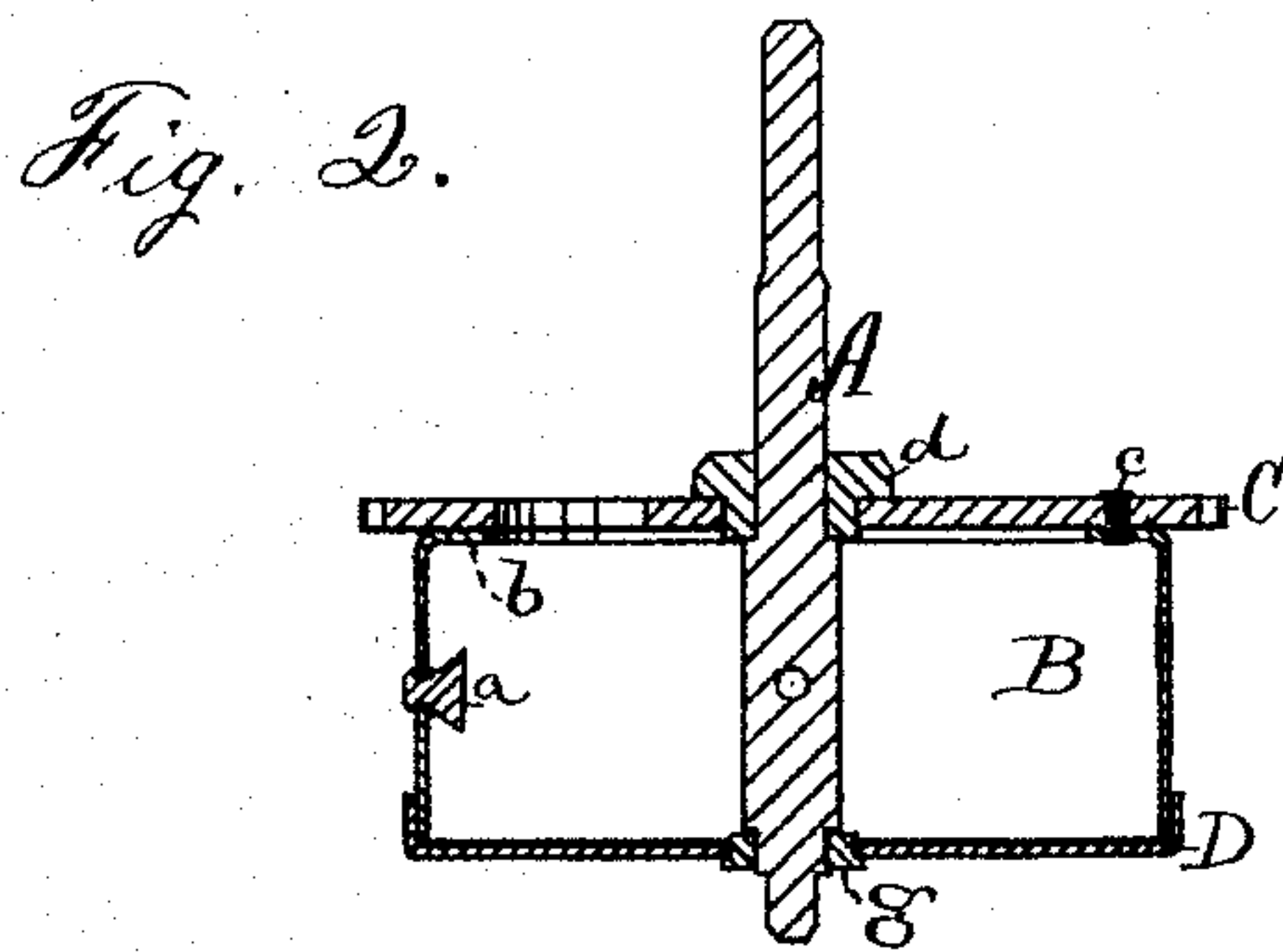
