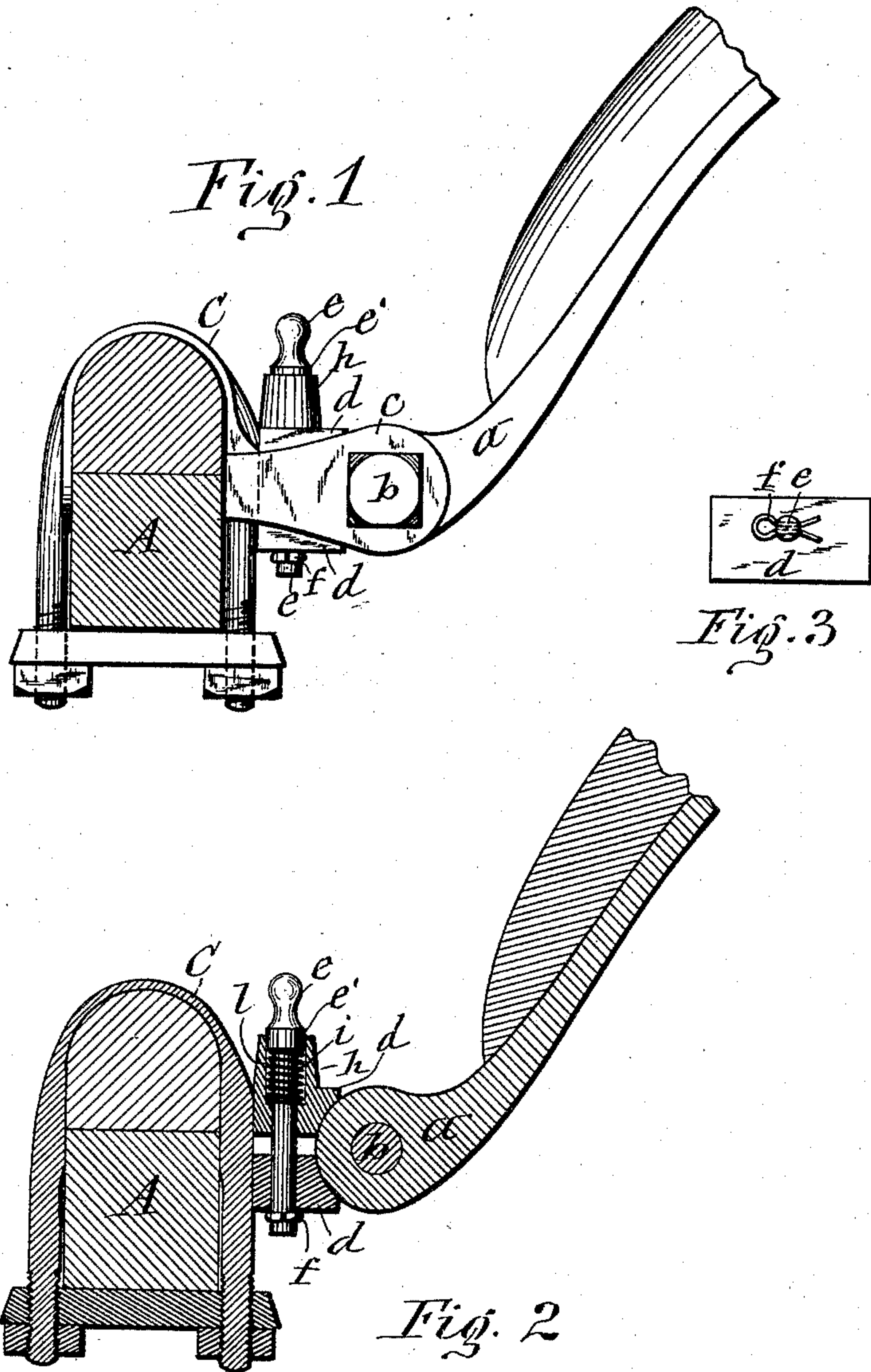


(No Model.)

A. H. DAY.
THILL TIGHTENER.

No. 442,108.

Patented Dec. 9, 1890.



