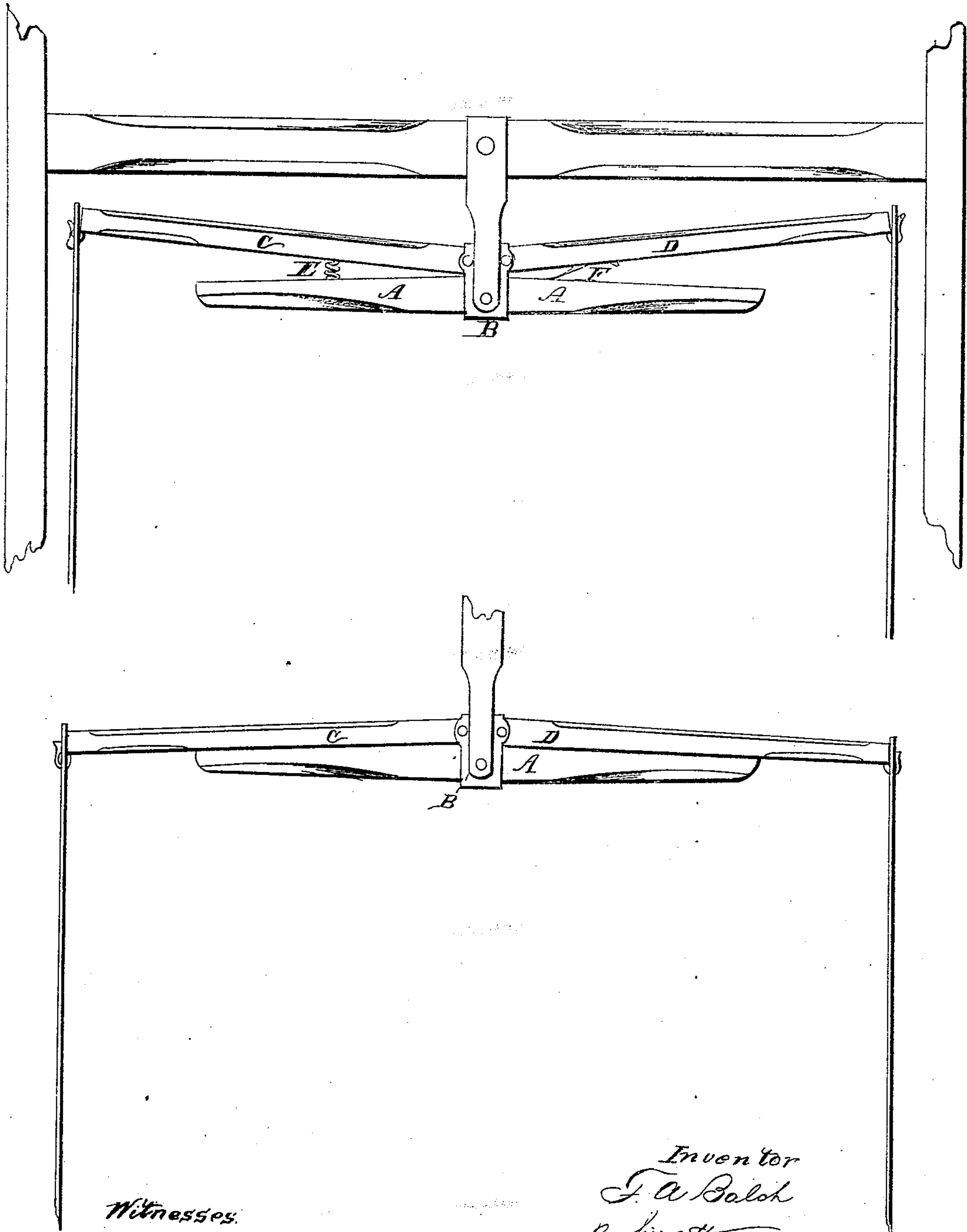


F. A. BALCH.

Whiffletree.

No. 57,844.

Patented Sept 11. 1866.



Witnesses.

*C. M. McLean*  
*Andrew M. Hately*

*Inventor*  
*F. A. Balch*  
*By his atty*  
*R. D. Smith*

# UNITED STATES PATENT OFFICE.

F. A. BALCH, OF HINGHAM, WISCONSIN.

## IMPROVEMENT IN WHIFFLETREES.

Specification forming part of Letters Patent No. 57,844, dated September 11, 1866.

*To all whom it may concern:*

Be it known that I, F. A. BALCH, of Hingham, in the county of Sheboygan and State of Wisconsin, have invented a new and useful Improvement in Whiffletrees; and I do hereby declare the following to be a full, clear, and exact description of the same, reference being had to the accompanying drawings, in which—

Figure 1 is a plan view of my improvement, showing the position of the parts when sustaining the draft-strain of the traces. Fig. 2 is a plan of the same, showing the position of the parts when relieved of all strain from the traces.

My invention is designed to obviate the danger of unhooking traces when the draft upon them is relieved, either in passing over descending ground or when the horse is suddenly checked; and also to relieve the carriage of the unpleasant jerk which is experienced when the draft-strain comes upon the traces suddenly.

That others may understand my invention, I will particularly describe it.

My whiffletree is composed of three bars jointed together. The main bar, A, is pivoted in the usual way in a strap, B, which is secured to the cross-bar of the shafts. The bar A is not quite so long as the ordinary whiffletree. At the back of the bar A are the two bars C and D, pivoted at one end to the bar A at points near the middle of A. To the free ends of the bars C and D the traces are hooked. The springs E F, or any other suitable kind, are interposed between the bar A and the bars C and D, for the purpose of keeping them asunder, so that when the traces are slack the springs press the arms C and D backward far enough to take up the slack and prevent any possibility of their becoming unhooked.

If the springs E F are pretty strong, as they should be, the first strain of the draft will be

resisted by them, and the inertia of the carriage will be gradually overcome, thus avoiding all unpleasant jerking of the carriage.

When the full strain of the draft is received the bars C D will be drawn up against the back of the bar A, which then receives the real strain, and as it is suspended at its center, the action of my whiffletree is not different from any other centrally pivoted or suspended whiffletree when under draft. The instant, however, the draft-pressure is relaxed the arms C D move away from the bar A, and the trace is not allowed to become slack.

These operations are so plainly shown in the drawings that they cannot be misunderstood.

I am aware that various spring contrivances have been made designed to prevent traces from becoming unhooked; but so far as I am aware they are not designed to do more than form a closed hook when the trace is slack, and not to take up the slack and keep the trace always taut, and that they are not capable of relieving, in any material degree, the jerk incident to a sudden start. I therefore do not claim the application of springs to this part of the carriage capable of exercising in some degree the functions of my device, but only the improved mode of applying them by which they are free to act, but do not sustain the labor of draft.

Having described my invention; what I claim as new, and desire to secure by Letters Patent, is—

The combination of the bar A, with the bars C and D, and the springs E and F, substantially as described, and for the purpose set forth.

F. A. BALCH.

Witnesses:

JNO. E. THOMAS,

J. T. BRIDGEMAN.