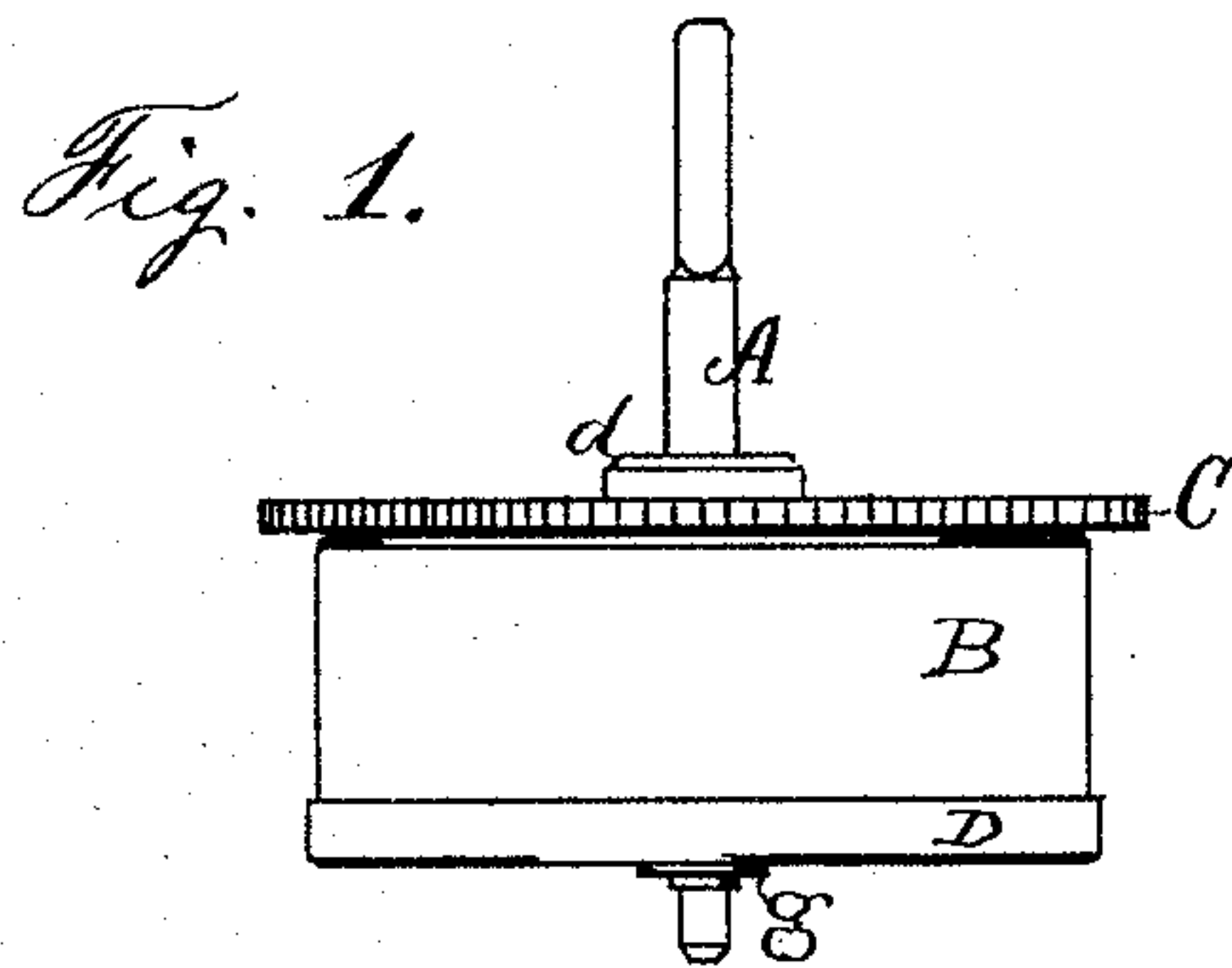


