

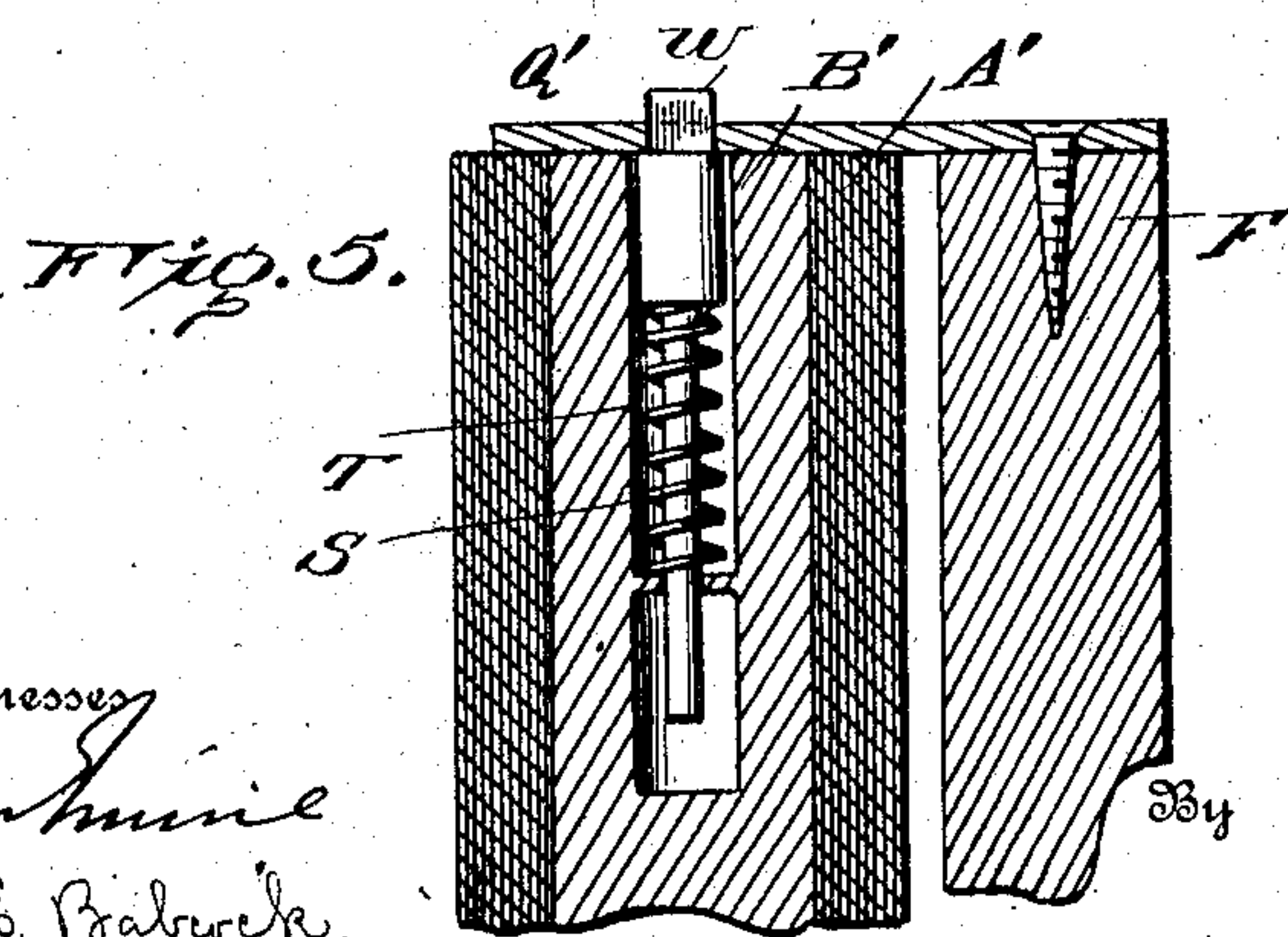
