

No. 805,873.

PATENTED NOV. 28, 1905.

J. NEAL.
CEILING PLATE.
APPLICATION FILED DEC. 8, 1902.

Fig. 1

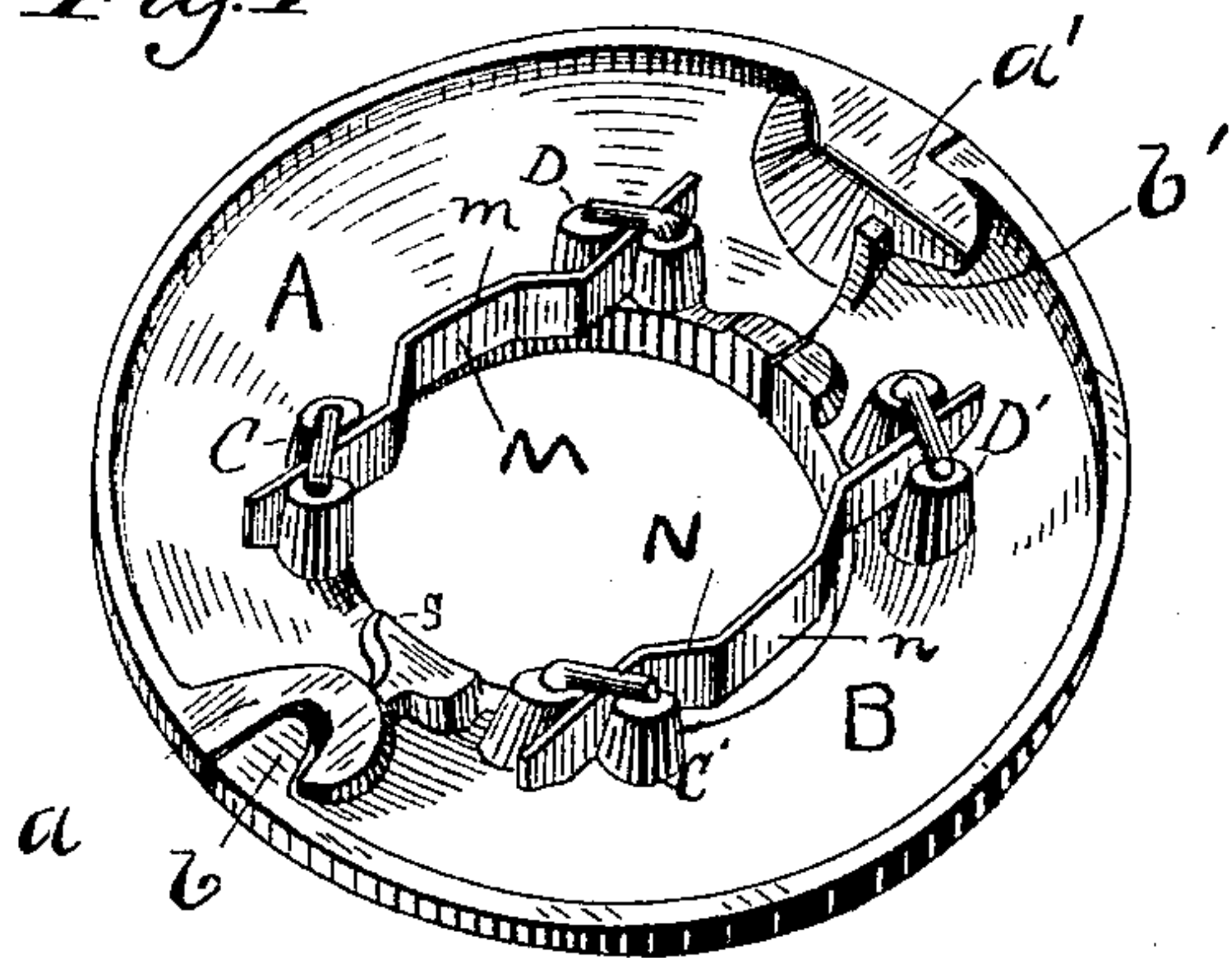


Fig. 2

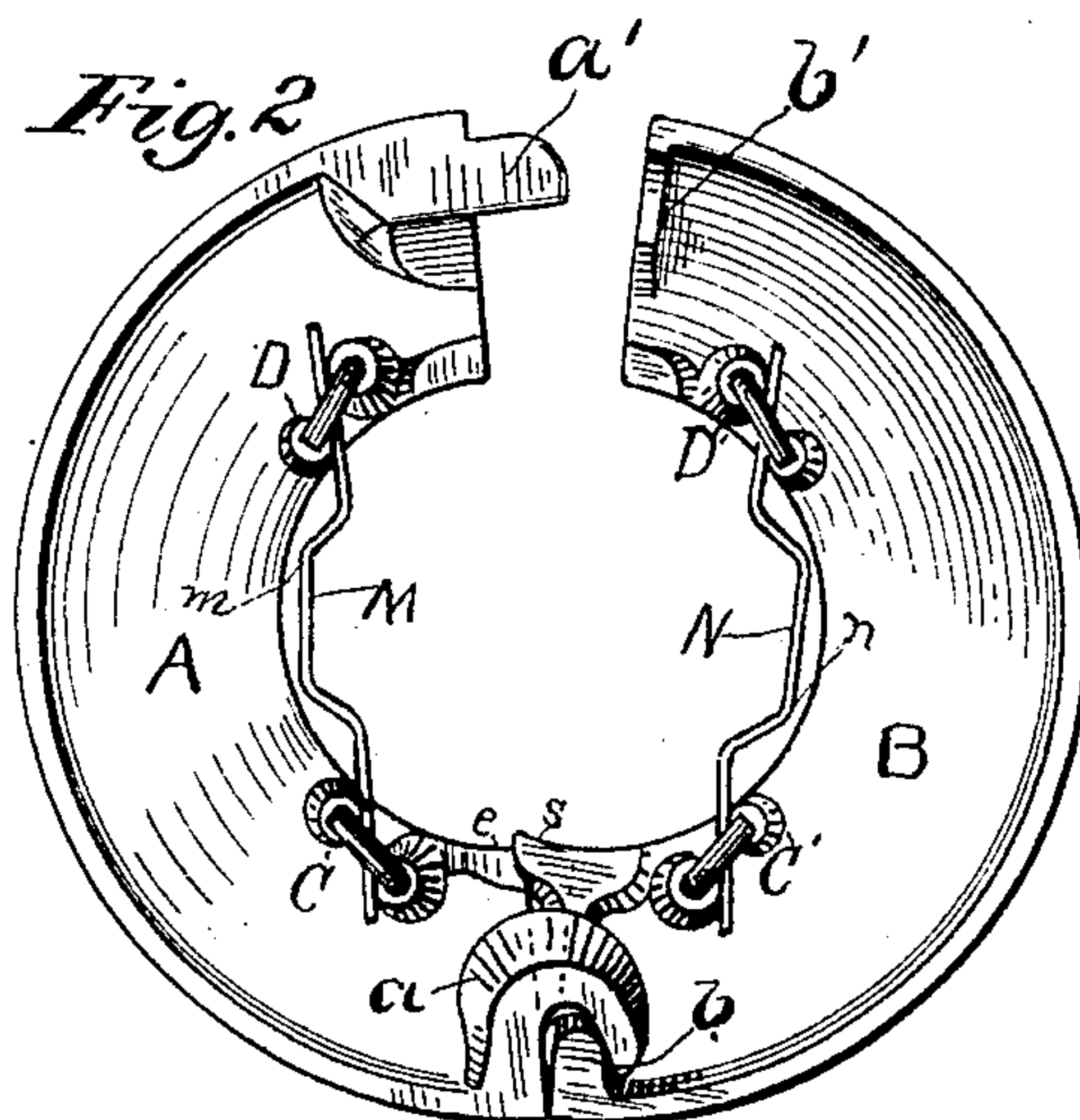


