

(No Model.)

P. P. McMAHON & G. M. WILCOXSON.

SPRING BOX FOR CAR COUPLINGS.

No. 470,071.

Patented Mar. 1, 1892.

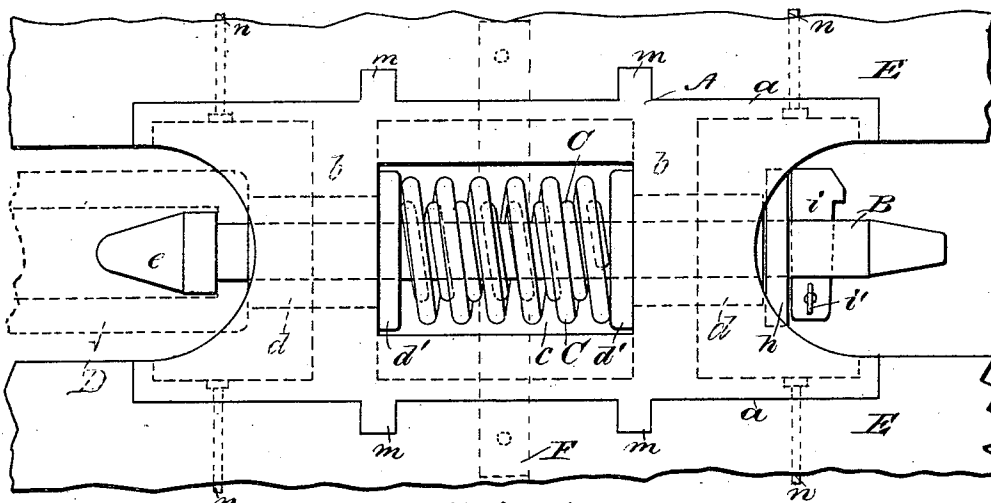


Fig. 1.

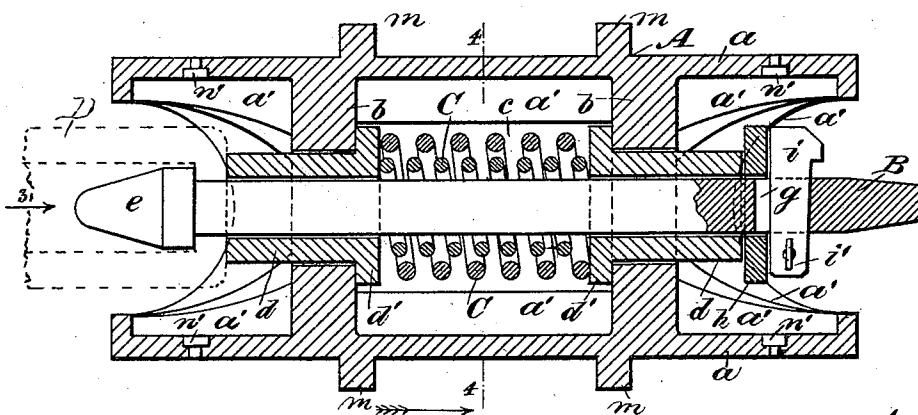
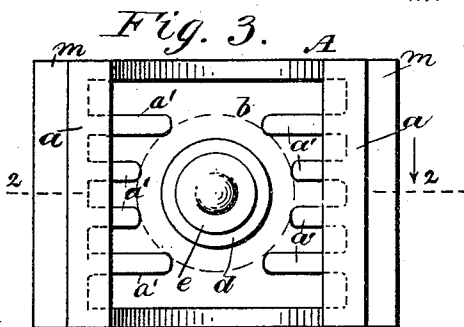
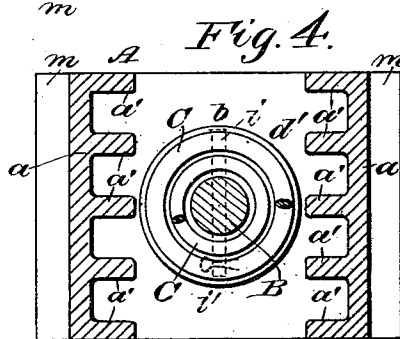


Fig. 2.



WITNESSES:

J. H. Fiske
C. Sedgwick



INVENTORS:

P. P. McMahon
G. M. Wilcoxson
BY
Munn & Co
ATTORNEYS.

UNITED STATES PATENT OFFICE.

PATRICK PAUL McMAHON AND GEORGE MARCUS WILCOXSON, OF CHATTANOOGA, TENNESSEE.

SPRING-BOX FOR CAR-COUPPLINGS.

SPECIFICATION forming part of Letters Patent No. 470,071, dated March 1, 1892.

Application filed July 8, 1891. Serial No. 398,847. (No model.)

To all whom it may concern:

Be it known that we, PATRICK PAUL McMAHON and GEORGE MARCUS WILCOXSON, both of Chattanooga, in the county of Hamilton and State of Tennessee, have invented a new and useful Spring-Box for Car-Couplings, of which the following is a full, clear, and exact description.

