

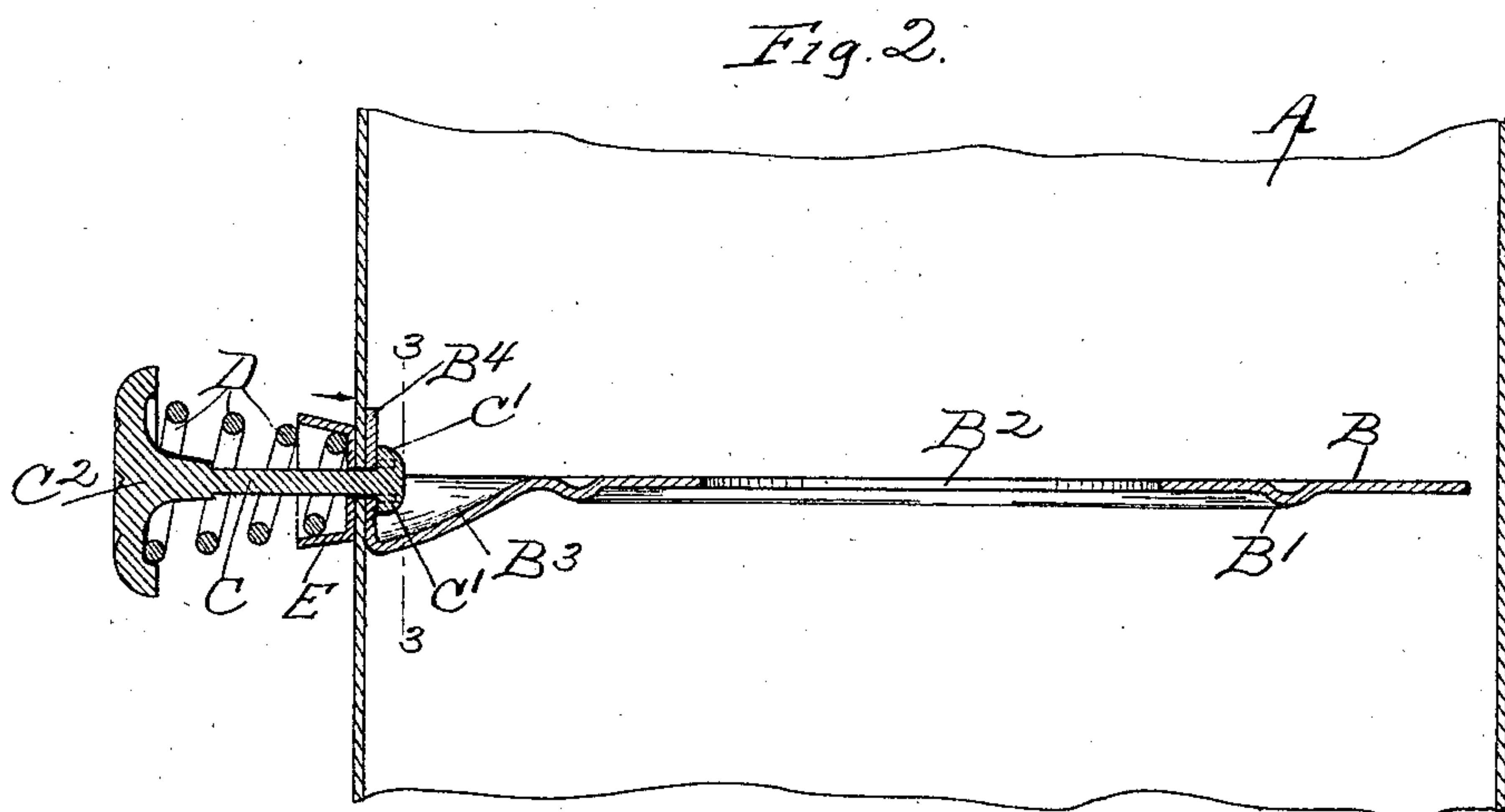
