

(No Model.)

2 Sheets—Sheet 1.

C. W. HARVEY & C. J. ROOT.
DOOR SPRING.

No. 450,486.

Patented Apr. 14, 1891.

Fig. 1.

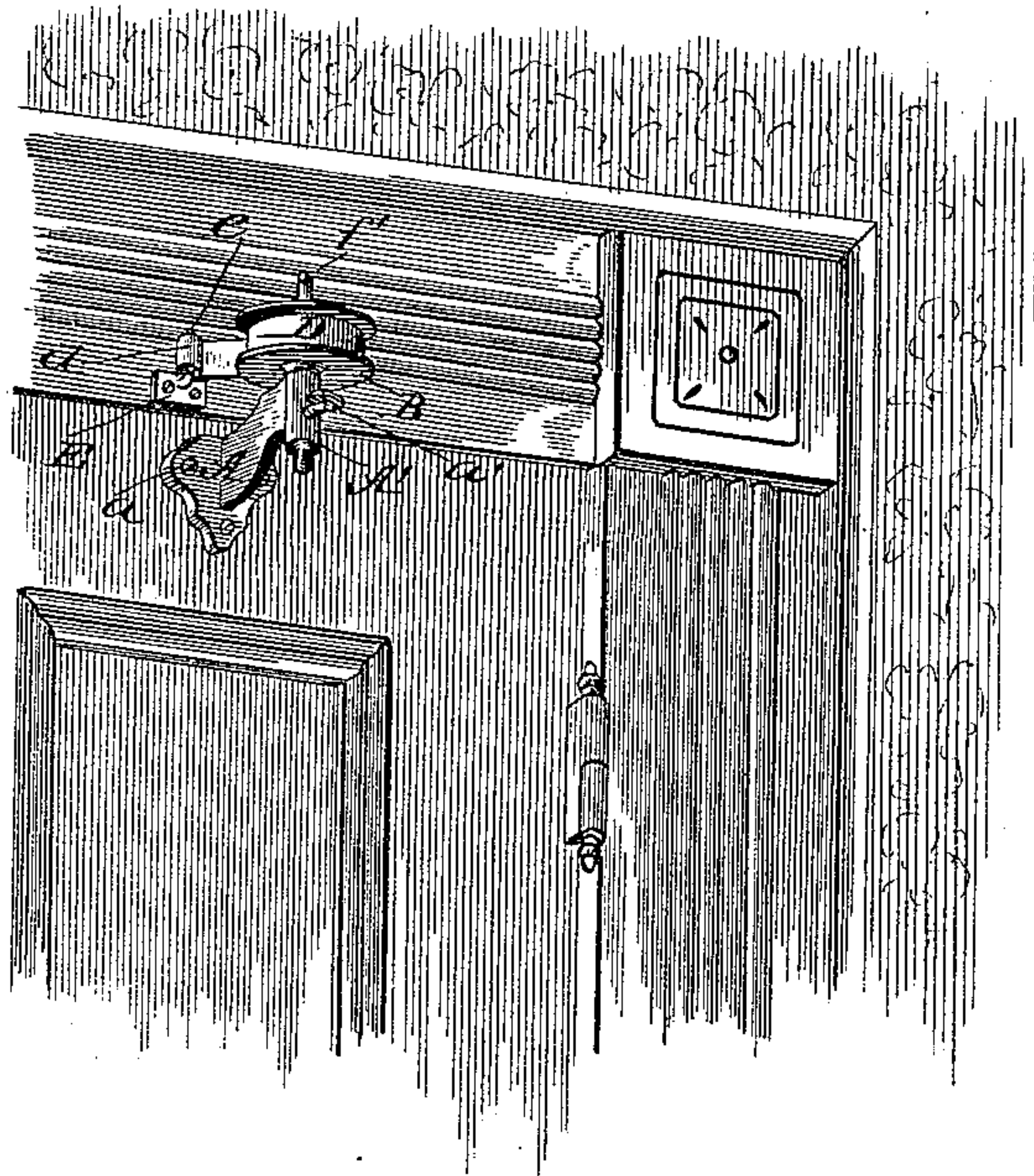