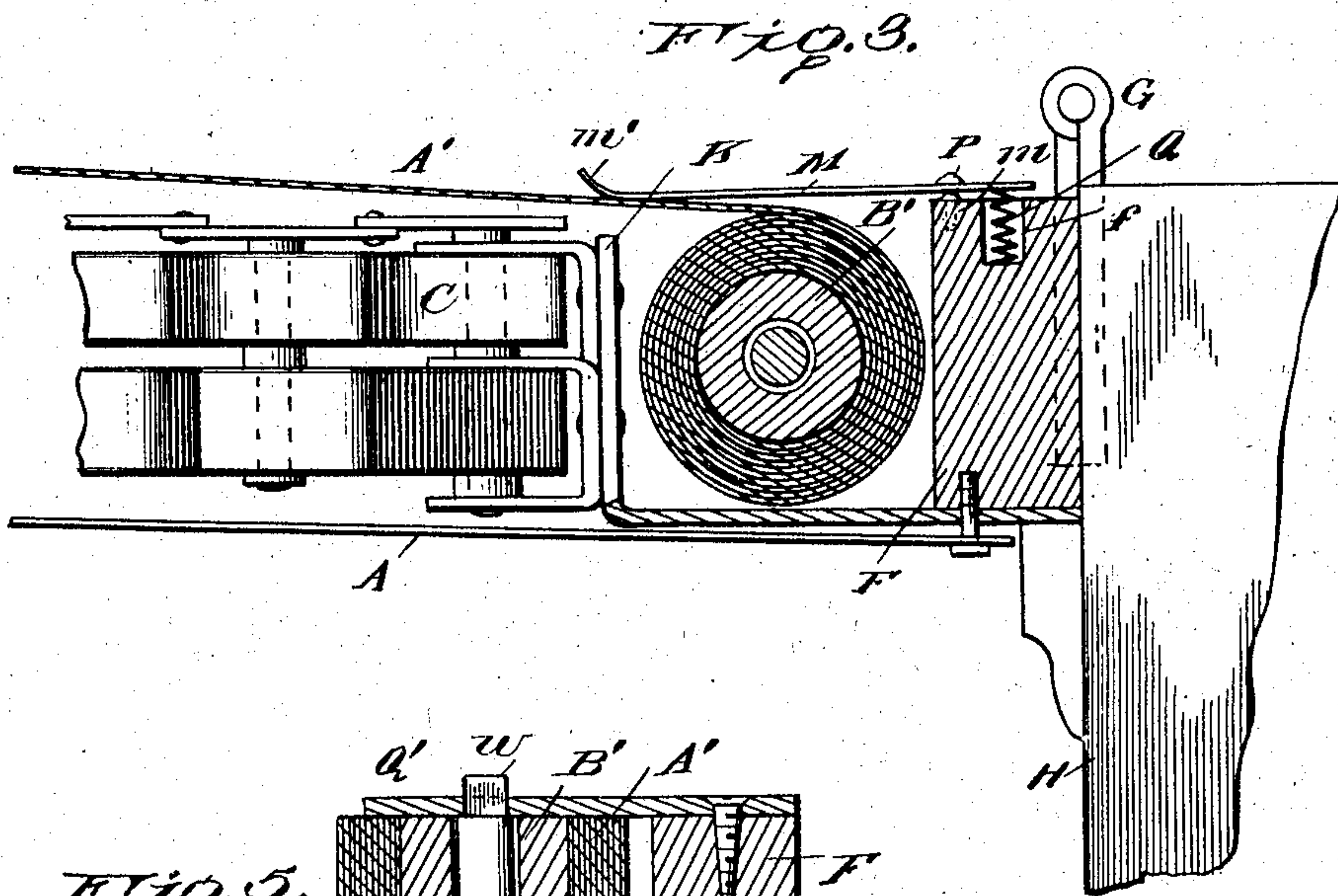