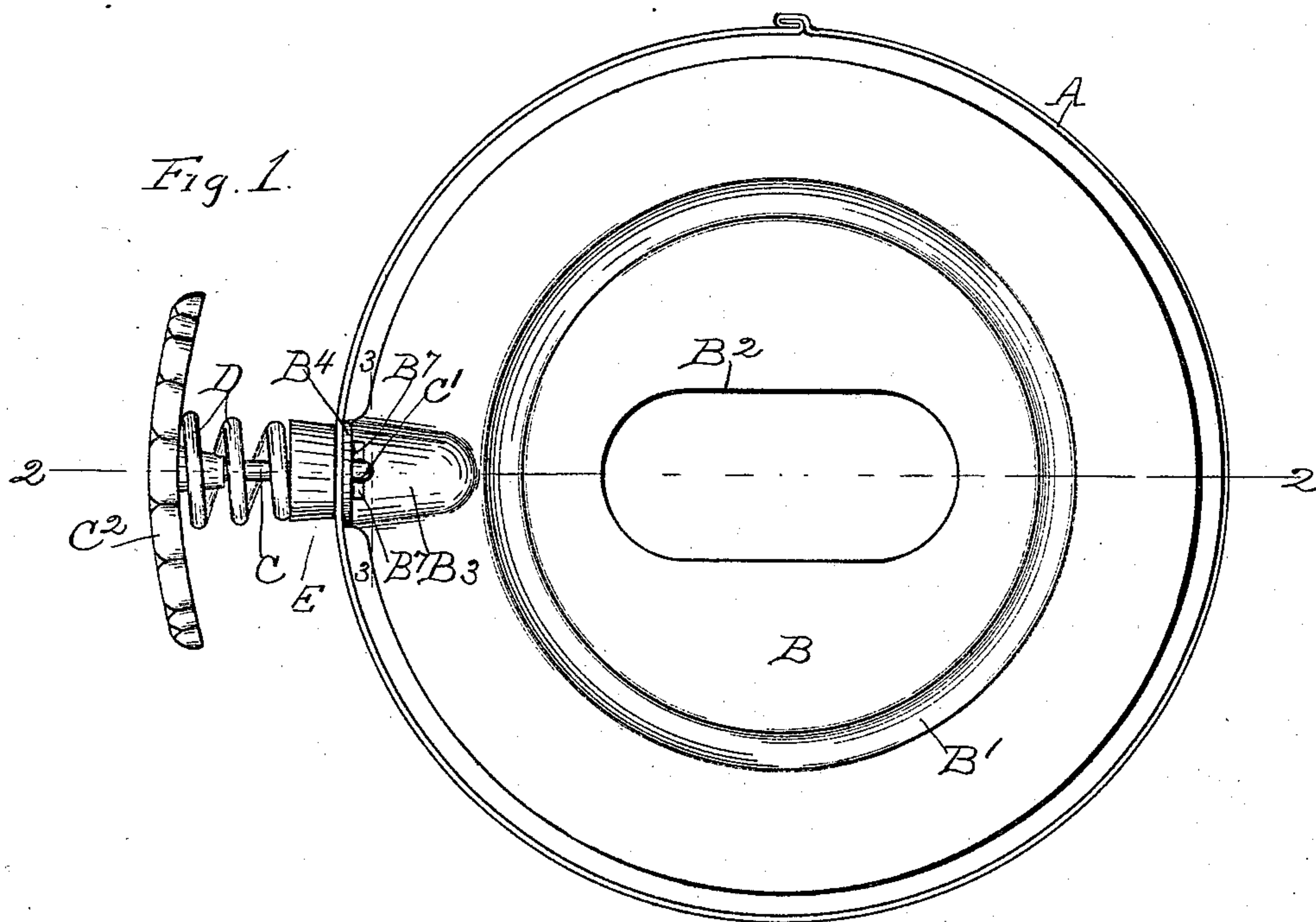
(No Model.)

