

(Model.)

F. J. FLOWERS.

Safety Attachment for Thill Couplings.

No. 238,670.

Patented March 8, 1881.

Fig. 1.

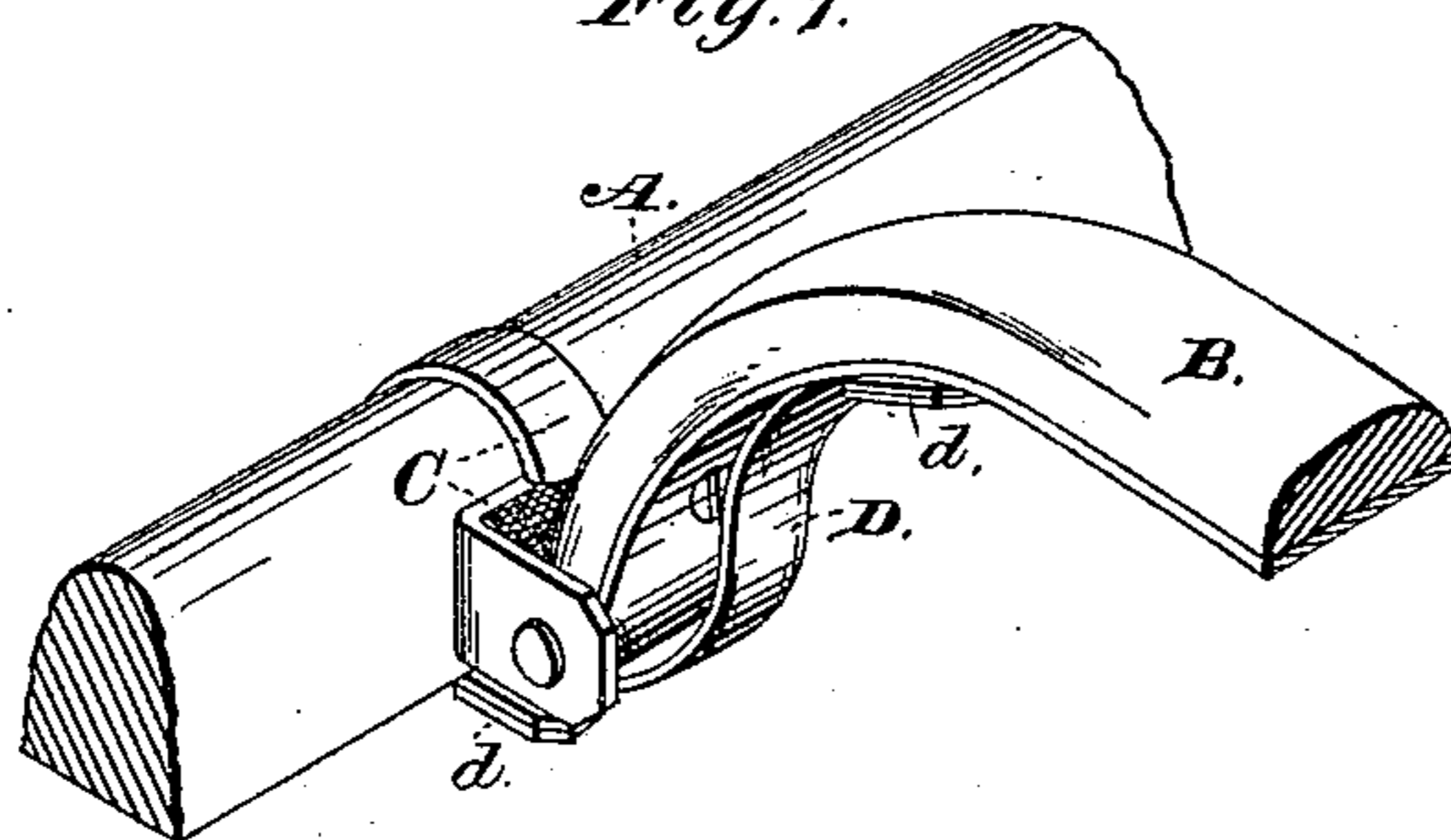


Fig. 2.

