

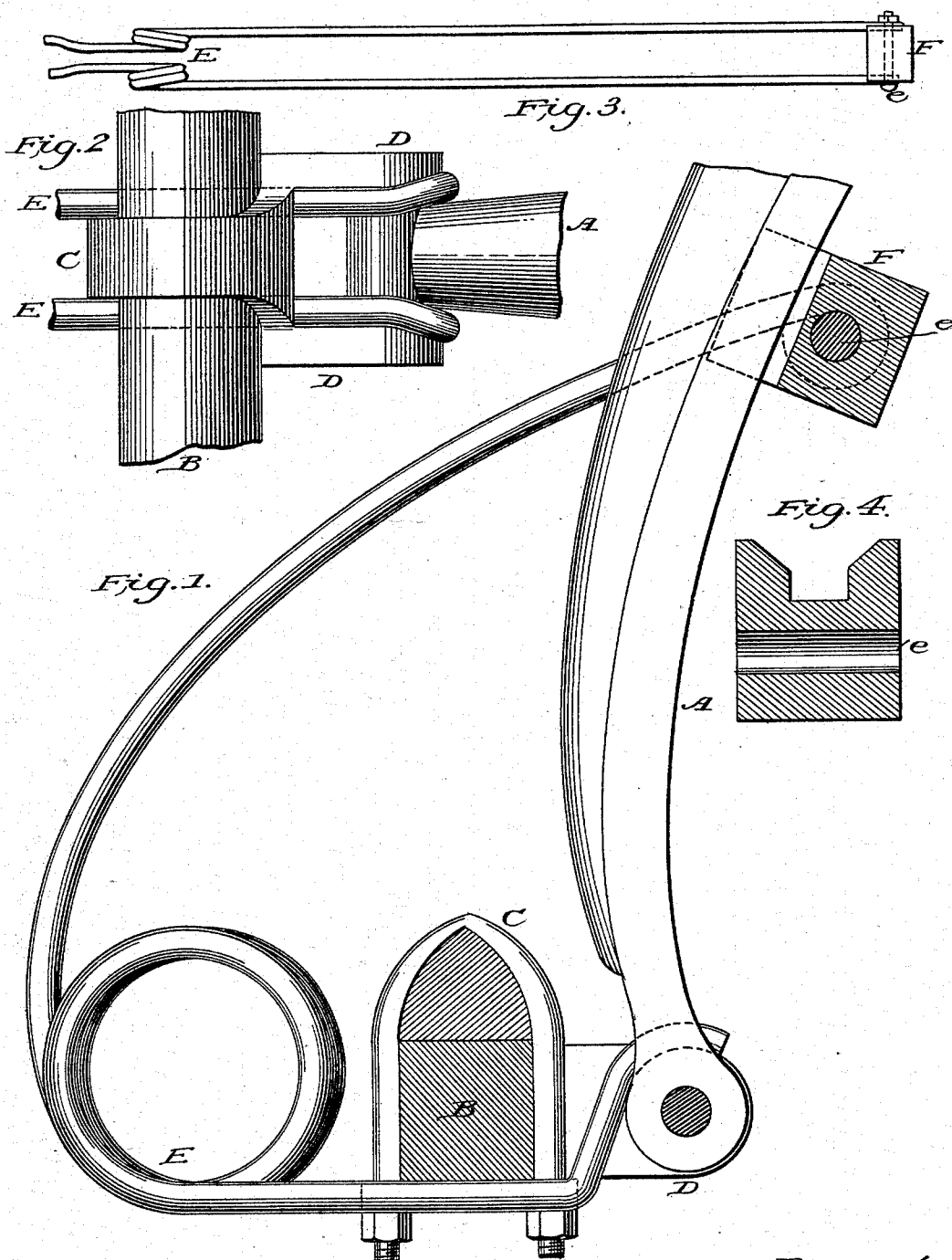
(No Model.)

E. E. BLACKMAN.

COMBINED SHAFT SUPPORTER AND ANTIRATTLE.

No. 527,475.

Patented Oct. 16, 1894.



Witnesses.
Richard O. Williams
James Tyler, Jr.

Inventor.

E. E. Blackman

UNITED STATES PATENT OFFICE.

ELMER E. BLACKMAN, OF RAYMOND, NEBRASKA.

COMBINED SHAFT-SUPPORTER AND ANTIRATTLER.

SPECIFICATION forming part of Letters Patent No. 527,475, dated October 16, 1894.

Application filed September 25, 1893. Serial No. 486,387. (No model.)

To all whom it may concern:

Be it known that I, ELMER E. BLACKMAN, a citizen of the United States, residing at Raymond, in the county of Lancaster and State of Nebraska, have invented a new and useful Improvement in Carriage-Shaft Supporters and Antirattlers, of which the following is a specification.

My invention relates to improvements in shaft-supporters for carriages, for the purpose of adjusting and holding the shafts in any desired position; and it also embraces means for arresting the rattling of the clip and thill coupling. I attain these objects by means of the devices illustrated in the accompanying drawings, in which—

Figure 1 is a side view showing one of the shaft-supporting springs, when attached to the carriage. Fig. 2 is a detailed top view of my device at the point of bearing on the shaft, where the shaft attaches to the carriage. Fig. 3 is a top view of my invention, detached from the buggy; and Fig. 4 is a detailed view of the shaft holder of my invention.

Similar letters refer to similar parts throughout the several views.

In the drawings A. represents the carriage shaft; B., the carriage axle; C., the clip, and D. the coupling joint of the axle and shaft.

E. represents one of two similar pieces of spring metal, the lower ends of which rest transversely on the upper side of the rear end of the shaft, bending one to the right and one to the left and being curved to fit the upper side of the rear end of the shaft, A. transversely in such a manner that the shaft may be lifted to its greatest height without interfering with the position of the said spring supporters E.

The curved ends of the spring supporters E. bending one to the right and one to the

left on either side of the wooden part of the shaft A. at its rear end, form a hook which prevents the said spring supporters E. from detaching, when in use. The springs E. from their point of bearing upon the upper sides of the rear ends of the shafts A. pass downward through the opening at the rear end of the shaft and between it and the axle B. of the carriage, thence directly under the axle and at the rear of the axle, are curled into a coil spring, one of the pieces E. being coiled to the right and one to the left, both pieces E. then passing upward and forward, one piece E. upon each side of the shaft A. and attached by bolt *e.* to the shaft holder F. This shaft holder F. is formed with a groove, the said groove having inclined sides and being sufficiently large to allow the nuts of the bolts with which the wood of the shaft is fastened to the iron of the shaft, to pass freely through the said holder F. without catching on the shaft bolts as it moves along the shaft, when the shaft A. is raised and lowered.

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

The combination in carriage shaft supporters and anti-rattlers, of the two pieces E. having their lower ends curved to fit the upper sides of the carriage shafts, and being curled into a coil spring at the rear of the carriage axle and the shaft holder F. to which the forward ends of the pieces E. are attached, all substantially as described.

In testimony whereof I hereunto set my hand, in the presence of two witnesses, this 31st day of August, 1893.

ELMER E. BLACKMAN.

Witnesses:

C. A. LEMING,
O. G. ADKINSON.