2 Sheets—Sheet 1.

J. E. GAITLEY.
DAMPER.

No. 540,049.

Patented May 28, 1895.



Witnesses:
Frank Kendall.
Geo. H. Kurtz

Inventor.
John E. Gaitley
by Mosher & Curtis
Attys.

(No Model.)

2 Sheets—Sheet 2.

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Fig. 3.

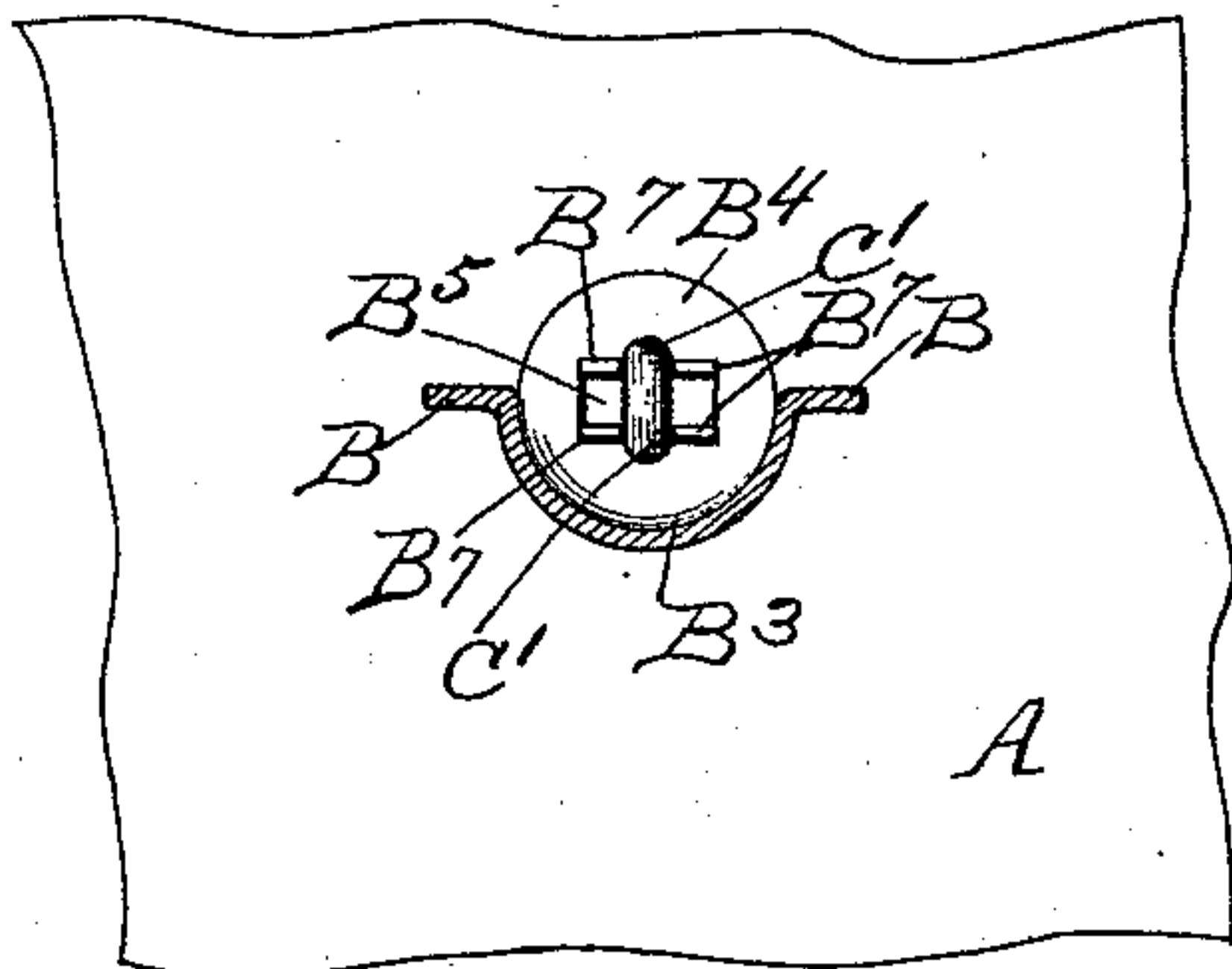


Fig. 6.

