Torrey & Tilton,

Door Spring.

No. 18,164. Patented Sep. 8, 1857.

Fig 1.

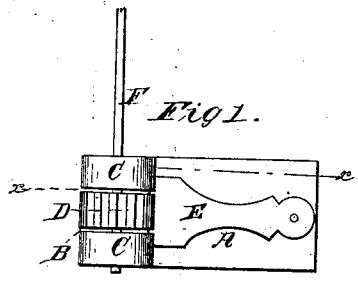


Fig 5.

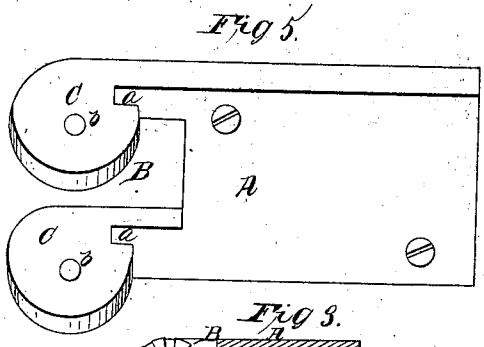


Fig 2.

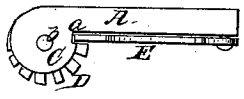


Fig 3.

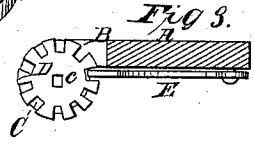
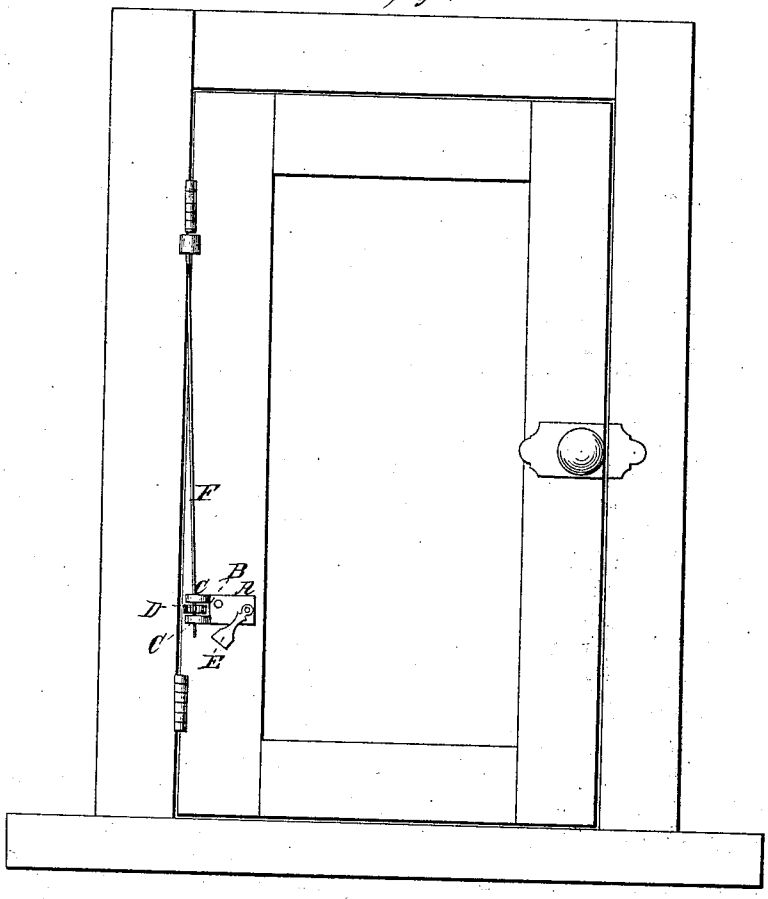


Fig 4.



N. PETERS, PHOTO-LITHOGRAPHER, WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

EDWARD P. TORREY AND W. B. TILTON, OF NEW YORK, N. Y.

DOOR-SPRING.

Specification forming part of Letters Patent No. 18,164, dated September 8, 1857; Reissued February 10, 1863, No. 1,404.

To all whom it may concern:

Be it known that we, EDWARD P. TORREY and WM. B. TILTON, of the city, county, and State of New York, have invented a new and Improved Arrangement of the Parts of the Bracket Employed for Adjusting the Upright Torsional Rod-Spring; and we do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawings, forming part of this specification, in which—

Figure 1, is a side view of a bracket having its parts arranged after our invention. Fig. 2, is an edge view and Fig. 3, a horizontal section of the same. Fig. 4, is a front view of a door with our improved bracket, and the torsional rod applied to it. Fig. 5, is a perspective view of the bracket minus the cog wheel and pivoted stop plate.

Similar letters of reference in each of the several figures indicate corresponding parts.

The object of our invention is to render practicable and useful the adjusting bracket of the upright torsional rod spring, contrived by T. Riggin; said bracket consisting of a turning socket with a flange at its upper end, in which flange a series of adjusting holes are formed. A bracket thus constructed and arranged is objectionable, first because its adjusting socket and flange is liable to be twisted and sprung up out of its seat, and second because the small pin, which is necessarily used to hold the spring to whatever tension it may be adjusted is continually being snapped or cut off. This last objection is of such a nature as to interfere materially with the sale of the springs and is the cause of almost universal complaint.

The nature of our invention consists in constructing the bracket A, with an open central slot B, in its outer end, and forming a stop, notch or recess *a*, in each of the ears C, C, between which the slot is cut; and arranging an adjusting barrel cog wheel D, between said ears, and a flat pivoted plate E, on the face of the bracket and in such relation to the cog wheel D, and the stop notches *a*, in the ears C, C, of the bracket A, that by turning it, the plate, down at right angles to the torsional rod F, which passes through the round holes *b*, *b*, in the ears, and the square hole *c*, in the cog wheel, said rod will be firmly held, through the cog wheel D, notches *a*, *a*, and plate E, from moving, or retained at any tension to which it may have been set.

It may be evident that by placing the adjusting cog wheel between two ears, instead of on top of the bracket, as in Riggin's arrangement all chance of the rod and cog from twisting and springing up out of its seat is completely avoided, as the ears serve to retain it in a horizontal position. And by having the cog thus arranged and the notches formed in the ears, a broad, stiff stop plate can be used in place of a pin, as in Riggin's arrangement, and thus all liability of the spring losing its tension by the snapping or cutting off of the stop device avoided. With Riggin's arrangement the pins cannot be made strong enough to bear the strain without making the contrivance too clumsy, and consequently jutting out from the door so much as to make it impracticable, and even if this were done the pin would very often be wrenched off. Now our catch is not only strong enough in itself, but is supported by the notches *a*, *a*, in the bracket, on both sides, and consequently can bear the utmost tension, as all the strain is removed from the pivot to the stop notches.

We do not claim any of the parts separately considered, neither do we claim the combination of a stop pin and adjusting device applied for regulating the upright torsional rod spring irrespective of the arrangement of said parts but

What we do claim as our invention, and as a necessary auxiliary to render such adjusting device practicable and useful, is—

The arrangement of the adjusting cog-wheel between the two notched ears of the bracket, and the pivoted stop plate on the face of the bracket, and in such relation to said cog wheel and the notches in the ears, that the whole operating together as herein specified will form a firm and substantial adjusting device for the upright torsional rod spring, as set forth.

EDW. P. TORREY.
WM. B. TILTON.

Witnesses:
BISSET BARQUET,
JULIUS J. LEE.

[FIRST PRINTED 1912.]