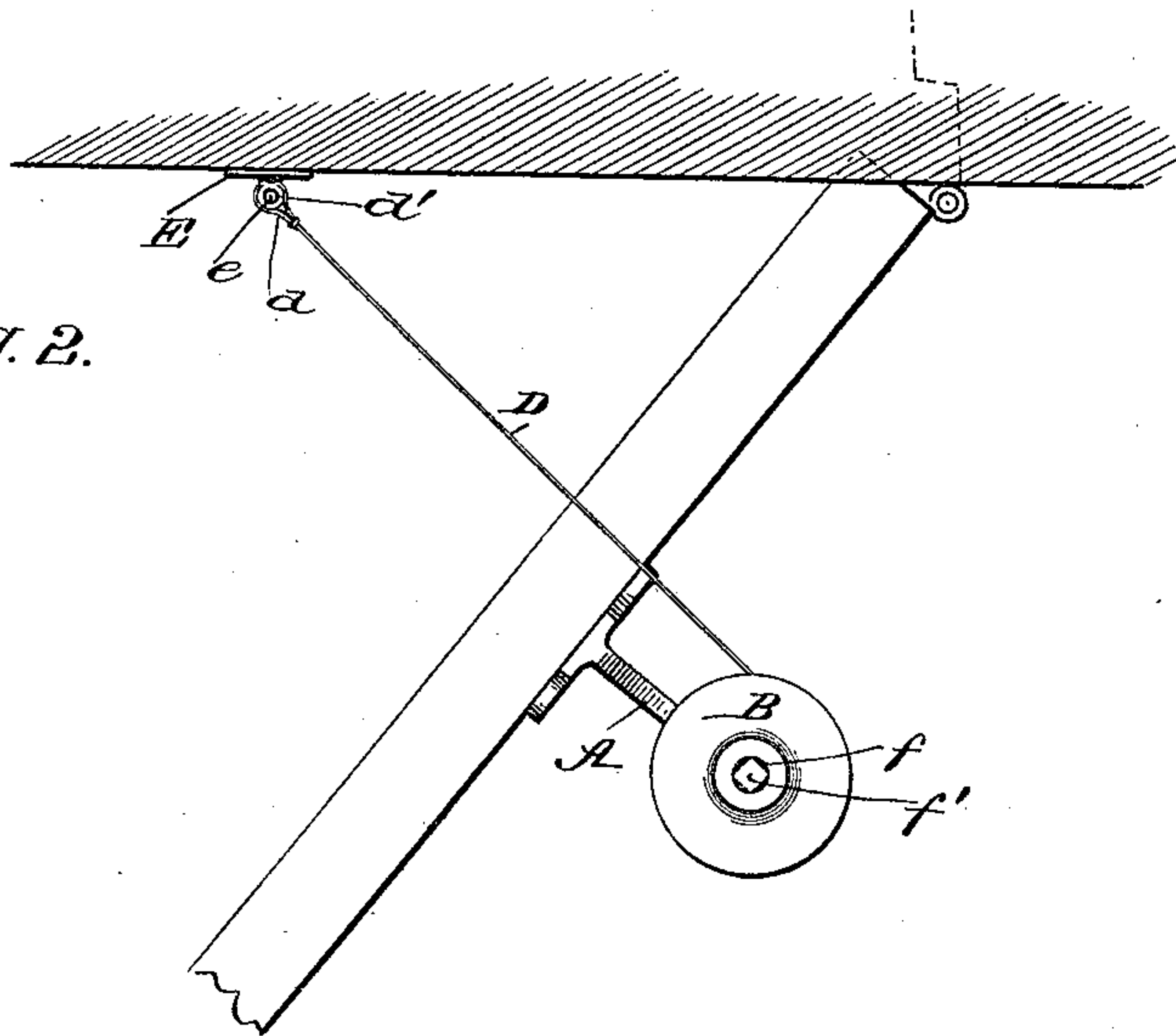


Fig. 2.



WITNESSES:

Fred G. Dieterich
P. B. Turpin.

INVENTOR:

Charles W. Harvey
Charles J. Root

BY *M. M. L.*

ATTORNEYS

(No Model.)