The object of this invention is to provide a detachable box or case for the secure retention of a buffer-spring for a car-coupling which will permit the spring to be changed quickly if broken, and which can be utilized in conjunction with different styles of draw-heads.

To this end our invention consists in the construction of parts and their combination, as is hereinafter described and claimed.

Reference is to be had to the accompanying drawings, forming a portion of this specification, in which similar letters of reference indicate corresponding parts in all the figures.

Figure 1 is a plan view of the improved device in position on a car-frame, shown broken. Fig. 2 is a plan view of the improvement, partly in section, taken on the line 2 2 in Fig. 3. Fig. 3 is an end view opposite the arrow 3 in Fig. 2, and Fig. 4 is a transverse section on the line 4 4 in Fig. 2.

The spring-box A is preferably made of malleable cast-iron. Other available metals may also be used in its production. Said box consists of two parallel side walls *a*, which are held spaced a proper distance apart by the transverse parallel walls *b b*, that are so located with regard to the terminals of the side walls that a spring-chamber *c* will be provided between them. Central perforations are formed in the transverse walls *b* for the loose insertion of the similar thimbles *d*, which when in place are axially coincident. The thimbles *d* have each a radial flange *d'* formed on one end, which flanges are designed to limit the sliding movement outwardly of the thimbles that receive and afford support to a link-bolt B, which is loosely inserted in them, as shown in Fig. 2. Such a sufficient length is given to the link-bolt B between the head *e* on its front end and a transverse key-hole *g* near its rear end as will allow a proper degree of endwise motion to said bolt and en-

gaged thimbles in service, and upon its body, between the walls *b*, one or more buffer-springs C are placed. There is a wrought-metal washer *h* placed on the link-bolt B at its rear end, which is interposed between the end of the thimble *d* and a cross-key *i*, the latter being inserted in the key-hole *g* and therein retained by a split key *i'* or similar means.

At the front end of the link-bolt B a draw-head D of any approved form is attached, which is secured to the bolt by insertion of the latter through a perforation in the rear wall of the draw-head, as indicated in Figs. 1 and 2, where the rear part of a draw-head is shown by dotted lines.

To secure efficacy in operation, the length of the bolt B between the bearing-wall of its head *e* and the washer *h* is proportioned so that the insertion of the key *i* will bind the draw-head upon the end of an adjacent thimble *d* and the washer on the outer end of the other thimble, the springs C being slightly compressed thereby, so that draft force on the draw-head D will be cushioned by the springs and percussion on the outer end of the draw-head be absorbed also by said springs in an obvious manner.

In order to afford lightness and strength to the spring-box A, its side walls *a* are made as thin as is admissible and their bodies stiffened by series of reinforce-webs *a'*, that are formed integrally therewith and are preferably arranged at spaced intervals parallel to each other on each side wall. The spring-box has a proper number of locking-ribs *m* formed on the exterior surface of the side walls *a*, at opposite points preferably, which ribs are designed to enter grooves in the draft-timbers E of the car-frame and by their close engagement therewith coact with the bolts *n* in securing the spring-box to said timbers. The bolts *n* are located in opposite perforations made for them in the side walls *a* of the spring-box, and their heads are embedded in sockets or recesses made for their reception, or the nuts of the bolts may be placed in said recesses *n* and thereby be held from turning when the bolts are entered and screwed up so as to bind the spring-box to the timbers E, through which they are passed to engage the nuts.

In order to prevent the springs C from loss

in case the link-bolt B should be broken, a keeper plate or bar F is secured transversely by its ends upon the timbers E below the spring-chamber c, as shown by dotted lines in Fig. 1, and as the springs named can be removed or placed in position by the removal of the cross-key i' and endwise movement of the link-bolt it is apparent that an exchange of a broken or worn-out spring for a new one can be quickly and securely effected.

Having thus described our invention, what we claim as new, and desire to secure by Letters Patent, is—

1. A spring-box for car-couplings, consisting of two parallel side walls having interior stiffening-webs and exterior locking-ribs and two transverse apertured walls integral with the side walls and forming therewith a spring-chamber, the side walls projecting beyond the transverse walls, substantially as herein shown and described.

2. In a spring-box for car-couplings, the combination, with a box having integral side and transverse walls forming a chamber open at top and bottom, the end walls projecting beyond the transverse walls and the trans-

verse walls being apertured, of flanged thimbles in said apertures, a link-bolt passing through the thimbles and provided with a head at one end, and a spring in the chamber and surrounding the link-bolt, substantially as described.

3. The combination, with a coupling draw-head, of a spring-containing box securable on car-timbers, consisting of two parallel side walls having exterior locking-ribs on each wall, interior stiffening-webs thereon, two transverse spaced walls integral therewith, each cross-wall centrally apertured, a flanged thimble in each apertured cross-wall and adapted to support a link-bolt, a longitudinally-movable link-bolt having its head engaging the rear wall of a draw-head through which said bolt passes, a washer and a cross-key on the other end of the bolt, and a buffer-spring on the bolt between the transverse walls, substantially as described.

PATRICK PAUL McMAHON.

GEORGE MARCUS WILCOXSON.

Witnesses:

C. S. BASSETT,

J. N. HUSKEY.