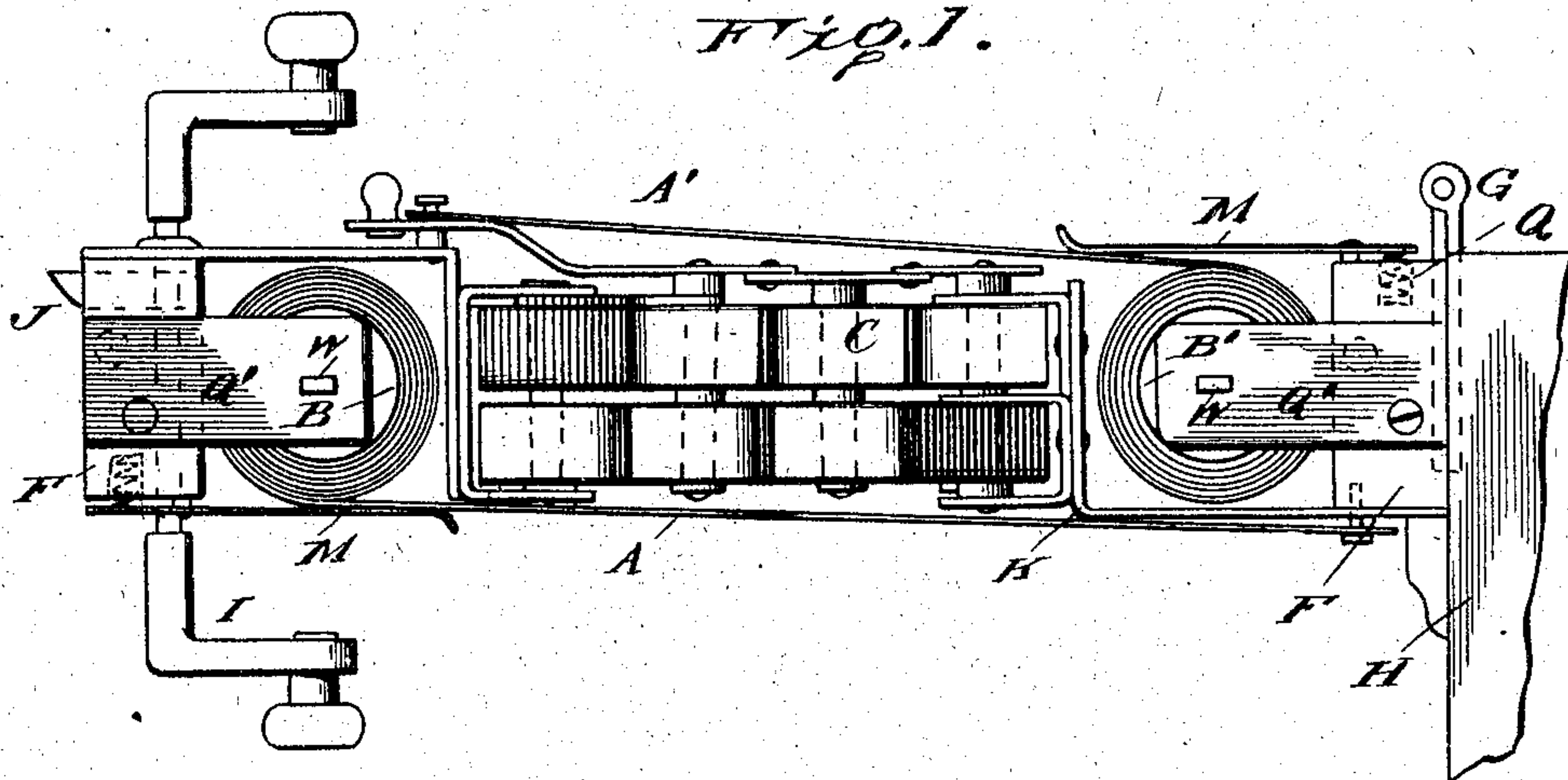
No. 791,498.

