

(No Model.)

A. ARMSTRONG.
THILL COUPLING.

No. 432,174.

Patented July 15, 1890.

FIG. 1.

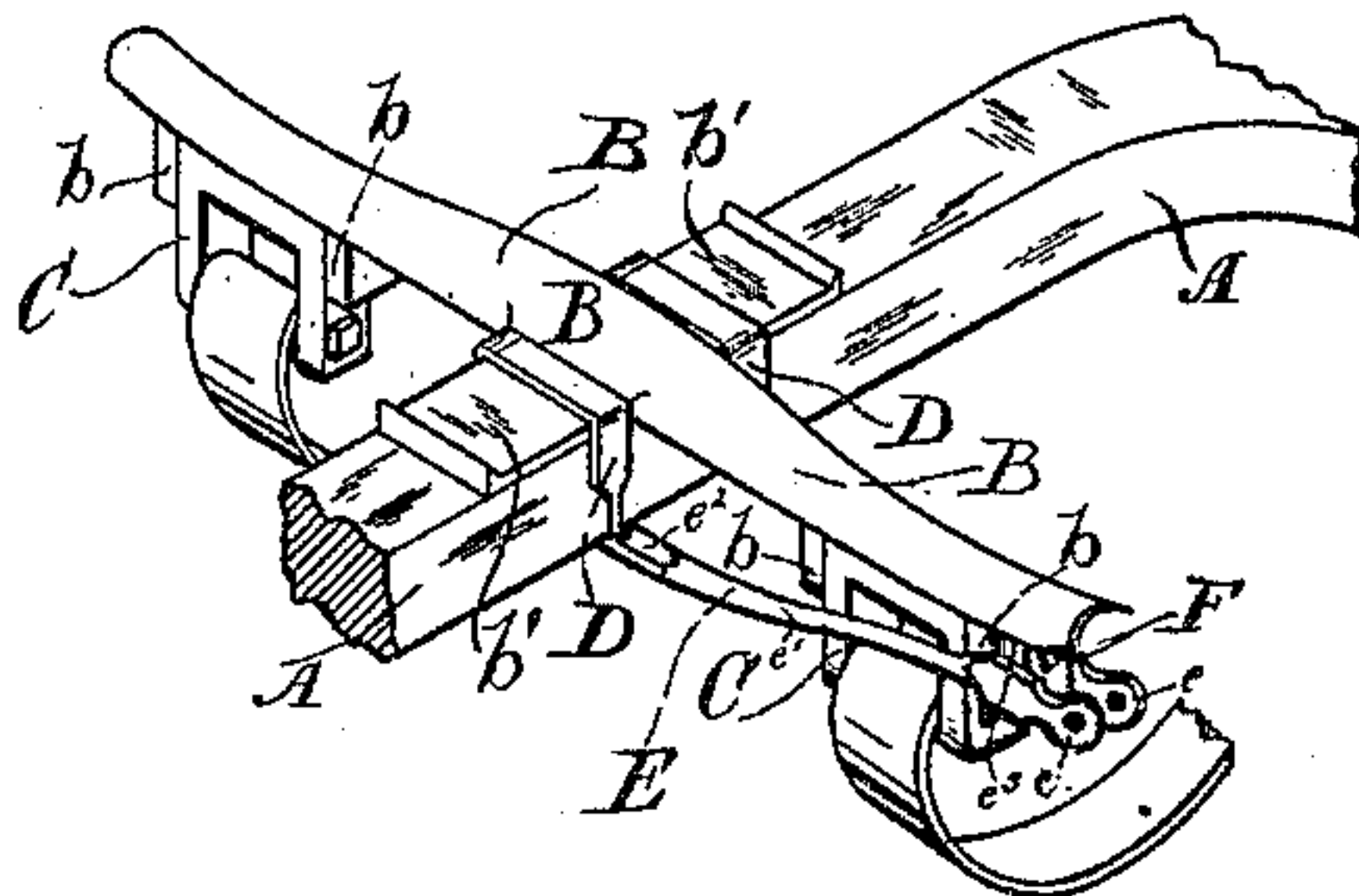


FIG. 2.