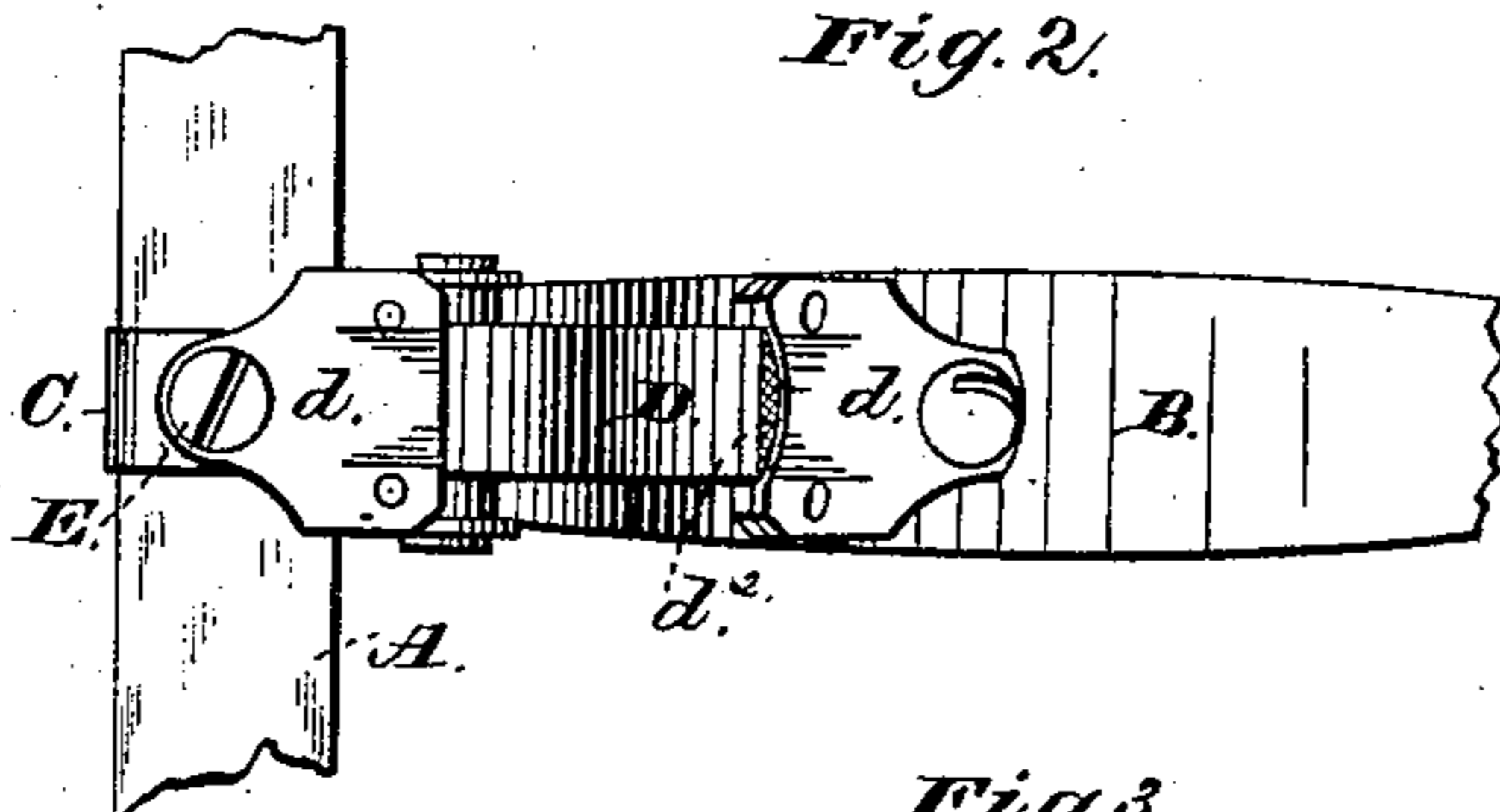


Fig. 3.