PATENTED JUNE 6, 1905.

G. J. RECORD.  
DOOR OR SCREEN.

APPLICATION FILED AUG. 17, 1904.

2 SHEETS—SHEET 1.



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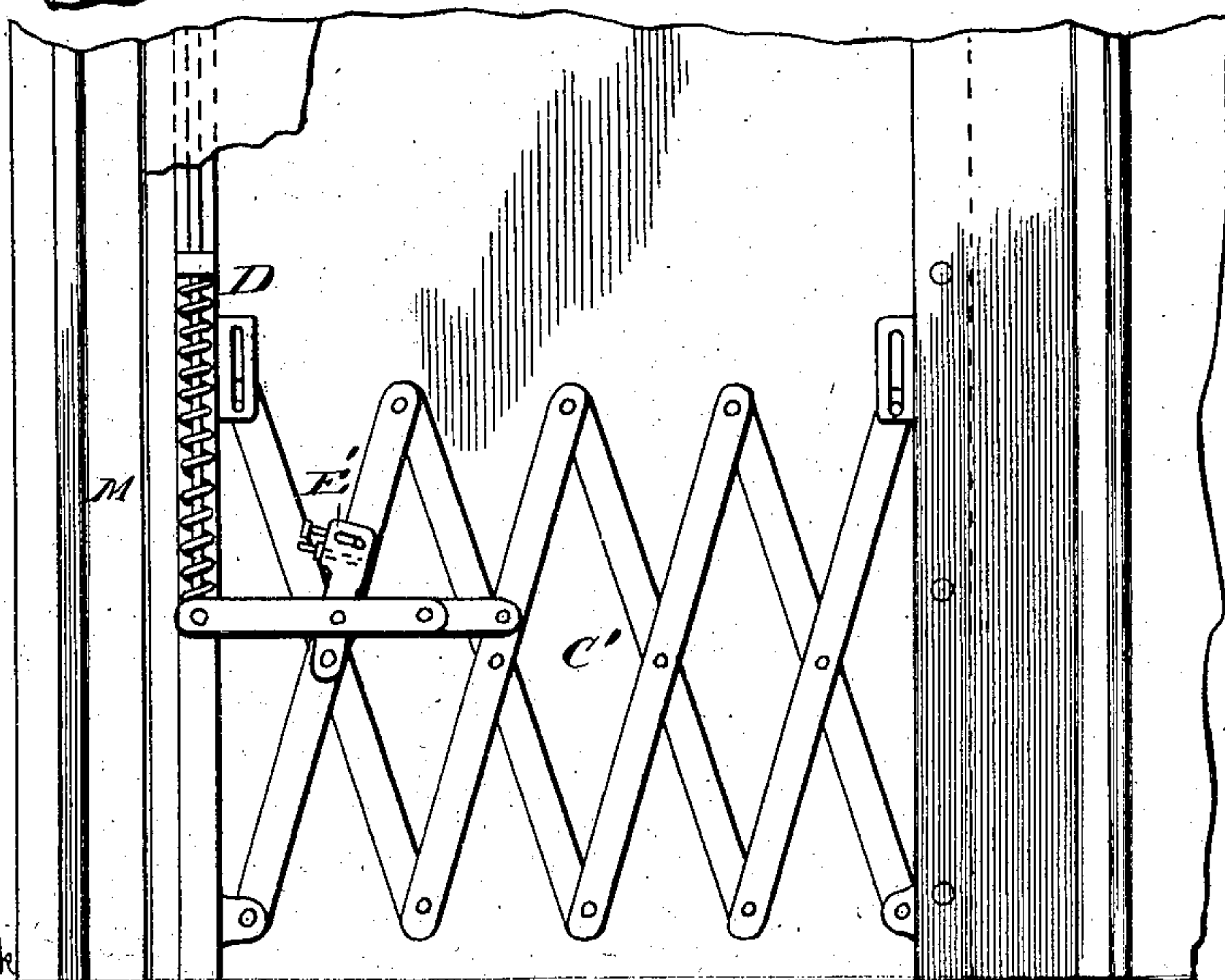
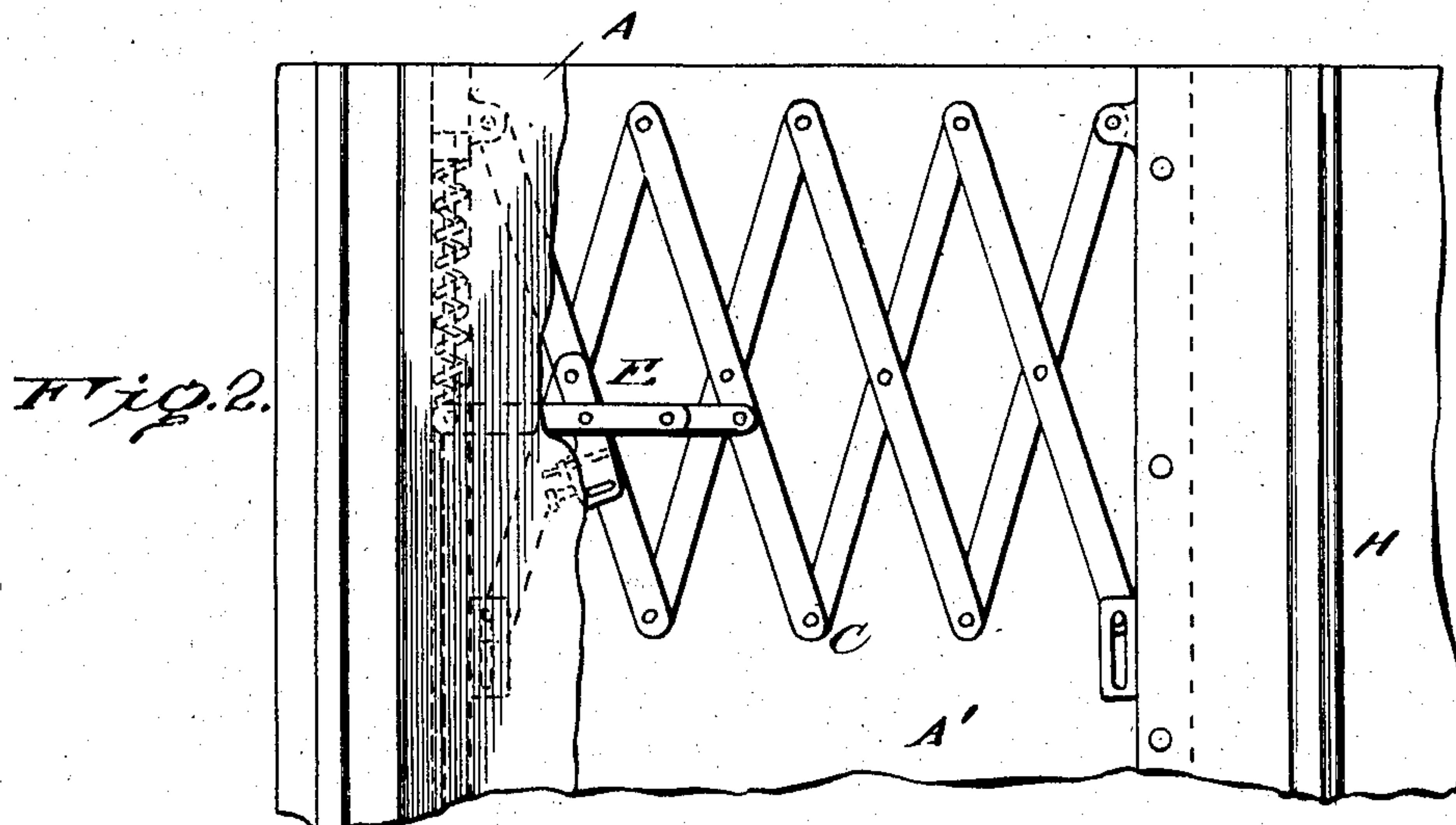
