

UNITED STATES PATENT OFFICE.

WILLIAM W. WATERBERRY, OF WATERTOWN, WISCONSIN.

DRAFT-COUPLING.

SPECIFICATION forming part of Letters Patent No. 334,999, dated January 26, 1886.

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To all whom it may concern:

Be it known that I, WILLIAM W. WATERBERRY, of Watertown, in the county of Jefferson, and in the State of Wisconsin, have
5 invented certain new and useful Improvements in Draft-Couplings; and I do hereby declare that the following is a full, clear, and exact description thereof.

My invention relates to draft-couplings for
10 use with all varieties of heavy vehicles, as well as with heavy farming implements—such as plows, cultivators, harvesting and mowing machines, &c.; and it consists in certain peculiarities of construction, as will be fully set
15 forth hereinafter.

In the drawings, Figure 1 is a vertical central longitudinal section of my device. Fig. 2 is a plan view, and Fig. 3 is a vertical cross-section on the line $x x$ of Fig. 2.

20 A is the front part of my draft-coupling, and B the rear part, and both parts are hollow or cylindrical for the greater part of their length, the bores or chamber $A' B'$ of the two parts coinciding, and the said parts being
25 united by a screw-thread connection, as shown at $a b$, as well as by a screw-bolt, b' , passing through threaded perforations in the two parts. The part A has a front extension, A^2 , beyond the chamber A' , and this is provided with a
30 horizontal opening, a' , connecting with chamber A' , and with a vertical transverse slot, a^2 , while the upper part, A^3 , of the part A is provided with transverse slots a^3 and bolt-holes
35 a^4 , for the ready attachment of my draft-coupling to the appropriate part of the frame or truck of the vehicle or other article.

C is a movable head or diaphragm, which is perforated for the reception of one end of the
40 draft-rod D, and rounded or concaved about said perforation on one side to form a socket-bearing for the half-ball d , similarly perforated and slipped over the end of the rod D, and kept in place thereon by the nuts $d' d^2$. The perforation in the head C is oblong, so as
45 to give some little play to the rod D on the ball-and-socket principle at that point.

E is a stout spiral spring in the chamber A' , and F is a spiral spring of less force for the
50 chamber B' , the adjacent ends of the two springs being separated by and pressing against the diaphragm C. The front end of

the rod D is supported by passing through the central eye, g , of a screw-bolt, G, whose shanks pass up through and down through the slots
55 $a^2 a^3$ in the extension A^2 , and are screw-threaded and provided with nuts $g' g'$, of greater diameter than the said slots, whereby the rod D may be moved laterally and kept horizontal, the said rod being provided with an eyebolt,
60 D', at the front, for attachment to the whiffle-tree, &c.

By the use of my improved draft-coupling the horse or team is enabled to get a start and commence pulling before encountering the
65 entire weight of the load, and this gradual draft is less injurious to the horse, and makes his task, every time he starts, much easier to him. The resistance of the rear spring is less than of the front spring; but it serves as a
70 cushion or buffer at stopping, and also exerts its own force when the front spring is drawn forward, and thus aids in preserving the advantage gained by such forward draft.

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

1. An improved draft-coupling, consisting of two chambered or cylindrical parts with springs of different force in the two chambers,
80 separated by a movable diaphragm, to which is connected the draft-rod, substantially as set forth.

2. In a draft-coupling, the combination of two chambered or cylindrical parts containing
85 spiral springs of different force, a movable diaphragm with perforation and concavity or socket, a screw-bolt adapted to move laterally in a vertical slot in the front end of the forward part of the coupling, and a draft-rod
90 supported in the eye of the screw-rod and perforation of the movable diaphragm, and provided with a ball-bearing at the rear end, and suitable tightening-nuts, substantially as set forth.

In testimony that I claim the foregoing I
95 have hereunto set my hand, at Milwaukee, in the county of Milwaukee and State of Wisconsin, in the presence of two witnesses.

WILLIAM W. WATERBERRY.

Witnesses:

H. G. UNDERWOOD,
G. A. PLATZ.