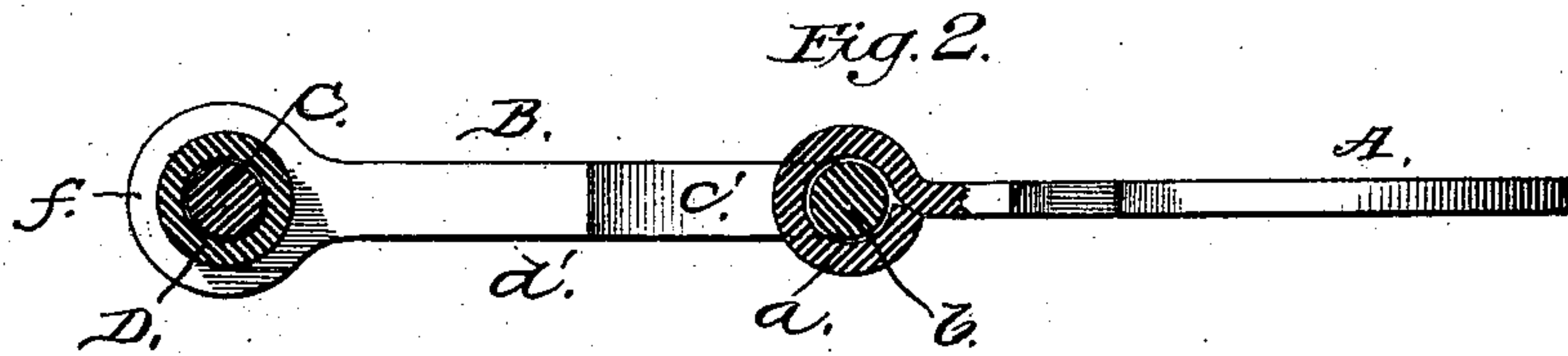
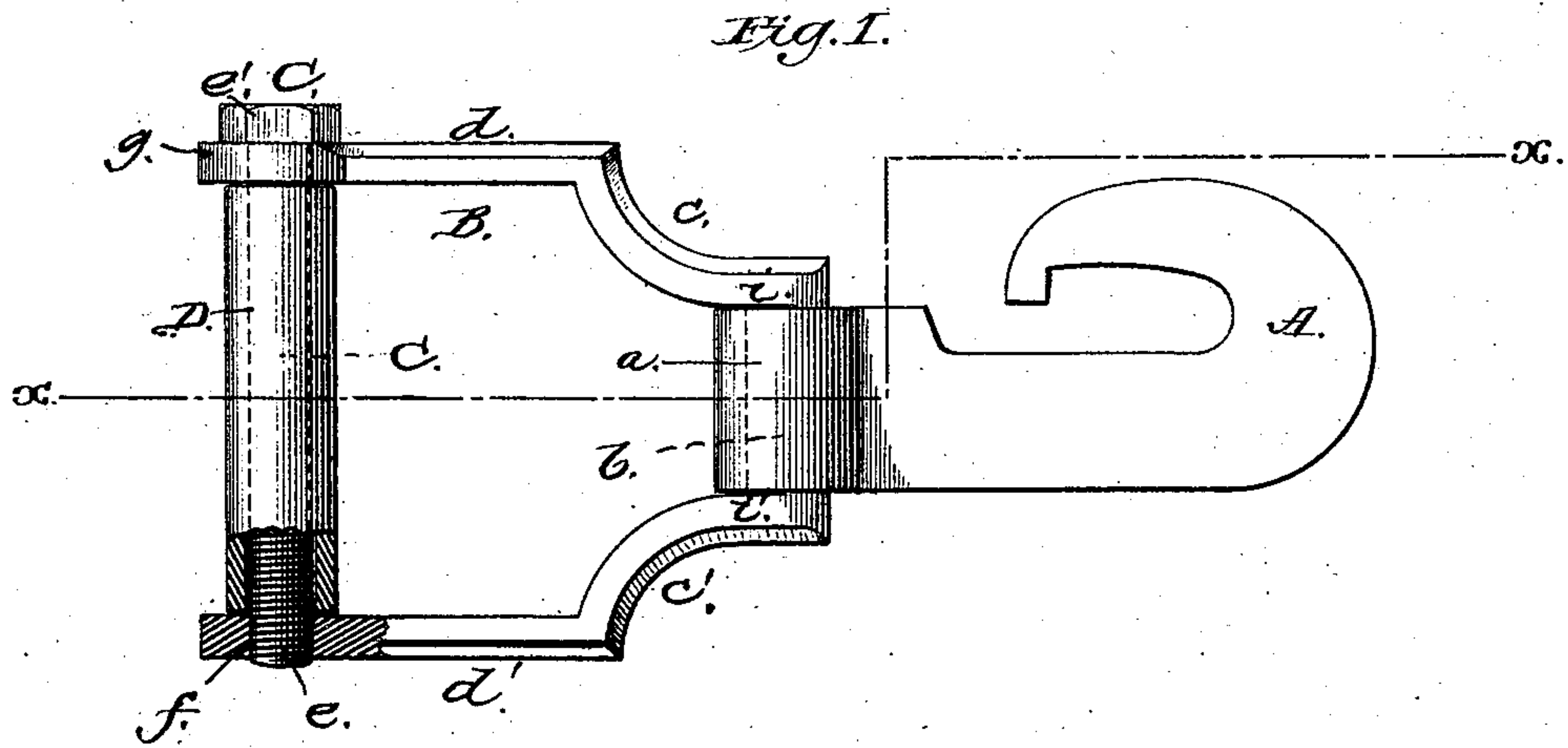