Fig. 3

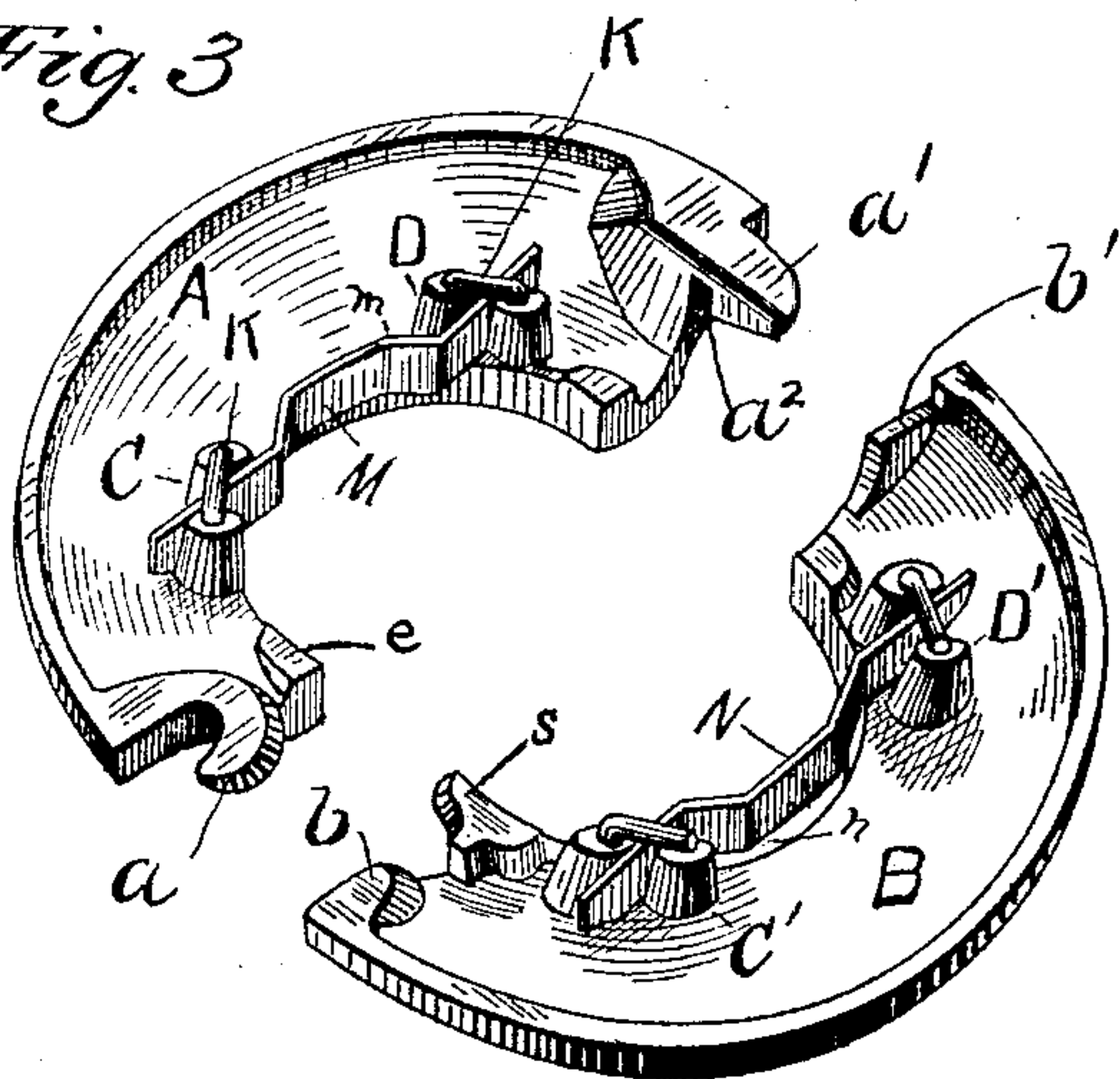
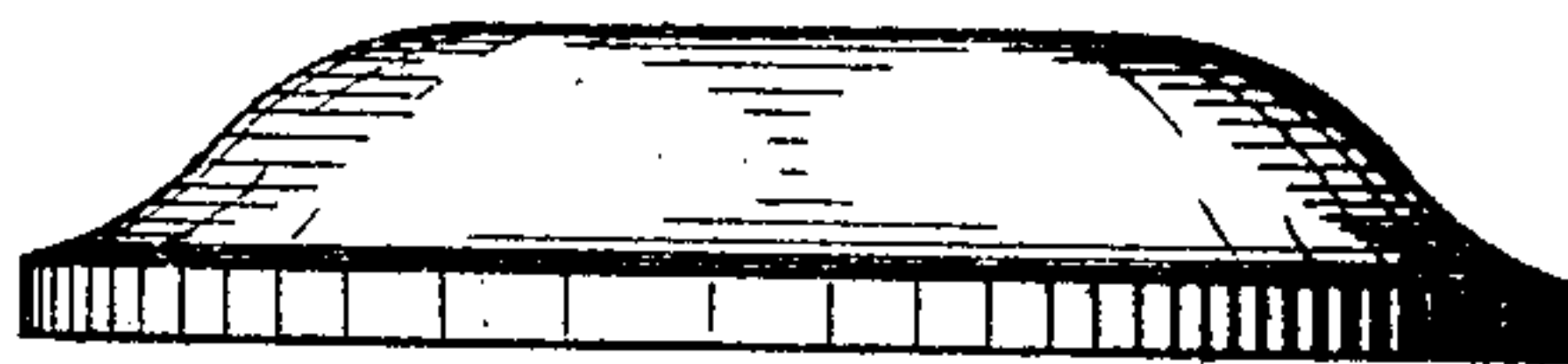