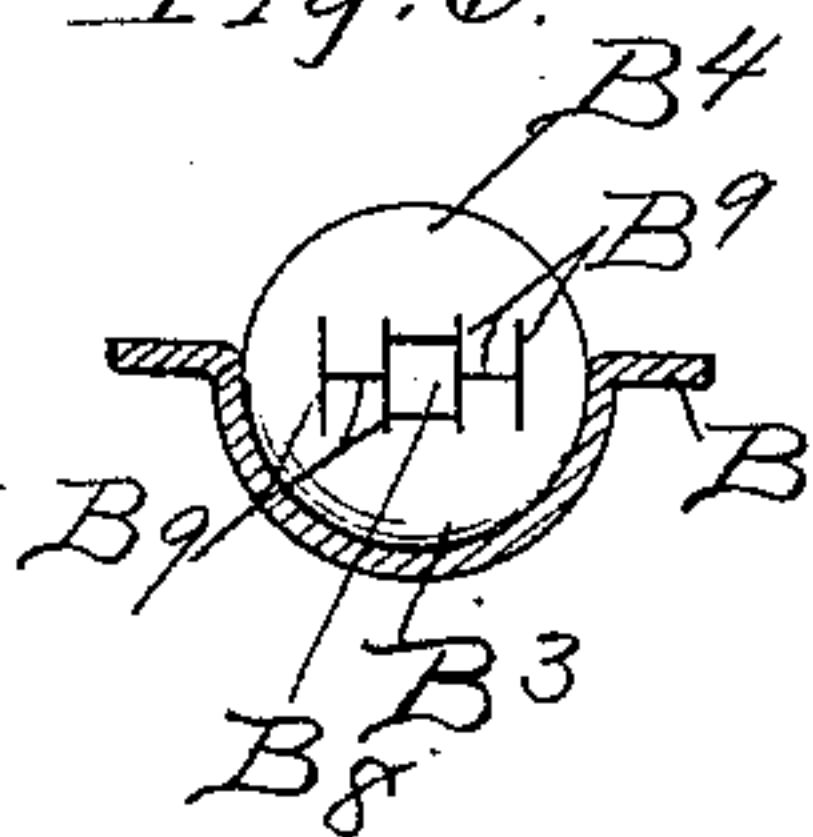


Fig. 5.

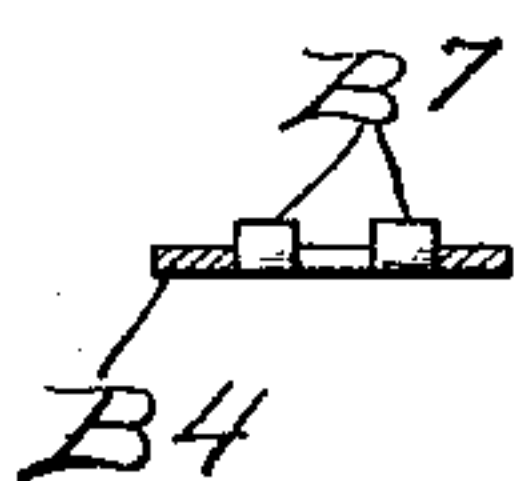


Fig. 4.

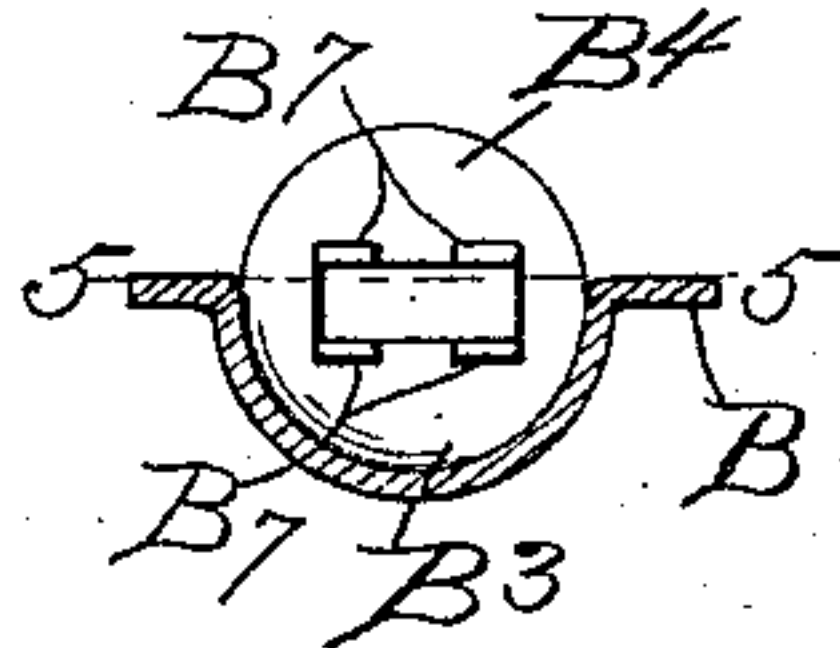


Fig. 8.