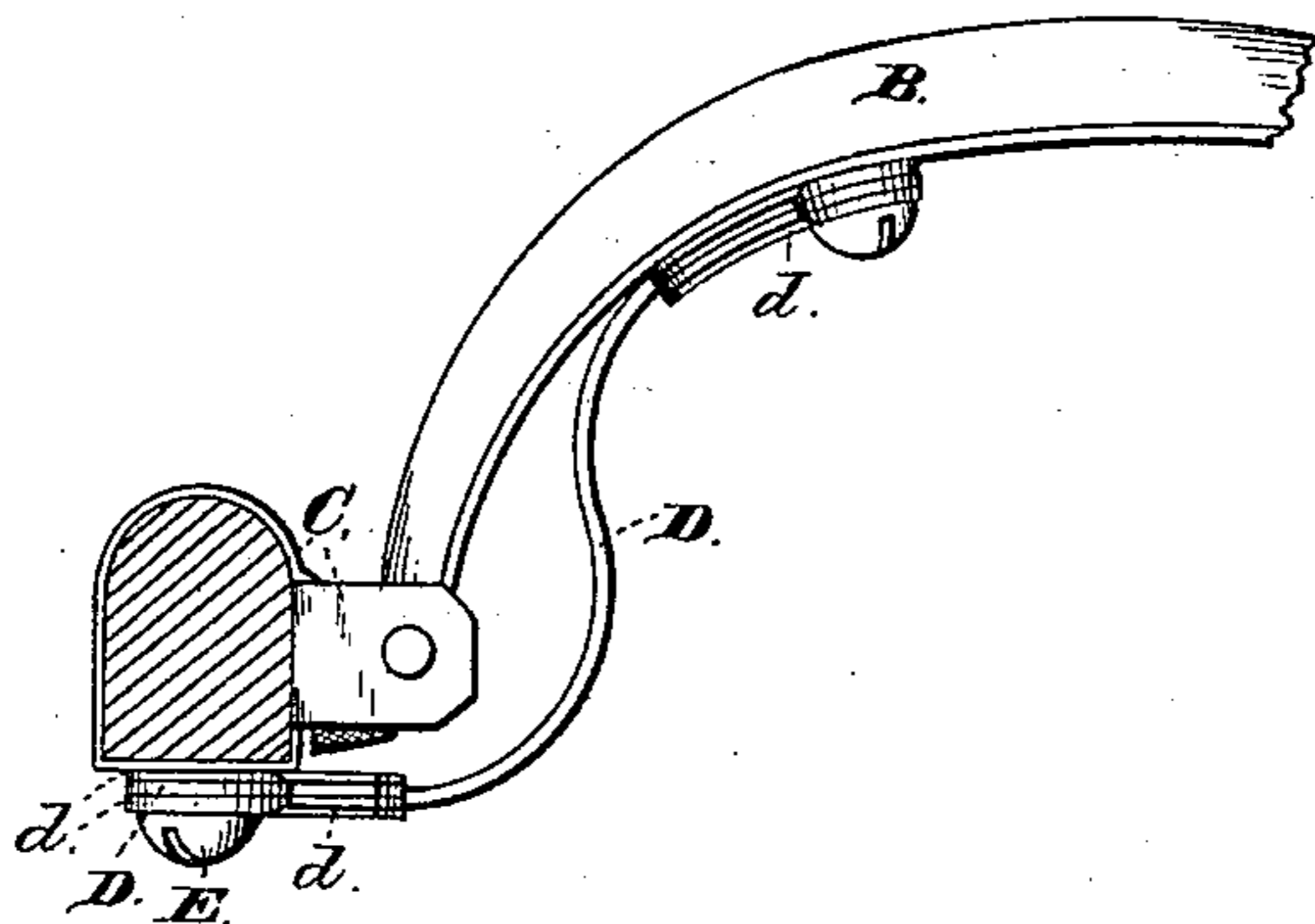
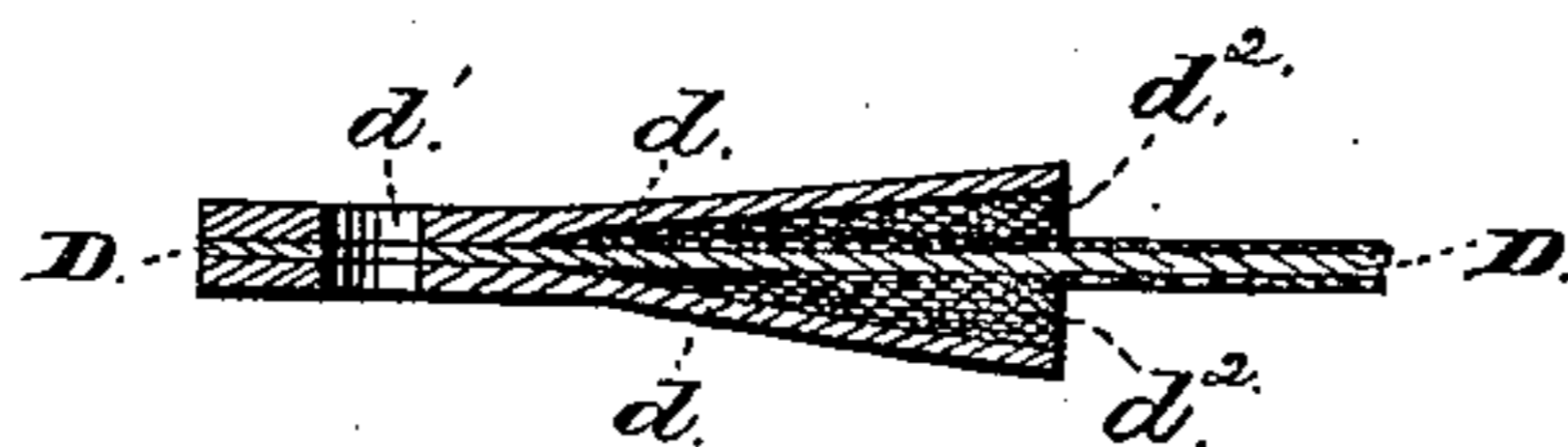


