

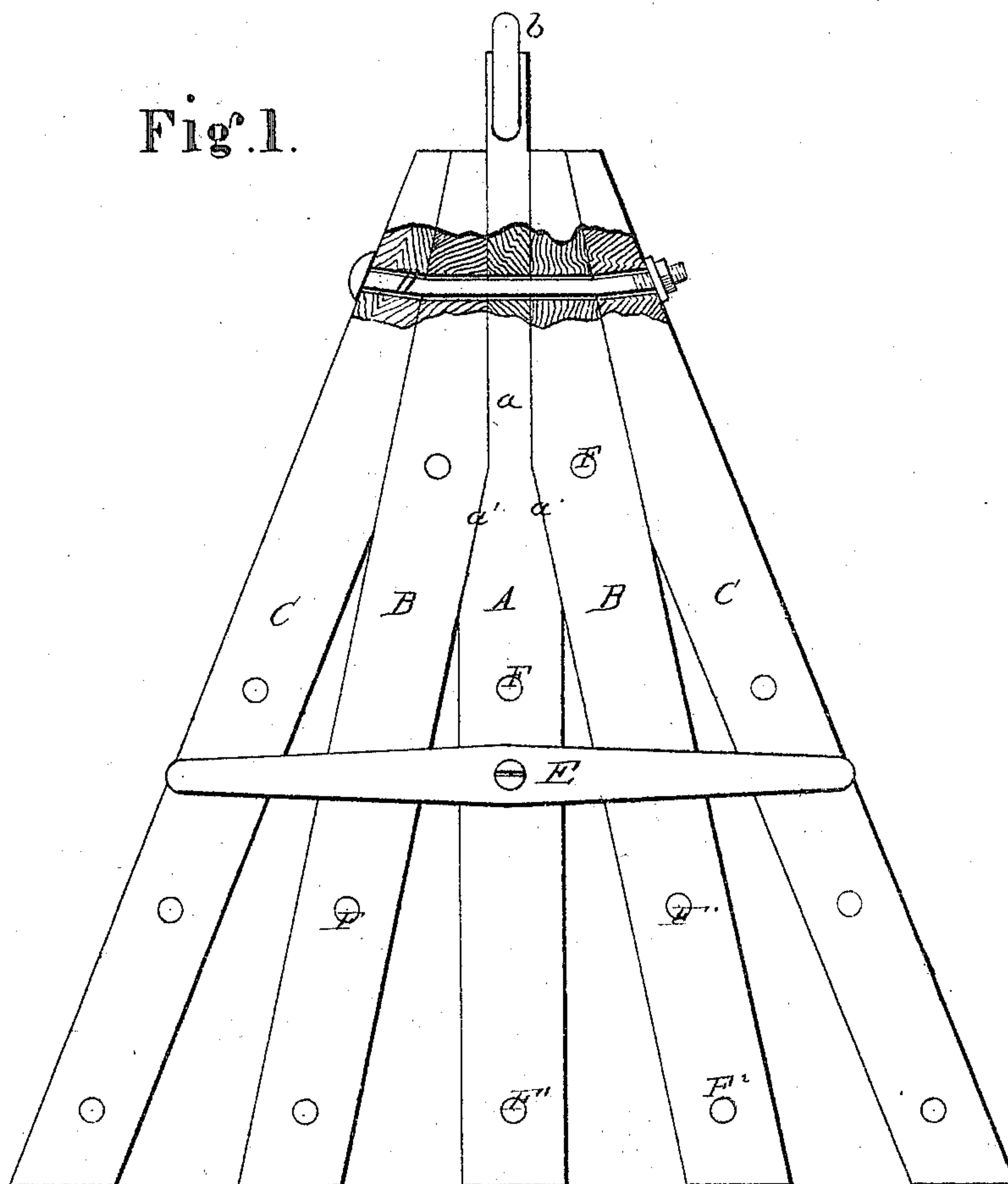
P. H. LANG.

Harrows.

No. 134,433.

Patented Dec. 31, 1872.

Fig. 1.



Witnesses.

E. H. Bates

J. B. Curtis

Inventor.

Peter H. Lang  
Chipman & Son, C.  
Atty.

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Fig. 2.