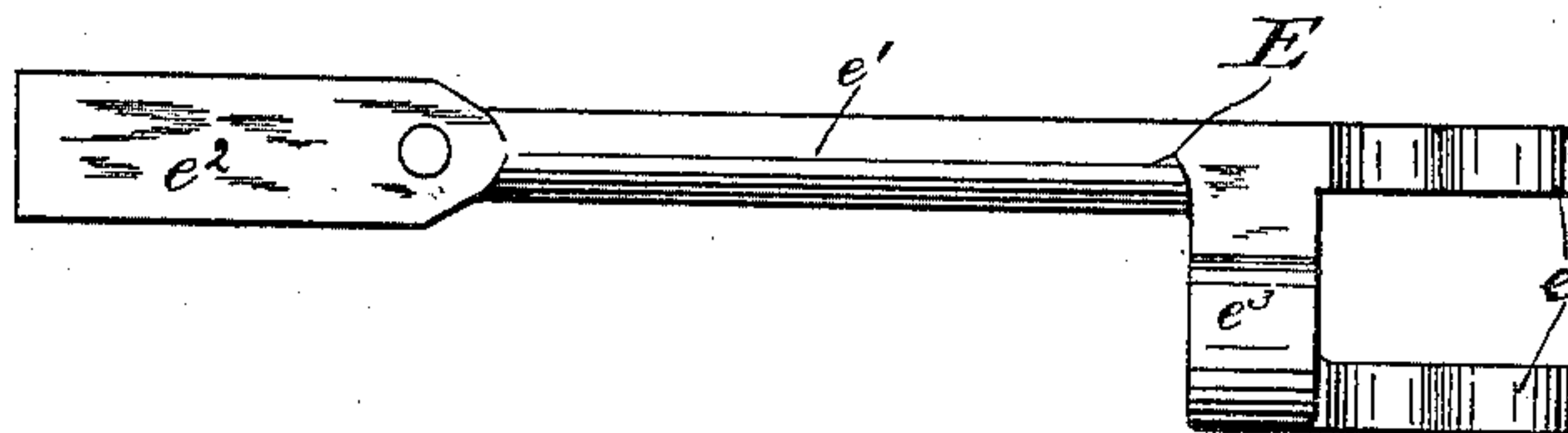
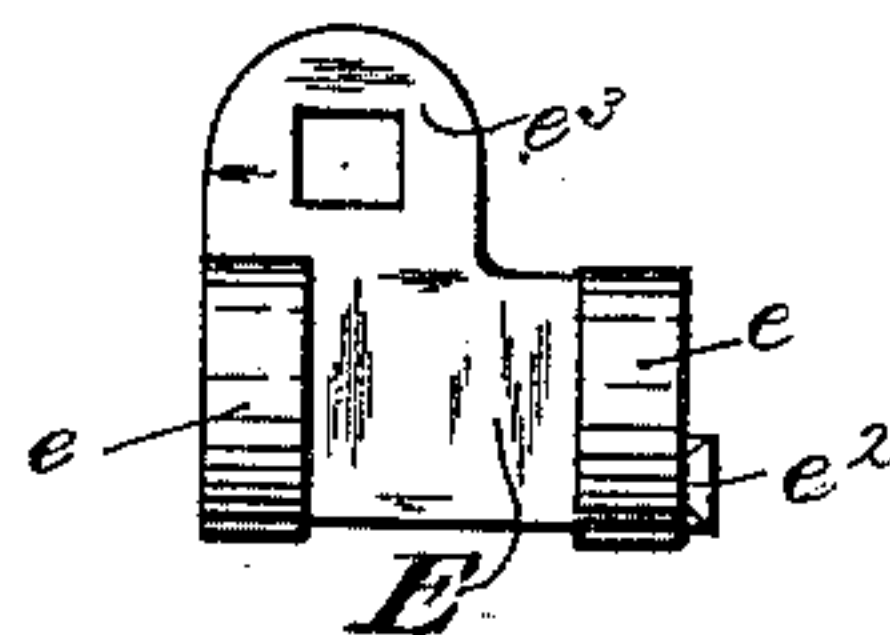


FIG. 3.