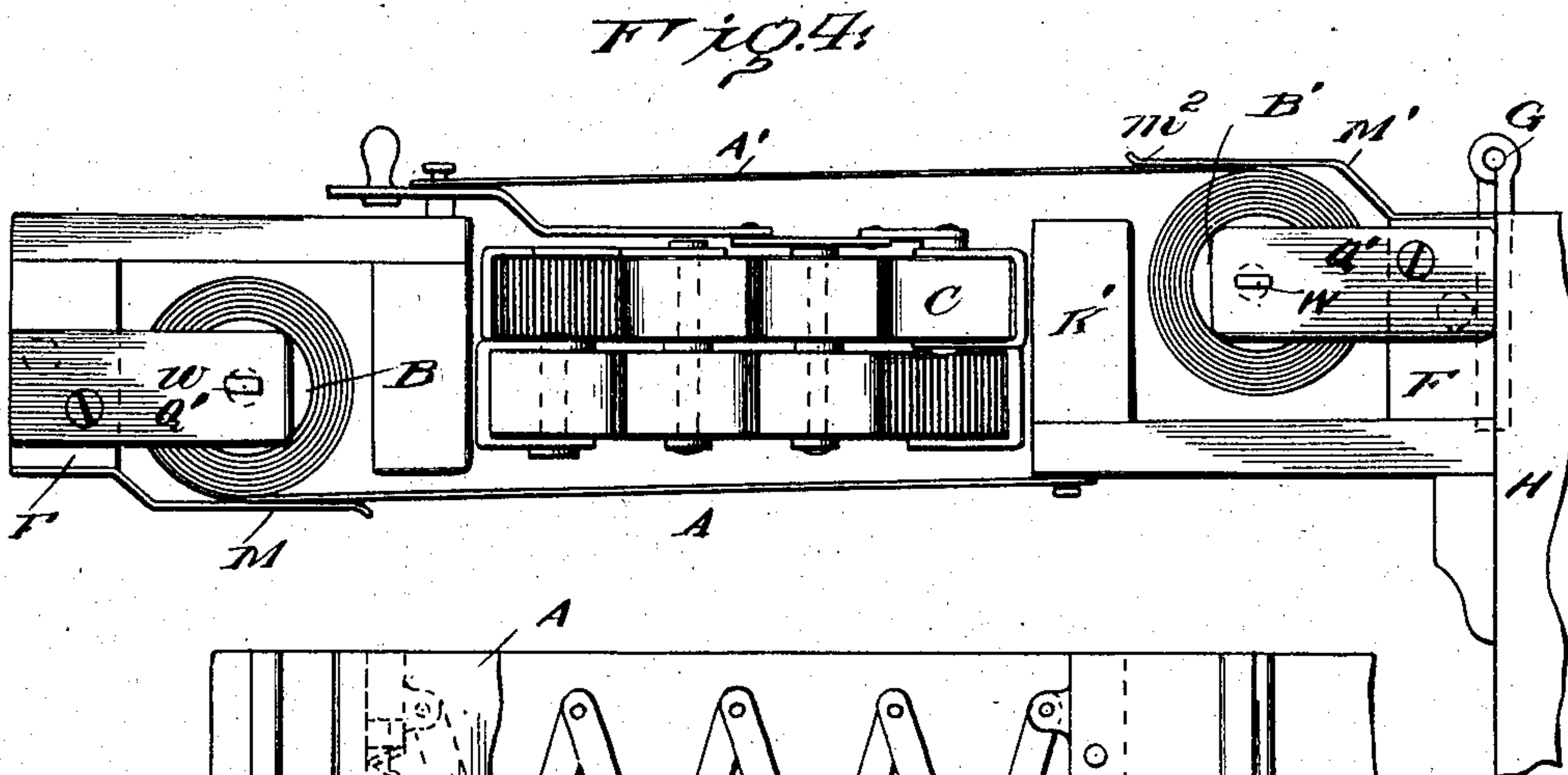
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# UNITED STATES PATENT OFFICE.

