

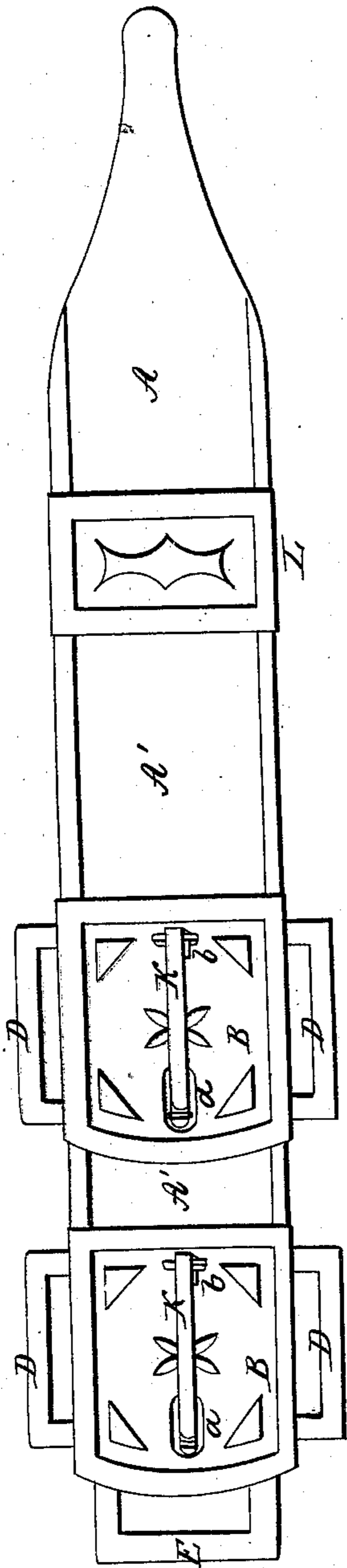
*N. Botsford,*

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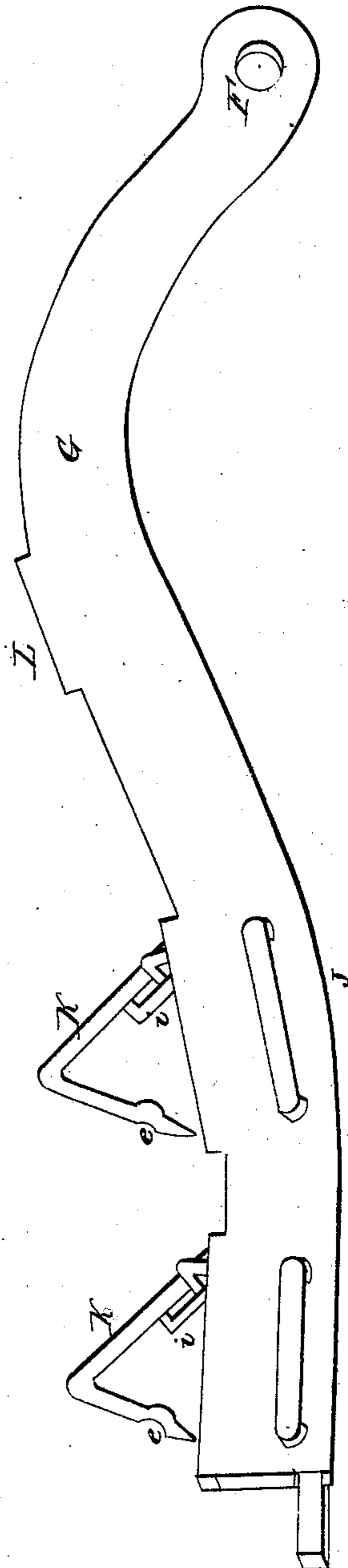
*N<sup>o</sup> 104, 106.*

*Patented June 14, 1870.*

*Fig. 1.*



*Fig. 2.*



*Witnesses,*

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# United States Patent Office.

NATHAN BOTSFORD, OF SOMERSET, NEW YORK.

Letters Patent No. 104,106, dated June 14, 1870.

## IMPROVED HAME-TUG FOR HARNESS.

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, NATHAN BOTSFORD, of Somerset, in the county of Niagara and State of New York, have invented certain new and useful Improvements in Hames-Tugs; and I do hereby declare the following to be a full, clear, and exact description thereof, sufficient to enable those skilled in the art to which my invention appertains to fully understand and to make and use the same, reference being had to the accompanying drawing forming part of this specification, and in which—

Figure 1 is a front view, and

Figure 2, a top or edge view of a tug constructed according to my invention.

Similar letters of reference indicate like parts in the two figures.

My invention consists in so forming the tug that it will not come in contact with the animal, the tug being formed with a curve, but having its end in line with each other, so that the draft is not interfered with.

It also consists in the application to the tug of a double set of loops, whereby the tug is adapted for use on large or small horses.

It further consists in the peculiar construction of the devices for securing the trace to the tug, and in the application to the tug of a pair of such fastening devices or buckles, all as hereinafter fully described.

The invention will be fully understood from the following detail description.

I make my hames-tugs of metal—malleable iron preferred—and form the same with a bow or curve, G J, which sets off from the horse, and thereby the chafing of the shoulder and wearing of the collar are avoided. It will be observed that although the tug is curved, its ends are in line with each other, and the draft is not therefore interfered with.

I apply to each tug A a double set of loops, D D D D, for the attachment of the breast and back-straps. The object in having two sets is to adapt the tug for use on large or small horses.

E is the loop for the attachment of the breeching-strap.

F is the hole through which the staple passes which secures the tug to the hames.

Each tug is provided with a pair of buckles, on each of which the draft is equal, and therefore there is less liability of the tongues breaking or the holes in the strap tearing out than when a single buckle is employed.

I construct these buckles by providing the tug with plates B B, slotted at *a*, and formed with loops *b b*, in which are hung angular tongues K K. These tongues have elongated eyes *i i*, whereby said tongues are allowed a slight play, in order to make them enter more readily the slots *a*. To prevent the accidental disengagement of the tongues, I notch them, as at *e e*, which notches engage with the edge of the plate B within the slots.

L is a loop formed with or attached to the tug, for confining the upper end of the trace in place. The trace enters the tug at I, and passes, in the countersink A', under the plates B B and loop L, the tongue entering holes made in the trace, as usual.

The cheapness, durability, and simplicity of my hames-tug will generally recommend it.

Having thus described my invention,

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

1. A metallic hames-tug, A, made with a curve, G J, a straight extension, J I, in line with the pivot-hole F, and a countersink, A', to receive the trace, substantially as shown and described, for the purpose set forth.

2. The double set of loops D, applied to the tug as and for the purpose specified.

3. The combination of the slotted plates B B and angular tongues K K, with each other and with the metallic hames-tug, constructed, arranged, and operating substantially as described.

4. A metallic hames-tug, with a curve, G J, and loops D D D D L E, and the buckles herein described, all constructed and arranged to operate substantially as set forth.

NATHAN BOTSFORD.

Witnesses:

FREDERICK C. BURCHELL,  
HENRY H. FROST.