2 Sheets—Sheet 2.

C. W. HARVEY & C. J. ROOT.
DOOR SPRING

No. 450,486.

Patented Apr. 14, 1891.

Fig. 3

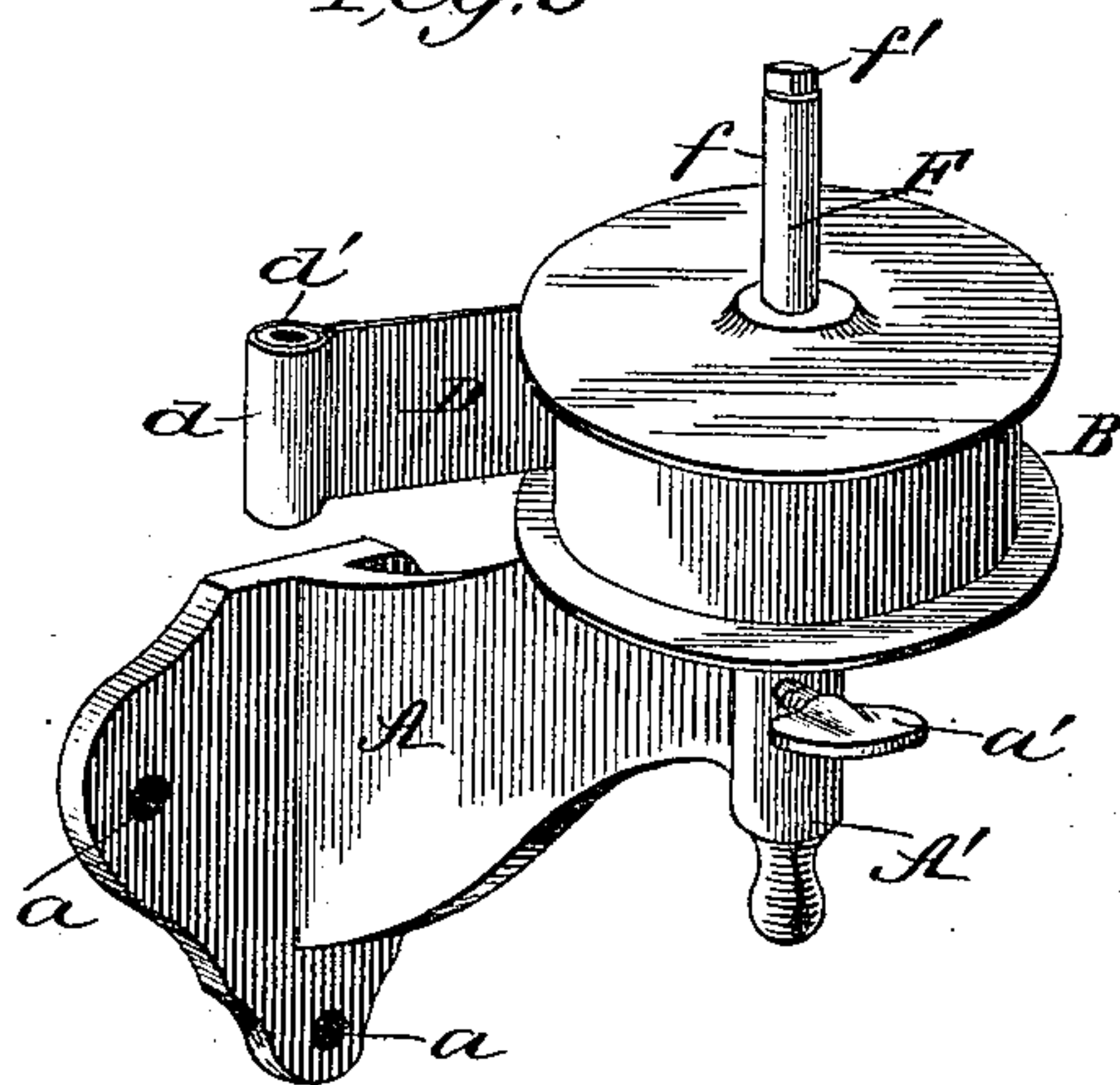


Fig. 4.