Fig. 4.



Witnesses:

Jas. E. Hutchinson.
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Inventor:

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UNITED STATES PATENT OFFICE.

FRANCIS J. FLOWERS, OF NEW YORK, N. Y.

SAFETY ATTACHMENT FOR THILL-COUPPLINGS.

SPECIFICATION forming part of Letters Patent No. 238,670, dated March 8, 1881.

Application filed January 20, 1881. (Model.)

To all whom it may concern:

Be it known that I, FRANCIS J. FLOWERS, of New York city, in the county of New York, and in the State of New York, have invented certain new and useful Improvements in Safety Attachments for Thill-Couplings; and I do hereby declare that the following is a full, clear, and exact description of the invention, reference being had to the accompanying drawings, making a part of this specification, in which—

Figure 1 is a perspective view of a carriage-shaft provided with my safety attachment. Fig. 2 is a plan view of the lower side of the same. Fig. 3 is a side elevation of said parts, and Fig. 4 is a longitudinal section of one end of my safety-plate.

Letters of like name and kind refer to like parts in each of the figures.

It has heretofore been customary to extend a leather strap from the front axle of a carriage to some point upon the lower side of each shaft, in advance of its connection with said axle, for the purpose of preventing the shafts from becoming disconnected from the axle in the event of accident to the coupling; but experience has shown that but little time is necessary before said straps become sufficiently rotten to render certain their breakage whenever compelled to bear the strain necessary to draw the carriage.

To remedy such defect, and to provide an efficient, reliable, and easily-applied safety attachment, is the design of my invention, which consists in combining with the axle and shaft of a carriage a flexible metal plate having one of its ends attached to the lower side of each of said parts, substantially as and for the purpose hereinafter specified.

In the annexed drawings, A represents the front axle of a carriage, and B one of a pair of shafts, which is connected with said axle, in the usual manner, by means of any ordinary form of coupling, C.

Extending between the lower side of the axle A and the lower side of the shaft B, at a point in front of and above the coupling C, is

a metal plate, D, which has a width somewhat less than the width of said shaft, is made thin and flexible, and at each end is secured between two plates, *d*, that together form a clamp, and are provided with one or more openings, *d'*, for the passage of a screw or bolt, E, by means of which said clamp is secured to or upon the adjacent part—the axle or shaft.

The plate D conforms longitudinally to the general shape of the parts beneath which it passes, and when in position is drawn sufficiently taut to hold the parts of the shaft-coupling firmly together and prevent the same from rattling without interfering with all necessary freedom of motion of the shaft, during which motion said plate bends as said shaft is moved upward or downward.

Should the coupling C break or become disconnected the forward movement of the draft-animal would simply cause the plate D to be straightened, when it would easily sustain the strain without liability of injury.

The plate D is preferably made from brass, although iron or steel may be used, if desired, and is covered with leather, to protect it from corrosion, and to give to its exterior a better appearance.

In order that the plate D may not be liable to break where the clamps *d* grasp its ends, I place between said parts, at such points, pieces of rubber, *d*², or other elastic material, as shown in Fig. 4.

Having thus fully set forth the nature and merits of my invention, what I claim as new is—

In combination with the axle and shaft of a carriage, a flexible metal plate having one of its ends attached to the lower side of each of said parts, substantially as and for the purpose specified.

In testimony that I claim the foregoing I have hereunto set my hand.

FRANCIS J. FLOWERS.

Witnesses:

HENRY G. MARTIN,
BERTHA AYERS.