Fig. 4



Witnesses
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JUDSON NEAL, OF SOUTHLINGTON, CONNECTICUT, ASSIGNOR TO PECK, STOWE & WILCOX, OF SOUTHLINGTON, CONNECTICUT, A CORPORATION OF CONNECTICUT.

CEILING-PLATE.

No. 805,873.

Specification of Letters Patent.

Patented Nov. 28, 1905.

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To all whom it may concern:

Be it known that I, JUDSON NEAL, a citizen of the United States of America, residing at Southington, in the county of Hartford and State of Connecticut, have invented certain new and useful Improvements in Ceiling-Plates, of which the following is a specification.

These ceiling-plates, as is well known, are used about pipes to cover up openings where the pipes pass through the ceilings. They can as well be used in the same manner at the floor. When used as ceiling-plates, it is necessary to have some sort of a spring attachment which will grip the pipe to hold the plates in place, thus obviating the necessity of using screws.

In the drawings, Figure 1 is a bottom view of the device in perspective. Fig. 2 is a bottom plan view showing the two parts of the device partially separated. Fig. 3 is a bottom view of the device in perspective with the two parts entirely separated. Fig. 4 is a side view.

The particular object of this invention is to produce a device of the class indicated which shall have features of novelty and advantage and which can be manufactured at an extremely low cost.

The ceiling-plate shown is made up of two parts or members A B, which are cast in suitable metal. On the part A there is formed a hook-shaped lug *a*, and on the part B is formed the rounded lug *b*, which is engaged by the lug *a*. By reference to Fig. 2 it is seen that up to certain limits these interengaging lugs *a b* act as a hinge connection. On the part or member A adjacent the lug *a* there is formed the ear *e*, and on the member B there is formed the ear *s*, adapted to ride over the ear *e* as the members are closed together from the position shown in Fig. 2. The relative location of the engaging faces of the ears *e* and *s* is such that these elements tend to hold securely locked the web and latch next described. On the opposite side of the aperture from the above-mentioned lugs I provide means for locking the elements together, comprising the latch *a'* on the member A, radially grooved on its under side, as at *a''*, and

the web *b'* on the member B to be engaged by the latch and fit into the groove *a''*.

To fasten the two parts of the plate together, the lugs *a b* are first engaged and the parts closed together, the ear *s* riding over the ear *e* and the beveled face of the latch *a'* riding up on the web *b'* until it drops into the notch *a''*. Lugs *a b* and ears *e s* are so situated with reference to each other that they tend to produce a vertical displacement of the opposite ends of the members when the latch rides over the web *b'*. The tendency is to elevate the web *b'* and depress the latch *a'*. Hence the two parts *a' b'* will be held firmly in engagement when the members are closed. The natural spring of the metal is sufficient to permit the latch to ride over the web.

On each half or member of the plate there are formed integral therewith two pairs of posts C D C' D'. One post in each pair is cored out to receive the L-shaped retaining-wires K. One end of the spring M is located between the pair of posts C and the other end between the pair of posts D, the wires K being bent down into contact with the other post, as shown, to retain the spring in place. The spring N, with its ends between the pairs of posts C' D', is retained in place in a similar manner.

In the inner edge of each half of the plate is formed a semicircular recess, which when the plates are joined forms an opening through the plate of the size of the outside diameter of the pipe to be accommodated.

The springs M N are oppositely disposed to one another and may be offset, as at *m n*. It is of considerable importance that each spring be held at its opposite ends, as this arrangement insures the retention of the springs in place, not only when the plate is in position around a pipe, but also when it is being stored or in shipment.

In the manufacture of my ceiling-plate no finishing or machine-work, except polishing, is necessary. When the parts come from the molds, the lugs and posts are properly formed the posts are cored for the retaining-wires, and it is only necessary to insert the springs and wires and bend the latter to produce a finished article.

While I have entitled this device a "ceiling-plate" and so described it in the claims, it is evident that it can be used equally as well as a floor-plate.