(Model.)

L. W. BURRELL.  
Tug Hook and Clevis.

No. 235,991.

Patented Dec. 28, 1880.



WITNESSES:

John A. Cairns,  
F. J. Masi.

INVENTOR:

L. W. Burrell,  
by E. W. Anderson,  
his ATTORNEY.

# UNITED STATES PATENT OFFICE.

LORY W. BURRELL, OF MINNEAPOLIS, MINNESOTA.

## TUG-HOOK AND CLEVIS.

SPECIFICATION forming part of Letters Patent No. 235,991, dated December 28, 1880.

Application filed August 7, 1880. (Model.)

*To all whom it may concern:*

Be it known that I, LORY W. BURRELL, of Minneapolis, in the county of Hennepin and State of Minnesota, have invented a new and valuable Improvement in Tug-Hooks and Clevises; 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, and to the letters and figures of reference marked thereon.

Figure 1 of the drawings is a representation of a side view of my improved tug-hook and clevis, and Fig. 2 is a sectional view of the same.

This invention has relation to improvements in hame-tug hooks; and it consists in a tug-hook and clevis combined, arranged, and constructed substantially as hereinafter shown and described.

In the annexed drawings, the letter A designates the hook, constructed with a cylindrical eye, *a*, arranged in the plane of the same; and B indicates the clevis, composed essentially of two parallel bars *d d'*, an end bar, *b*, and two curved bars or connections, *c c'*, uniting the pivot-bar *b* to the ends of bars *d d'*. The bar *d'* has a screw-threaded eye, *f*, and bar *d* a plain eye, *g*, for the reception of a bolt, C, having a threaded end, *e*, and a head, *e'*, the said bolt being provided with a sleeve-roller, D, extending between the ends of the bars or arms *d d'*, and bracing them. The inner

faces of the bars *c c'* are parallel to each other at their point of junction to the pivot-bar *b*, and the ends of the eye *a*, which encircles the said bar, bear snugly against the said parallel surfaces *i i'*, by which means the hook is prevented from dropping. As indicated in the drawings, the clevis at the bolt C is wider than at the pivot-bolt *b*, thus permitting the use of a wide tug without using a hook of unnecessarily large size. The roller, also, upon the bolt C prevents undue friction and the consequent wear of the tug. The hook, clevis, bolt, and roller are made of malleable iron.

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

The combined clevis and tug-hook, consisting of the clevis B, having the parallel side bars, *d d'*, the curved bars or connections *c c'*, provided with the pivot-bar *b*, parallel to each other at their point of junction to said pivot-bar, the hook A, having the eye *a* engaging the bar *b* and rotating thereon, the removable screw-threaded bolt C, passing through eyes *f* and *g* in the ends of bars *d d'*, and having the rotating sleeve-roller D, substantially as specified.

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

LORY W. BURRELL.

Witnesses:

H. P. HERRING,  
R. W. CUMMINGS.