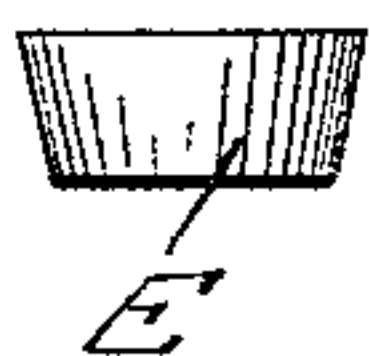


Fig. 9.

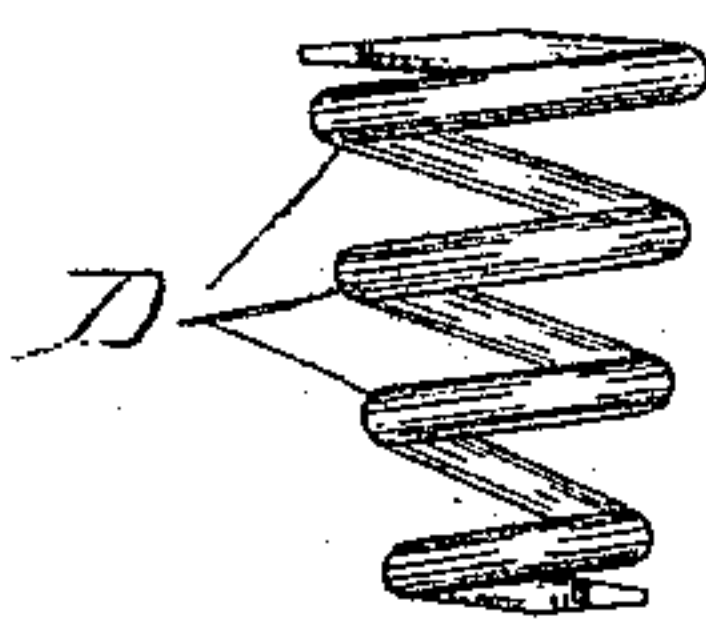
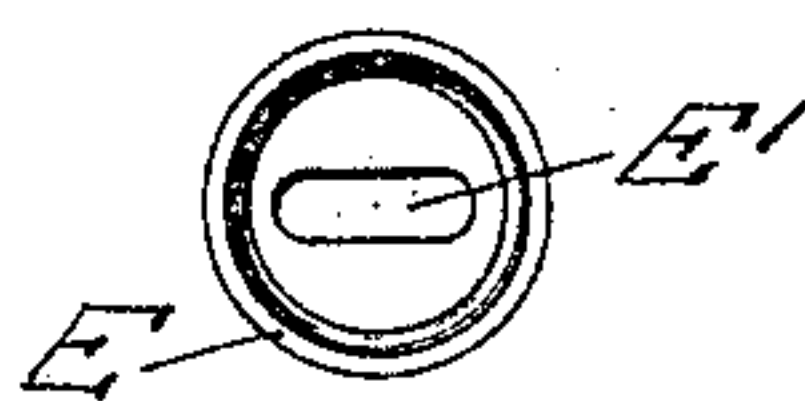


Fig. 7.



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UNITED STATES PATENT OFFICE.

JOHN E. GAITLEY, OF TROY, NEW YORK.

DAMPER.

SPECIFICATION forming part of Letters Patent No. 540,049, dated May 28, 1895.

Application filed November 30, 1894. Serial No. 530,378. (No model.)

To all whom it may concern:

Be it known that I, JOHN E. GAITLEY, a citizen of the United States, residing at Troy, county of Rensselaer, and State of New York, have invented certain new and useful Improvements in Dampers, of which the following is a specification.

The invention relates to such improvements and consists of the novel construction and combination of parts hereinafter described and subsequently claimed.

Reference may be had to the accompanying drawings, and the letters of reference marked thereon, which form a part of this specification.

Similar letters refer to similar parts in the several figures.

Figure 1 of the drawings is an end view of a section of pipe, showing my improved damper in a closed position, as in use. Fig. 2 is a central section of the parts shown in Fig. 1, taken on the broken line 2 2 in Fig. 1. Fig. 3 is a vertical section of the damper-disk, taken on the broken line 3 3 in Figs. 1 and 2, showing the disk-offset and a portion of the pipe in elevation. Fig. 4 is a similar section of the disk detached. Fig. 5 is a horizontal cross-section of the offset, taken on the broken line 5 5 in Fig. 4. Fig. 6 is an elevation of the disk-offset similar to that seen in Fig. 4, showing a step in the process of manufacture. Fig. 7 is an interior plan view of the cup-shaped washer detached. Fig. 8 is a side elevation of same. Fig. 9 is a side elevation of the coil-spring detached.

