C. E. GILLESPIE, H. J. & F. J. SPRINGER.
Thill-Coupling.

No. 212,308. Patented Feb. 18, 1879.

FIG. 1.

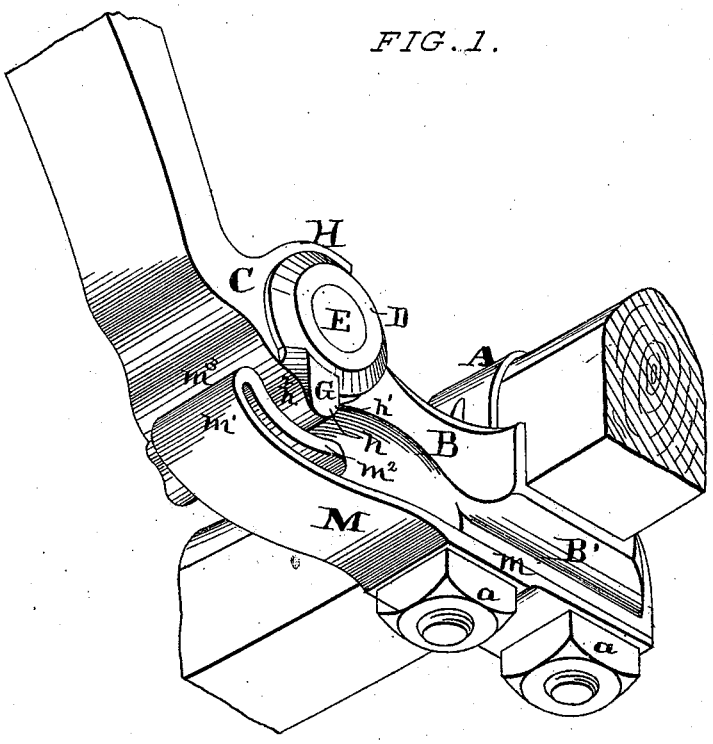
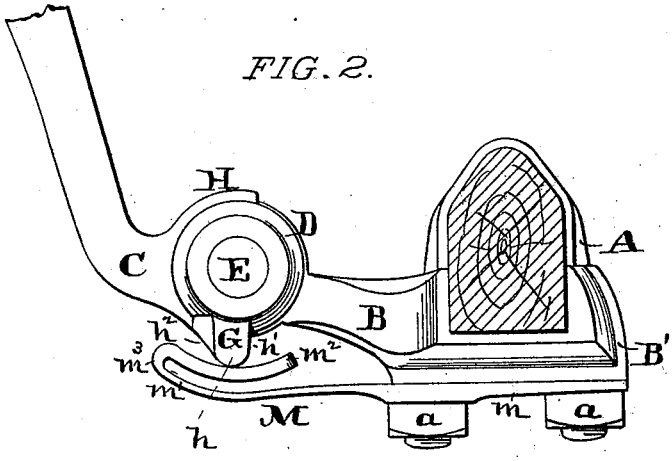


FIG. 2.



ATTEST:
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UNITED STATES PATENT OFFICE.

CYRUS E. GILLESPIE, HENRY J. SPRINGER, AND FREDERICK J. SPRINGER, OF EDWARDSVILLE, ILLINOIS.

IMPROVEMENT IN THILL-COUPLINGS.

Specification forming part of Letters Patent No. **212,308**, dated February 18, 1879; application filed October 25, 1878.

To all whom it may concern:

Be it known that we, CYRUS E. GILLESPIE, HENRY J. SPRINGER, and FREDERICK J. SPRINGER, residents of Edwardsville, Illinois, have made a new and useful Improvement in Thill-Couplings, of which the following is a full, clear, and exact description, reference being had to the annexed drawings, making part of this specification, in which—

Figure 1 is a view, in perspective, of a thill-coupling having the improvement, looking from beneath; and Fig. 2, a side elevation of the same.

Like letters refer to like parts.

The special aim of the present improvement is to provide means for preventing the coupling from rattling.

The improvement is especially adapted to the construction patented by Cyrus E. Gillespie and Henry J. Springer, June 27, 1876.

Referring to the drawings, A represents the axle-clip, B the hook, B′ the axle-bed, and C the shaft-socket, having the cheeks D, pin E, guard G, and shield H, all as in the construction referred to, saving as modified by the present improvement, which is as follows: M represents a spring, arranged to constantly press the two main parts of the coupling together, being connected at one end, *m*, with that portion of the coupling which is upon the axle, and so that it can be properly held, and at its outer end, m^1, bearing, in the manner hereinafter described, against the shaft-socket, and so as to press the latter against its bearing in or upon the hook, and sufficiently to prevent rattling.

The construction and arrangement of the spring are as follows: A flat strip is fastened at its end *m* to the under side of the axle-bed by means of the nuts *a a*, and extends thence outwardly to and bears against the shaft-socket, and against that part thereof termed the "guard" G. The latter, at the point where the spring touches it, is extended downward, as shown, to enable the guard and spring to move freely upon each other. The spring presses upward, and acts to keep the socket closely against the hook, even when the parts of the coupling are much worn.

As the shaft-socket moves upon the hook, the extension *h* is moved in and out over the spring; hence, if the extension bore directly upon the spring, the resistance of the latter would be unequal during the movement of the socket, causing the spring, as we have ascertained practically, to soon give way. To obviate this difficulty we employ what we term the "equalizer" feature of the spring—that is, the outer end of the spring is turned over upon its main portion, forming the bearing m^2, and upon which the extension *h* immediately bears. The part m^2 is made stouter than the spring proper, so as to be rigid under the pressure of the socket, and so that the strain will always be transmitted to the end m^3 of the spring, whether the extension *h* is pressing upon the inner or the outer end of the bearing m^2. The result is the spring always exerts a uniform upward pressure upon the socket.

We are aware that springs have heretofore been used to press the two parts of a thill-coupling together, and we therefore do not claim such, broadly; but

We claim—

The combination of the clip A, axle-bed B′, hook B, shaft-socket C, guard G, having the extension *h*, and spring M, having the bearing m^2, the latter being elongated and made thicker than the main portion of the spring, substantially as described.

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Witnesses:
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