GEORGE J. RECORD, OF CONNEAUT, OHIO.

## DOOR OR SCREEN.

SPECIFICATION forming part of Letters Patent No. 791,498, dated June 6, 1905.

Application filed August 17, 1904. Serial No. 221,142.

*To all whom it may concern:*

Be it known that I, GEORGE J. RECORD, a citizen of the United States, residing at Conneaut, in the county of Ashtabula and State of Ohio, have invented certain new and useful Improvements in Doors or Screens; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention is an improvement on the subject-matter of my application Serial No. 189,562; and it consists in the construction and combination of parts hereinafter more particularly set forth and claimed.

In the accompanying drawings, Figure 1 represents a plan view of a door-section embodying my invention. Fig. 2 represents a side elevation of a part of the same, showing one of the metal shields in full and the proximate parts broken away. Fig. 3 represents a transverse horizontal section through Fig. 2 on the plane passing through the upper springs bearing against the shields. Fig. 4 represents a plan view of one end of a modified form of door. Fig. 5 represents a detail sectional view of the means for permitting detachment of the rollers.

A and A' designate two sheets or curtains of flexible material on opposite sides of the door and attached, respectively, to upright spring-rollers B B', arranged at the opposite ends of the door-section and so as to draw on said sheets in reverse directions and take up the slack of the flexible body of the door-section while contracting the latter, thereby preserving a smooth exterior for the door as it opens and closes and hiding the excess of fabric within the section, at the ends thereof. Each of these rollers and the attached flexible sheet correspond substantially to the roller and sheet of said application, as do also each of the two sets of toggle-bars C C', their latch-bars D D', and adjusting-plates or brackets E E', with their necessary attachments and appurtenances, to the like parts in the said application, each part being simply doubled and the two sets of operative parts arranged parallel to each other between the two sheets A A', which at all times com-

pletely hide them. The plates Q, in which the upper ends of the rollers B B' are journaled, with the flattened parts w' of their journals extending above the same, as in said application, are attached to the tops of upright supports F F', the support F being connected by hinge G to the door-casing H, while support F' is free and provided with door-knobs I and latch J. The position of each roller is between said support and the toggle-arms, being either approximately on the middle line passing between the two series of the latter, as shown in Fig. 1, or in line with one of said series, as shown in Fig. 4. The two series of toggle-arms are attached at each end to angular metal frames K, Fig. 1, or equivalent wooden frames K', Fig. 4, these frames being fixed to said upright supports. The upright supports and toggle-arms constitute the frame of the door or door-section.

When the door is closed, every part of the operative mechanism is within the doorway, whereas my said former application describes and shows a roller for each door-section located outside of the doorway and within the apartment or hall on that side where it is necessarily exposed to the experiments of children and the accumulation of foreign matter, besides occupying some space and being more or less unsightly. This location of said roller was for the purpose of leaving no crack between the roller and its support, through which any one might look on the reduction of diameter of the roll of flexible material as the door-section is extended. In the present instance I attain the same result more satisfactorily and neatly by employing two thin upright shields M, Fig. 1, or M', Fig. 4, preferably of sheet metal. These shields are attached, respectively, to the two upright supports F F' aforesaid, each overlapping the winding side of one of the rollers and covering the opening between said roller and the proximate support from the top to the bottom of the door. The means of attachment are preferably screws P of conical base, passing through openings m in said shields, which openings are large enough to allow a little pivotal play of said shield. Springs Q, set into recesses f of the support F or F', Figs. 1 and 3, bear out-



ward against the portion of each shield beyond said screw to force the main part of said shield gently inward against the proximate flexible sheet A or A', the shield guiding and protecting the said sheet, though permitting the free forward and backward movement thereof. The free edge of each shield is turned a little outward at  $m'$ , preventing it from impeding the movement of the sheet as the latter is wound. These springs Q may, however, be dispensed with, as shown in Fig. 4, and a resilient shield M' substituted in each instance. Instead of lying flat like the shield M this shield M' is preferably bent out at  $m^2$  for greater resiliency, the roll being set out farther on that side as well. In either case the frame K or K', being a solid plate or board from the top to the bottom of the door, effectually hides and protects the roll.

Each door-section may of course be used as an entire door for narrow doorways; but such sections will be used together to make a double door.

The two spring-rollers insure prompter and more certain action than one roller used alone.

The door-section constructed as above described is at all times equal in weight and in form at both ends, though complete within itself, and will readily swing back out of the way when this is desired. The closed door is alike in appearance on both sides, presenting only the smooth sheets or curtains, the supports meeting in the middle of the door the sheet-metal covers and the metal or wooden frames. No operative part appears except the door-knob and no opening or crack is left at any point.

This improved door is of course adapted to all the uses mentioned in the specification of my application for patent hereinbefore mentioned.

To provide for the easy detachment of the rollers, the journal W of each roller is movable endwise against the resistance of a spring S in a recess T of said roller, as illustrated in Fig. 5. When said journal is thus moved below the said plate, the roller is free to be tilted and removed.

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

1. In a door, screen, curtain or partition, the combination of a pair of spring-rollers, a pair of flexible sheets wound respectively thereon and a collapsible frame provided with means for holding said sheets extended or allowing them to be wound on said rollers at will, said rollers being at opposite ends of the said frame substantially as and for the purpose set forth.

2. In a door, screen, curtain or partition, the combination of a pair of spring-rollers at opposite ends of the frame thereof, a pair of

flexible sheets wound respectively thereon, supports for said rollers, each sheet being attached at its outer end to the support of the other roller, toggle-levers arranged in series between the said sheets and connecting the said supports, and means for holding the said toggle-levers expanded at will substantially as set forth.

