at the pulley E, the piece F is held in the position denoted by the red lines in fig. 1, the rope easily passing over the pulley E. By the lengthening or shortening of this rope, the angle in the derrick when turned from a straight line is regulated as desired. I then pass the rope *n* under the pulley *i*, through the eye or staple *g*, and over the pulley P, as seen in fig. 1, and to the end of the rope, at *j*, I attach a horse hay-fork, (when I pitch hay,) and at the other end of the rope, at *k*, the horse is attached.

The operation is as follows: The load of hay is placed over the rope between the derrick and where the horse is attached at *k*. The rope passing under the wagon between the front and hind wheels, the operator with a trip-rope attached to the fork draws the fork, and the rope passes through the eye *g*, and over the pulley P, until the fork will come to the hay on the wagon, the horse then being at *k*. The operator then fastens the fork in the hay and the horse is driven directly away from the load and derrick; the rope then passing over the pulley P, and through the eye *g*, and under the pulley *i*, which causes the hay to rise on a straight line with the derrick until it is raised to the proper height, when the driver backs the horse and the piece F assumes the position denoted by the red lines, as seen in fig. 1. Then the operator by means of the trip-rope of the hay-fork discharges the hay on the stack. After the hay is discharged the weight *m* falls from the pulley E to the bottom of the derrick, which returns the piece F to an upright position. The operation is repeated until the stack is finished.

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

1. A derrick provided with a pivoted shaft, F, made operative through the medium of the rope *n*, substantially as herein described and for the purpose set forth.

2. In combination with the above, the pulleys P and *i*, and guide *g*, constructed, arranged, and operating substantially as herein described and for the purpose set forth.

3. The combination of the weight *m*, pulley E, and rope X, with the pivoted shaft F, constructed, arranged, and operating substantially in the manner herein described and for the purpose set forth.

A. B. SPROUT.

Witnesses:

WM. B. WAUGH,

A. B. CATE.