WITNESSES:

C. L. Bendixon
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UNITED STATES PATENT OFFICE.

ALBERT H. DAY, OF MOHAWK, NEW YORK, ASSIGNOR TO ALBERT R. WARREN AND WILBUR EDDY, BOTH OF SAME PLACE.

THILL-TIGHTENER.

SPECIFICATION forming part of Letters Patent No. 442,108, dated December 9, 1890.

Application filed April 11, 1890. Serial No. 347,435. (No model.)

To all whom it may concern:

Be it known that I, ALBERT H. DAY, of Mohawk, in the county of Herkimer, in the State of New York, have invented new and useful
5 Improvements in Thill-Tighteners, of which the following, taken in connection with the accompanying drawings, is a full, clear, and exact description.

This invention relates to devices employed
10 to prevent the thill-coupling from rattling; and the invention has particular reference to the species of thill-tighteners in which two wedge-blocks are crowded against the back of the thill-iron by a bolt coupling said blocks
15 together and provided with an elastic bearing on one of the said wedge-blocks.

The object is to obtain a more positive and more secure hold on the eye of the thill-iron and to allow both wedge-blocks to be readily
20 removed from their coupling-bolt when required to renew said blocks; and to that end the invention consists in the combination, with the thill-shackle clip, of the wedge-blocks, both resting against the said clip and bearing
25 on the eye of the thill-iron and formed with coinciding vertical perforations and with a socket on the top block, a straight bolt passing through said socket and channels and formed with a collar on the end adjacent to
30 the socket and provided with a retainer beneath the bottom block, and a spiral spring embracing the upper end of the bolt and seated in the socket and bearing on the collar of the bolt, all as hereinafter more fully de-
35 scribed, and specifically set forth in the claim.

In the annexed drawings, Figure 1 is a side view of a thill-coupling provided with my improved thill-tightener. Fig. 2 is a vertical longitudinal section of the same, and Fig. 3
40 is a detached inverted plan view of the thill-tightener.

A represents the front axle, and C one of the usual clips of the shackle-irons which are fastened to the axle, said clip being provided
45 with perforated ears c c, between which the eye of the thill-iron a is inserted and secured by a bolt b, passing through said parts in the usual and well-known manner.

d d are the two wedge-blocks which are in-
50 serted between the back of the thill-iron a

and front of the usual shackle-clip C from the top and bottom thereof. Both of said blocks are formed with vertical rear faces, by which they rest against the front of the clip C, as shown in Figs. 1 and 2 of the drawings, the
55 front faces of said blocks being beveled or concaved to properly bear against the rear of the eye of the thill-iron. The said wedge-blocks are provided with vertical coinciding perforations, and one of said blocks, preferably the top block, is formed with an up-
60 wardly-projecting hub h, which is hollow or formed with a socket i, somewhat larger than the vertical perforation of the block and concentric therewith. Through said socket and
65 perforations of the blocks d d passes a bolt e, which is formed with a collar e' on the end adjacent to the socket, and is provided at the opposite protruding end with a suitable detachable retainer, preferably a split key f, as
70 shown in Fig. 3 of the drawings.

In the socket i is seated a spiral expansion-spring l, which surrounds the inclosed portion of the bolt e and presses with one end on the block d and with the opposite end on the col-
75 lar e', and thereby crowds the two wedge-blocks toward each other and toward the eye of the thill-iron, and tightens the latter so as to effectually prevent the rattling of the same.

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

In combination with the front axle, shackle-clip, and thill-iron, the two wedge-blocks d d, both formed with vertical rear faces resting
85 against the aforesaid clip and provided with coinciding vertical perforations, and the top block being formed with the socket i, the straight bolt e, passing through said perforations and socket and formed with the collar
90 e', the spring l, seated in the socket and pressing against the said collar, and a detachable retainer on the opposite end of the said bolt, substantially as described and shown.

In testimony whereof I have hereunto
95 signed my name this 27th day of March, 1890.

ALBERT H. DAY. [L. S.]

Witnesses:

J. B. RAFTER,
FRANK TALBOT.