3. An expansible and contractible section for a door, screen, curtain or partition provided with a shield on the side of one of its ends extending from top to bottom of the door to cover any opening which may be left at that point and also provided with an expansible and contractible frame, a body of flexible fabric and spring-actuated means for drawing on and winding said body, said means being in proximity to said shield and inclosed within the said section substantially as set forth.

4. In an expansible and contractible section for a door, screen, curtain or partition, a flexible sheet, means for holding said sheet extended, a roller on which the said sheet may be wound, and a shield of sheet metal or similar imperforate material covering the said roller and the space between it and its support, said shield being spring-pressed into contact with said sheet and extending from the top to the bottom of the door substantially as set forth.

5. In an expansible and contractible section for a door, screen, curtain or partition, the combination of two spring-rollers at opposite ends thereof, two curtains wound on said rollers respectively, means for holding the said curtains extended at will and frames to which the said means and the supports of the said rollers are attached, the said frames also covering the said rollers and the spaces between them and their supports substantially as set forth.

6. In an expansible and contractible section for a door, screen, curtain or partition, a pair of roller-supports at the ends thereof and a pair of spring-rollers journaled in bearings attached thereto, in combination with a pair of flexible sheets, each of which is attached at one end to one of said rollers and at the other end to the remoter roller-support, interposed means for holding the said section extended, and frames and shields for said rollers and the intervals between them and the said supports substantially as set forth.

7. In an expansible and contractible section for a door, screen, curtain or partition, a flexible sheet, in combination with means for holding it extended to form part of the body of the door, a roller to which said sheet is attached for winding it thereon, and devices which inclose said roller, covering the opening between said roller and its support, said devices including a sheet-metal plate



held against the said curtain by spring-pressure and extending from top to bottom of the door substantially as set forth.

8. In an expansible and contractible section for a door, screen, curtain or partition, a flexible sheet constituting part of the body of the section, a roller to which the said sheet is attached at one end and a casing and imperforate shield covering, on both sides of the section, the said roller and the space behind the same, the said shield being spring-pressed against the said sheet and extending from the top to the bottom of the door and the latter being provided with an expansible frame and means for holding it extended substantially as set forth.

9. In an expansible and contractible door, screen, curtain or partition, a flexible sheet, means for holding the said sheet extended, means for accumulating the said sheet at one end thereof as the said door contracts, and a shield of sheet metal or similar material extending from top to bottom of the said sheet and covering the space left between such accumulation and the proximate support as the accumulation is diminished by the extension of the said sheet substantially as set forth.

10. In an expansible and contractible section for a door, screen, curtain or partition, a flexible sheet forming part of the body of said section, a spring-roller on which said sheet is arranged to be wound, a support for said roller, an imperforate sheet-metal shield attached to a part of said section by means permitting pivotal motion, and springs arranged to hold the said shield against the said sheet substantially as set forth.

11. In an expansible and contractible door, screen, curtain or partition, a pair of flexible sheets on opposite sides thereof, means located between them for holding them extended, means for accumulating the said

sheets at opposite ends of the said door as the latter contracts, and shields of sheet metal or similar material extending from top to bottom of the said sheets and located diametrically opposite each other to cover the cracks or openings left between the diminishing accumulations of said sheets and the proximate supports as the door is extended substantially as set forth.

12. In an expansible and contractible door, screen, curtain or partition, a pair of flexible sheets, means arranged between them for holding the said sheets extended, spring-rollers at opposite ends of the said door on which the sheets are respectively automatically rolled as the door contracts, and shields of sheet metal or equivalent structure of equal height with the said sheets, which cover the openings between the said rollers or the material accumulated thereon and the proximate supports substantially as set forth.

13. In an expansible and contractible section for a door, screen, curtain or partition, a flexible sheet, means for holding the said sheet extended, a roller on which the said sheet may be wound and a shield of sheet metal or similar material extending from top to bottom of the door and covering the space between said roller and its support substantially as and for the purpose set forth.

14. A contractible and expansible door of equal thickness at all points provided in each end with a spring-roller, said rollers being arranged to contract the same substantially as set forth.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

GEORGE J. RECORD.

Witnesses:

A. B. CRITTENDEN,  
A. M. CRITTENDEN.