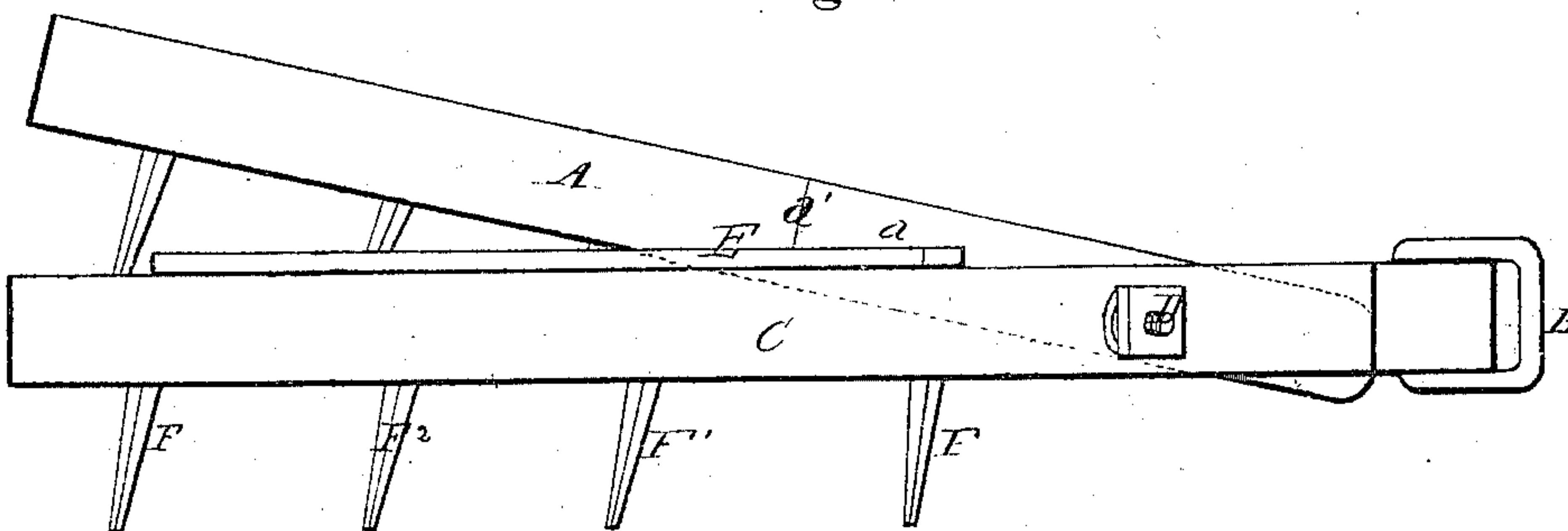
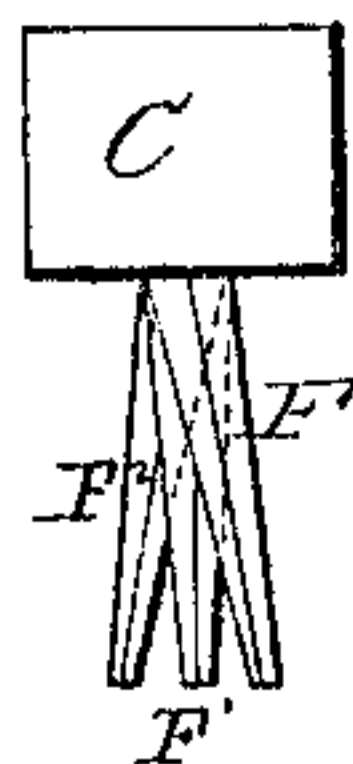


Fig. 3.



Witnesses  
E. H. Bates  
J. B. Curtis

Inventor.  
Peter H. Lang,  
Chipman Hosmer & Co.,  
Attys.

# UNITED STATES PATENT OFFICE.

PETER H. LANG, OF PALMYRA, MAINE.

## IMPROVEMENT IN HARROWS.

Specification forming part of Letters Patent No. 134,433, dated December 31, 1872.

*To all whom it may concern:*

Be it known that I, PETER H. LANG, of Palmyra, in the county of Somerset and State of Maine, have invented a new and valuable Improvement in Harrows; 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 drawing making a part of this specification, and to the letters and figures of reference marked thereon.

Figure 1 of the drawing is a representation of a plan view of my invention. Fig. 2 is a side view. Fig. 3 is a detail view.

This invention has relation to harrows; and it consists, first, in the construction and novel arrangement of the tooth-bars of an oblique-sided or V-shaped harrow, which are beveled and pivoted together at their forward ends, so that they may rise and fall to correspond to the variations of surface; secondly, in the arrangement of a pivoted bar designed to prevent the bars from being raised too high.

In the accompanying drawing illustrating this invention, A designates the central bar of a V-shaped harrow. It is constructed with a long parallel-sided neck, *a*, which terminates at the body of the bar in two beveled shoulders, *a' a'*. To the forward end of this bar is attached a clevis, *b*. B B indicate two parallel-sided tooth-bars, which are beveled at the forward ends to fit close to the sides of the neck *a* and shoulders *a'*, and thence extend back in oblique directions, as shown. C C designate outer tooth-bars, beveled at their forward ends and arranged one on either side of the harrow obliquely, as shown. By this arrangement the tooth-bars all converge at their forward and diverge at their rear ends, giving the harrow a V-shape. At their forward ends the bars A B C are pivoted together by means of a bent bolt, D. E designates a bar pivoted

to the upper side of the bar A, and stretching across the bars B C. F F<sup>1</sup> F<sup>2</sup> indicate pointed harrow-teeth. To the bar A are attached two of these teeth, one, F, inclined to the right, the other, F<sup>2</sup>, to the left. To each of the bars B C three teeth are secured, the first, F, leaning to the right, the second, F<sup>1</sup>, standing in a vertical plane, and the third leaning to the left, or vice versa.

By this arrangement the "canting" of the harrow-bars is prevented to a great extent. As will be seen, all the teeth lean with their points toward the rear end of the harrow, so as to enable them to overcome stumps, stones, and like obstacles. The bars A B C, being movable, will rise and fall so as to correspond to the inequalities of the surface over which the harrow is being drawn. The bar E prevents any one of the bars from being lifted too high. When, however, the extent of the surface inequalities necessitates a movement of the bars greater than ordinarily, the bar E may be turned around parallel to the bar A. The construction of my-improved harrow allows any number of bars to be used, as, for instance, the bar A, and two side bars, B C.

I claim as my invention—

1. The improved harrow having the central bar A with neck *a*, and beveled shoulders *a'*, and the oblique-beveled side bars B C, all pivoted together by the bolt D, as and for the purpose specified.

2. In a harrow, the bar E pivoted to the bar A, in combination with the pivoted side bars B C, substantially as specified.

In testimony that I claim the above I have hereunto subscribed my name in the presence of two witnesses.

PETER H. LANG.

Witnesses:

NORRIS KEENE,  
S. A. KEENE.