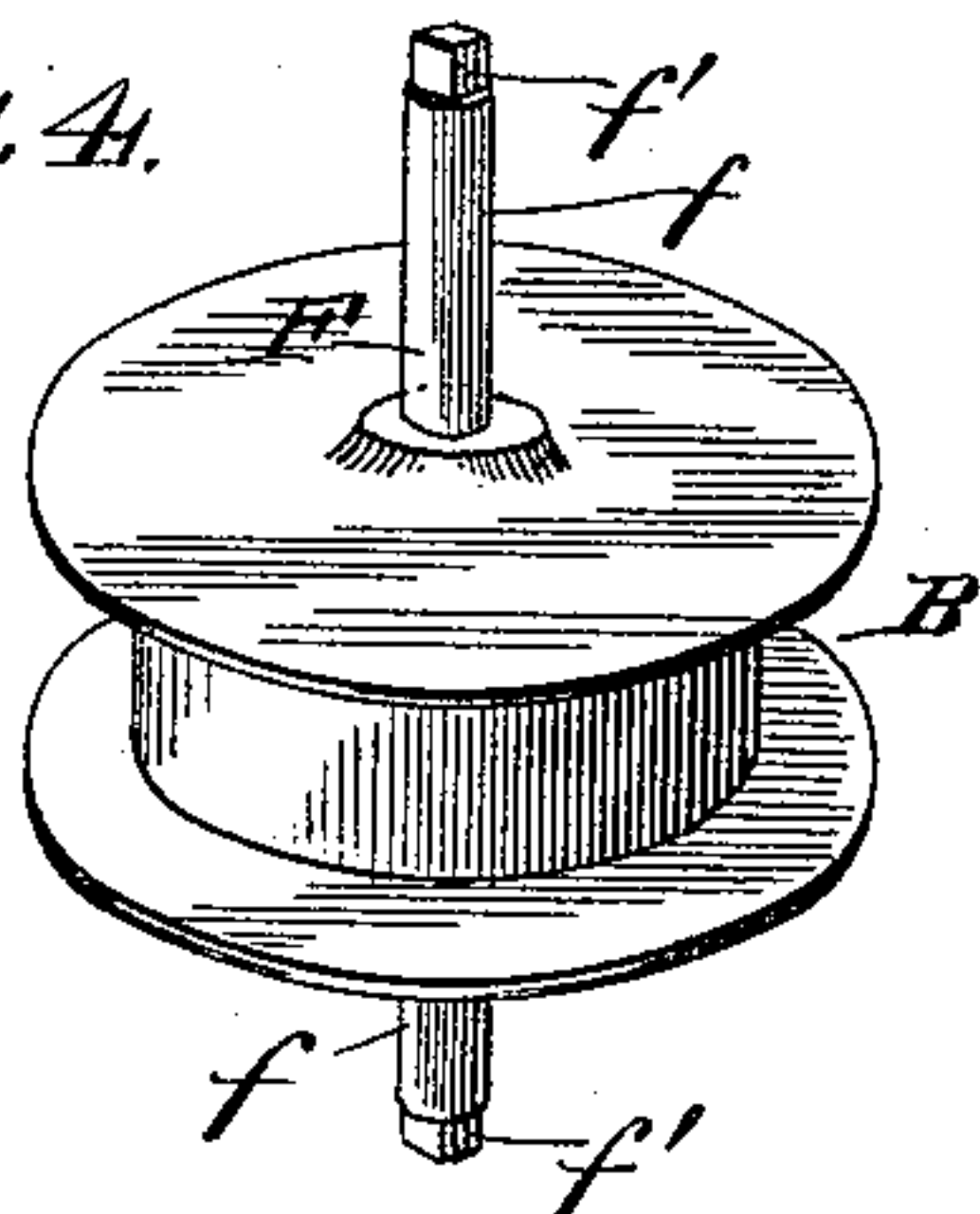