Witnesses
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UNITED STATES PATENT OFFICE.

ALBERT ARMSTRONG, OF CINCINNATI, OHIO, ASSIGNOR TO THE OVERMAN CARRIAGE COMPANY, OF SAME PLACE.

THILL-COUPLING.

SPECIFICATION forming part of Letters Patent No. 432,174, dated July 15, 1890.

Application filed April 29, 1890. Serial No. 349,876. (No model.)

To all whom it may concern:

Be it known that I, ALBERT ARMSTRONG, a citizen of the United States, and a resident of Cincinnati, in the county of Hamilton and State of Ohio, have invented certain new and useful Improvements in Thill-Couplings, of which the following is a specification.

My invention relates to that class of vehicles known as "duplex-spring-gear wagons," in which two cross-springs are arranged upon opposite sides of the axle and suspended from a spring hanger or bar.

Its object is to provide a shaft-coupling for this class of vehicles to accommodate the ordinary or standard sizes and shapes of shafts, and also to strengthen the spring-supports.

The invention will be first fully described in connection with the accompanying drawings, and will then be particularly referred to and pointed out in the claims.

In the drawings, Figure 1 is a perspective view of part of the axle and pair of springs with the spring-bar and my improved coupling secured thereon. Fig. 2 is a top elevation, upon an enlarged scale, of the shaft-coupling; and Fig. 3 is a front elevation of the same.

Referring to the parts, A is the axle, upon top of which is secured the spring-hanger B. This is preferably made of malleable metal, and is provided with lugs *b* to receive the spring-shackles C. The hanger is also provided with wings *b'*, which rest upon the axle A, and is secured to the axle by the clips D.

The parts above referred to are well known and need not therefore be more specifically described. The coupling E is also made of malleable iron, and the lugs *e*, which receive the shaft-bar, are the same as those in common use. The bar *e'* extends back from one end of the lug-plate and has a flattened portion *e²*, which is to pass under and be secured firmly to the axle by one of the clips which secure the hanger B. The screw-threaded ends of the clips D pass through the perforations in the flattened portion *e²* of the shaft-shackle and are provided with nuts on the under side to fasten the parts together. I have shown only one perforation in the flattened part *e²*. This is formed in casting. The other hole may be drilled to suit the size

of the axle to which the shackle is to be secured. The rear wall of the coupling has an upwardly-extending lug *e³*, which, when the shackle is in place, bears against the front lug *b* of the hanger. This lug is perforated to receive the bolt F, which passes through it, through lugs *b*, and spring-shackle C, the bolt thus serving the purpose of securing the shackle E and hanger B firmly together, and serving also as the pivot-bolt of the spring-shackle. The bolt F may be made long enough, if desired, to pass through the axle and serve to couple the shackle for the rear spring, as well as for the front one. The lugs of the shackle E, extending as they do to the front end of the hanger, occupies the same position with relation to the vehicle-body that the common shaft-shackles do. I am therefore enabled to use the standard thills with a duplex-spring gear provided with my improvements, and it will also be seen that the spring-hangers are firmly braced.

I have shown my shackle attached to and combined with one well-known form of duplex-spring gear. The changes necessary to apply it to other well-known forms will readily suggest themselves to the mechanic skilled in this branch of the business.

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

1. The coupling hereinbefore described, having the rear extension *e'* *e²* and the upwardly-extending perforated lug *e³*.

2. The combination of the axle, the spring-hanger for duplex springs secured thereon, and the shaft-coupling E, secured to the axle and to the forward end of the hanger, substantially as shown and described.

3. The combination, substantially as hereinbefore set forth, of the axle A, the hanger B, having lugs *b* and wings *b'*, the shackle E, secured to the axle, extending in front of hanger and having the upwardly-extended lug *e³* to bear against the front lug *b* of the hanger, the springs, the spring-shackles C, the bolts F, and clips D, for securing the parts together.

ALBERT ARMSTRONG.

Witnesses:

FRANK S. DAVIS,
GEO. J. MURRAY.