G. H. BLAKESLEY.
Spring-Barrels for Clocks.

No. 157,088.

Patented Nov. 24, 1874.



Witnesses.
H. W. Beadle.
H. E. Matthews.

Inventor.
Gilbert H. Blakesley.
By James Shepard Atty.

UNITED STATES PATENT OFFICE.

GILBERT H. BLAKESLEY, OF BRISTOL, CONNECTICUT.

IMPROVEMENT IN SPRING-BARRELS FOR CLOCKS.

Specification forming part of Letters Patent No. **157,088**, dated November 24, 1874; application filed January 14, 1873.

To all whom it may concern:

Be it known that I, GILBERT H. BLAKESLEY, of Bristol, in the county of Hartford and State of Connecticut, have invented certain new and useful Improvements in Spring-Barrel for Clocks, of which the following is a specification:

My invention consists in the peculiar manner of constructing the box for a clock-spring and attaching it to the main wheel, as hereinafter described.

In the accompanying drawings, Figure 1 is a side elevation of a clock-spring box, which embodies my invention; and Fig. 2 is a central and vertical section of the same.

The spring is to be attached—one end to a hook upon the main shaft A, and the other end to a hook, *a*, upon the inner wall of the box B—in substantially the same manner as in the ordinary spring-box; therefore it is deemed unnecessary to represent the spring in the drawing.

In this class of boxed springs, the wheel is always fitted to revolve freely upon the main shaft A, while said shaft remains stationary, except when the spring is being wound up.

The main portion of the box B I press from a flat disk of metal into the form of a hollow cylinder having a solid end. The central portion of this solid end is then removed by means of a suitable die, care being taken to leave a sufficient portion of said solid end to form an inwardly-projecting flange, *b*. (See Fig. 2.)

The operation of cutting out this central portion of the solid end will have a tendency to square and true the flange *b*; but if it does not so true it, it may be again struck in a die so as to bring the flange perfectly flat and true, and at right angles to the sides of the box B.

It will be observed that by the foregoing construction, the box B as produced is a single solid piece of metal without lap or seam.

I next secure the box B centrally upon the main wheel C by means of small rivets *c*, which pass through the flange *b* and rim of the wheel C.

The flange and box, being swaged up from

one single and solid piece, as before described, are not only true and square, but are also of such form as to be very firm, although formed from thin metal, and therefore, when the rim of the wheel is held firmly against the flange and secured thereto, the tendency is to level the wheel, in case it was not previously level, instead of warping it, as does the attachment of the ordinary spring-box.

It will also be observed that the inwardly-projecting flange *b* enables the body of the box B to be made somewhat larger than the circle upon which the rivets must necessarily be secured in the rim of the wheel C, and thereby I am enabled to use a larger box than can be used for the same-sized wheel, in case the box is secured to the wheel by means of lugs projecting upward directly from the edge of the box. This enlargement gives more room for the spring to expand, and thereby adds two or more days to the running time of the clock without changing the length or quality of the spring.

In the center of the main wheel C is a hub, *d*, which forms one bearing for a portion of the main shaft A, which is turned and burnished for reception therein. From a flat disk of metal I form a cap, D, having a shallow rim around its edge of such size as to close over the sides of the box B, and fit snugly thereon, after the ordinary box-cover style, as shown in Fig. 2. In the center of the cap D I fix a hub, *g*, to form the other bearing for a portion of the main shaft A, which is properly turned and burnished for reception in said bearing.

By removing the cap D, and securing the spring within the box B, and then replacing the cap, the boxed spring is ready for use in connection with the other parts of a clock movement.

It will be seen that the box and wheel, as arranged upon the main shaft, have a bearing at two points, one each side of the spring, and thereby the said wheel is firmly supported upon the shaft so as to revolve true, and with little strain upon its parts.

Although I obtain a better, more reliable, and roomy article, the peculiar construction

enables me to reduce the stock to such an extent that I can produce this improved device at a less cost than that of the ordinary boxed spring.

I claim as my invention—

In a spring-barrel, the seamless sheet-metal box B, having its inwardly-projecting flange

b connected directly to the rim of the main wheel C, all substantially as described, and for the purpose set forth.

GILBERT H. BLAKESLEY.

Witnesses:

HENRY A. MITCHELL,
WM. F. PIGOTT.