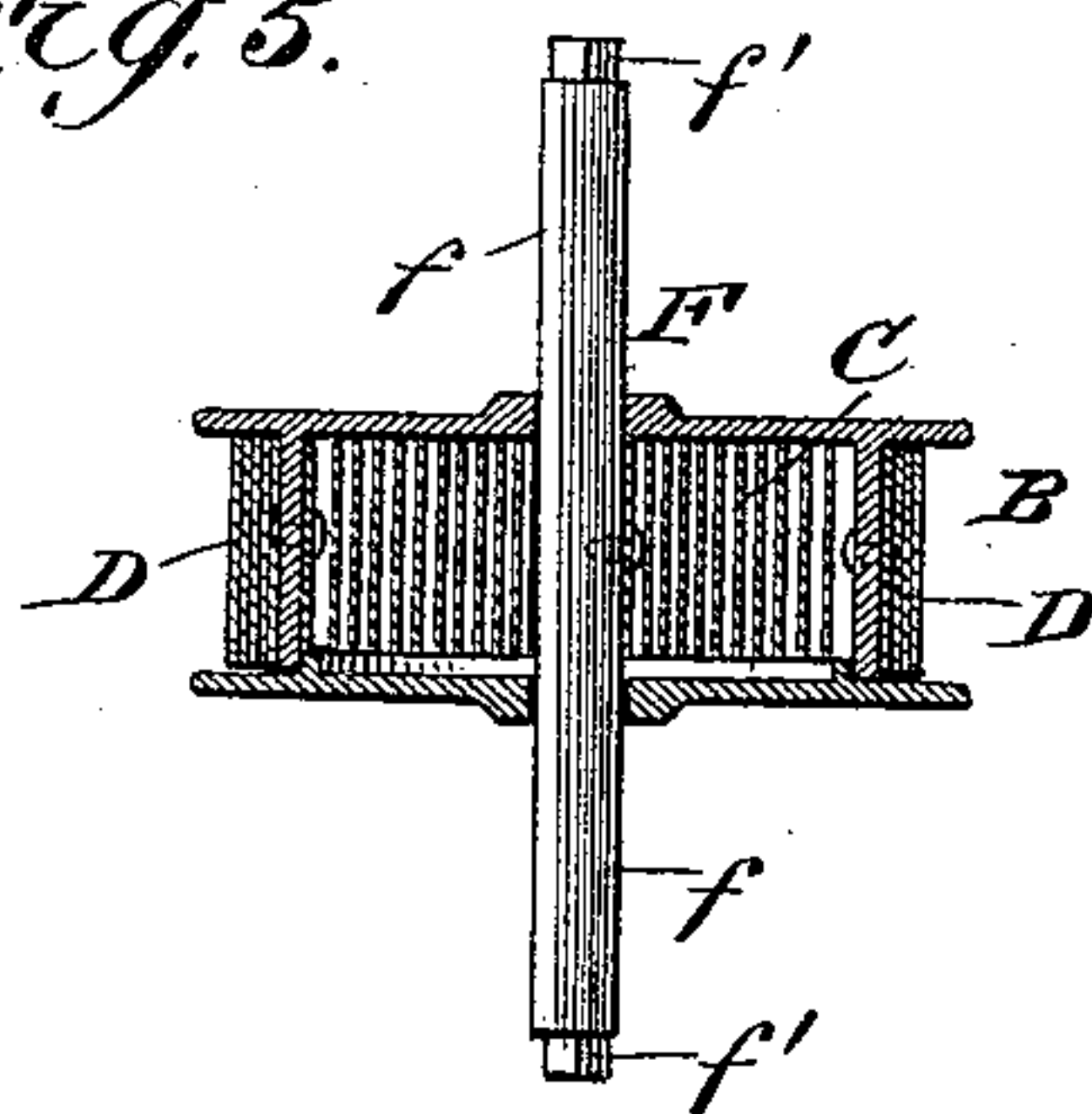