5 I claim as my invention—

1. A ceiling-plate formed in two members or halves and having a central aperture; a lug on one member at one side of the aperture overlying the other member, a latch on the
10 same member at the opposite side of said aperture adapted to engage with a web on the other member to lock the parts together against the spring of the metal; and means for producing a strain within the members
15 transverse to their plane, comprising an ear on the other member overlying the first-mentioned member between said lug and the aperture.

2. In a ceiling-plate formed in two members or halves and having a central aperture,
20 the combination with a pair of locking parts at one side of said aperture to lock the members together against the spring of the metal; of a pair of lugs at the opposite side of the
25 aperture constituting a hinge-joint, and an ear located between said pair of lugs and the aperture, said ear projecting from one member and riding over the other, whereby said pair of lugs and ear tend to produce a vertical
30 displacement of the latch and web when forced into engagement.

3. In a ceiling-plate formed in two members or halves and having a central aperture, the combination with a pair of locking parts
35 at one side of said aperture, one of said parts being a web standing on one member and the other a latch projecting from the opposite member and having a radial groove on its lower face adapted to receive said web; of a
40 pair of lugs at the opposite side of the aperture constituting a hinge-joint, and an ear located between said pair of lugs and the aperture, said ear projecting from one member and riding over the other, whereby said pair
45 of lugs and ear tend to produce a vertical displacement of the latch and web when forced into engagement.

4. In a ceiling-plate formed in two members or halves and having a central aperture,
50 the combination with a pair of locking parts at one side of said aperture, one of said parts being a web standing on one member and the other a latch projecting from the opposite member and having a radial groove on its lower face adapted to receive said web; of a
55 pair of lugs at the opposite side of the aperture constituting a hinge-joint, and a pair of ears located between said pair of lugs and the aperture, one of said ears projecting over the
60 other and riding thereon, whereby said pair of lugs and ears tend to produce a vertical displacement of the latch and web when forced into engagement.

5. In a ceiling-plate formed in two mem-

bers or halves and having a central aperture, 65 the combination with a pair of locking parts at one side of said aperture, one of said parts being a web standing on one member and the other a latch projecting from the opposite member and having a radial groove on
70 its lower face adapted to receive said web; of a pair of lugs at the opposite side of the aperture constituting a hinge-joint, and a pair of ears located between said pair of lugs and the aperture, one of said ears projecting
75 over the other and having a beveled lower face riding frictionally thereon, whereby said pair of lugs and ears tend to produce a vertical displacement of the latch and web when forced into engagement. 80

6. In a ceiling-plate formed in two members or halves and having a central aperture, the combination with a pair of locking parts at one side of said aperture, one of said parts
85 being a web standing on one member and the other a latch projecting from the opposite member and having a beveled lower face provided with a radial groove adapted to receive said web; of a pair of lugs at the
90 opposite side of the aperture constituting a hinge-joint, one of said lugs projecting from the last-named member and riding over the other member, and a pair of ears located between said pair of lugs and the aperture, one
95 of said ears projecting in opposed relation to the projecting lug and riding frictionally over the other ear, whereby said lugs and ears tend to produce a vertical displacement of the latch and web when forced into engagement. 100

7. A ceiling-plate formed in two members 100 or halves and having a pair of lugs at one side thereof constituting a hinge-joint, cooperating parts at the other side serving as a latch to lock the members together against the spring of the metal, and means for pro- 105 ducing a strain within the members when locked transverse to the plane thereof, comprising a pair of coacting ears located adjacent to the hinge-joint and between said joint and said latch. 110

8. A ceiling-plate formed in two members or halves having a central aperture, a pair of cooperating lugs at one side of said aperture, cooperating parts on the members at the opposite side of said aperture serving as a latch 115 to lock the members together against the spring of the metal, and a pair of coacting ears located adjacent to said lugs between said lugs and said latch said ears and lugs being so arranged that they are adapted to produce a strain within the members transverse to the plane thereof, when said members are locked. 120

9. A ceiling-plate formed in two members or halves and having a central aperture; a 125 lug and a latch on one member at opposite sides of said aperture, said lug overlying the second member and said latch engaging a web

thereon to lock the parts together against the
spring of the metal; and means for produc-
ing a strain within the members transverse to
the plane thereof, comprising an ear on the
5 second member overlying the first-men-
tioned member between the lug and the ap-
erture, substantially as described.

In testimony whereof I affix my signature
in presence of two witnesses.

JUDSON NEAL.

Witnesses:

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FREDERIC A. LARIBEE.