My invention relates to that class of dampers wherein the damper-disk is supported by a short operating spindle passed through one side of the pipe, and consists in providing the disk and spindle with interlocking and supporting offsets, and means for detachably maintaining the parts in a locked position for use.

A— is a short length or section of pipe, and
B— the damper-disk which is preferably made of sheet-metal. The disk is shaped to correspond with the cross-sectional form of the pipe, and provided with a strengthening corrugation B'— and usual central opening B²—.
The disk is also provided on one side or edge with a countersink or well B³— and an offset B⁴— projected from the bottom of the counter-

sink at right angles to the plane of the disk, and integral with the disk. The countersink and offset are formed by suitable swaging dies. The offset is provided with a central elongated aperture B⁵— adapted to receive the supporting spindle C— which is inserted therethrough and through a similar aperture in the pipe, the disk having been previously located within the pipe. The pipe-aperture is shown in Figs. 2 and 3. The inserted end of the spindle is also provided with a pair of oppositely-projecting offsets C'—.

The spindle is inserted with its offsets projecting lengthwise of the elongated aperture in the disk-offset. After the spindle is inserted, it is given a quarter-turn rotatively which projects the spindle-offsets transversely of the aperture and causes them to engage with the aperture-walls when the spindle is pressed outwardly, thereby causing the spindle and disk offsets to interlock with each other.

As a means for maintaining the offsets in an interlocked position, and for supporting the parts in the pipe in position for use, I provide the outer end of the spindle with an operating handle C²— and insert a coil-spring D— between the handle and pipe in line with the disk-offset.

In assembling the parts, the spindle is inserted through the coil-spring before its insertion in the pipe. The coil is of such a length as to cause its compression when the offsets are interlocked, whereupon the resilient force of the spring not only maintains the offsets in engagement with each other, but forces the disk-offset against the inner surface of the pipe with sufficient strength to maintain the disk in the desired position. When desired, the cup-washer E— provided with the elongated aperture E'— adapted to receive the spindle-offsets may be interposed between the spring and pipe as shown.

As a means for securely locking the spindle offsets in a position projecting transversely of the aperture in the disk-offset, I provide the offsetting spurs or lugs B⁷— integral with the disk and projecting from the aperture-walls to occupy a position such that they will engage opposite sides of the spindle offsets, as shown, and prevent a rotary movement of the spindle relatively to the damper-disk. The

coil-spring prevents the escape of the spindle offsets from their seats between the lugs while in use, but when it is desired for any cause to remove the damper from the pipe, the spindle offsets can be forced out from between the lugs by pushing inwardly upon the handle of the spindle and compressing the spring. The spindle can then be given a quarter-turn and withdrawn.

10 My improved damper disk is formed from a single piece of sheet-metal by first cutting from the formed offset its central portion forming the aperture B⁸—, then cutting through or partly through the offset on the lines B⁹—
15 and lastly bending outwardly from the face of the offset those portions of the sheet-metal inclosed on three sides by the cut edges, to form the lugs B⁷— and at the same time the elongated aperture. The countersink in the
20 edge of the disk permits of forming an offset which can be provided with an approximately central spindle-aperture in the plane of the disk-body extended.

The integral sheet-metal damper-disk,

formed as above described, constitutes an im- 25
proved article of manufacture which can be separately supplied to the trade to be sold for use with various styles of handle adapted to be secured to the disk in substantially the manner herein shown and described. 30

What I claim as new, and desire to secure by Letters Patent, is—

As an improved article of manufacture a disk for dampers comprising an integral piece of sheet-metal having a die-formed counter- 35
sink in one edge, an offset struck up from the outer end of the countersink and having a central elongated aperture, and two pairs of inwardly projecting lugs struck up from the opposite edge-walls of the aperture, one pair 40
near each end thereof, substantially as described.

In testimony whereof I have hereunto set my hand this 27th day of November, 1894.

JOHN E. GAITLEY.

Witnesses:

C. T. FINN,

FRANK C. CURTIS.