Fig. 5.



WITNESSES:

Fred G. Deterich
R. B. Turpin

INVENTOR:

Charles W. Harvey
Charles J. Root
BY *Munn & Co*

ATTORNEYS

UNITED STATES PATENT OFFICE.

CHARLES W. HARVEY, OF LOS ANGELES, CALIFORNIA, AND CHARLES J. ROOT, OF BRISTOL, CONNECTICUT; SAID. ROOT ASSIGNOR TO SAID HARVEY.

DOOR-SPRING.

SPECIFICATION forming part of Letters Patent No. 450,486, dated April 14, 1891.

Application filed December 23, 1890. Serial No. 375,546. (No model.)

To all whom it may concern:

Be it known that we, CHARLES W. HARVEY, residing at Los Angeles, in the county of Los Angeles and State of California, and

5 CHARLES J. ROOT, residing at Bristol, in the county of Hartford and State of Connecticut, both citizens of the United States, have invented a new and useful Door-Spring, of which the following is a specification.

10 This invention is an improvement in door-springs, seeking to provide a simple novel construction of door-spring which can be cheaply made and easily adjusted to suit right or left hand doors, and the tension of

15 which can be easily increased or diminished as may be desired.

The invention consists in certain novel constructions and combinations of parts, as will be hereinafter described, and pointed out in

20 the claim.

In the drawings, Figure 1 is a perspective view of the improved door-spring as in use, the door being closed. Fig. 2 is a top plan view of the device as in use, the door being

25 opened. Fig. 3 is a perspective view of the improved device. Fig. 4 is a detail perspective view of the drum, and Fig. 5 is a sectional view of the drum, all of which will be described.

30 In Figs. 1 and 2 the device is shown as in use, the bracket being secured to the door and the outer end of the ribbon being attached to the door-frame.

The bracket A forms a support for the

35 drum B; and while such bracket is preferably constructed as shown, it is obvious that the construction and form of the bracket may be varied without departing from some of the broad principles of our invention.

40 In the construction shown the bracket A has at one end a base-plate perforated at *a* for the screws by which it is secured to the door, and is provided at or near its outer end

with a socket A', which is preferably round in cross-section and is entered by a clamp- 45 ing-screw *a'*. This screw *a'* may be tightened against the spring-shaft to clamp such shaft from turning in the socket, when so desired.

The drum B contains a spring C and has 50 one end of the ribbon D secured to its rim, the opposite or outer end of the ribbon being adapted for connection with the door-frame, preferably by bending an eye *d* at such end and fitting a wooden bushing *d'* therein, such 55 bushing receiving a pin *e* on a connection-piece E, fastened to the door-frame.

The spring C is fastened at its outer end to the drum and at its inner end to the shaft F, which shaft passes through the ends of 60 the drum proper and is extended at *f* beyond both ends of the drum. These extensions *f* of the shaft F are adapted to fit in the socket A' of the bracket A, and the part *f* inserted in said socket may be held from turning by 65 tightening the clamping-screw *a'*. The extension of the shaft at both ends serves an important function, inasmuch as it enables the device to be fitted to the bracket or support in such manner as to properly serve its 70 purpose on either a right or a left hand door, as when the device is adjusted for use on a right-hand door it can be quickly adjusted for use on a left-hand door by simply 75 removing the drum from the support, reversing the drum end for end, and fitting the opposite end of the shaft in the socket of the support, as will be readily understood from the drawings.

In adjusting the tension of the spring the 80 screw *a'* is loosened and the spring-shaft properly turned until the desired tension is secured, when the shaft may be again secured by the clamping-screw. To facilitate the turning of the shaft in securing such ad- 85 justment, I form at the ends of the shaft-ex-

tensions *f* non-circular portions *f*", adapted to receive a wrench or other appliance by which the shaft may be easily turned.

5 Having thus described our invention, what we claim, and desire to secure by Letters Patent, is--

10 An improved door-spring comprising the bracket or support having a vertical socket, and the drum, having a ribbon or the like, and an actuating-spring, and the spring-shaft extended beyond the head of the drum and having such extension adapted to and fitted

in the vertical socket of the bracket or support, all substantially as set forth.

CHARLES W. HARVEY.

CHARLES J. ROOT.

Witnesses to the signature of Charles W. Harvey:

P. B. TURPIN,

SOLON C. KEMON.

Witnesses to the signature of Charles J. Root:

EDSON M. PECK,

THEO. C. ROOT.