

No. 676,331.

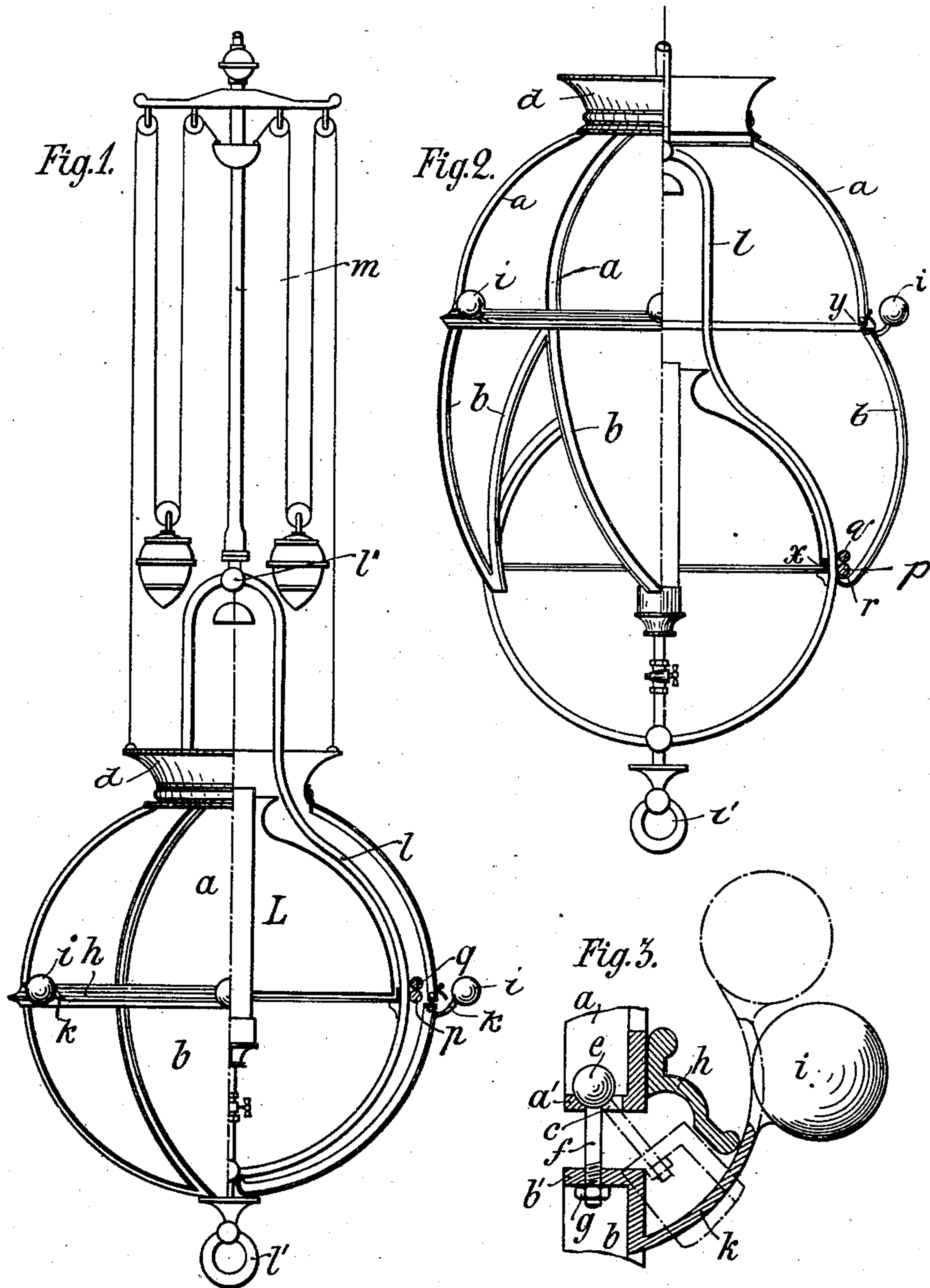
A. LEPEL & F. SCHULTZE.
GLOBE GUARD.

Patented June 11, 1901.

(Application filed Mar. 14, 1899.)

(No Model.)

3 Sheets—Sheet 1.



Witnesses
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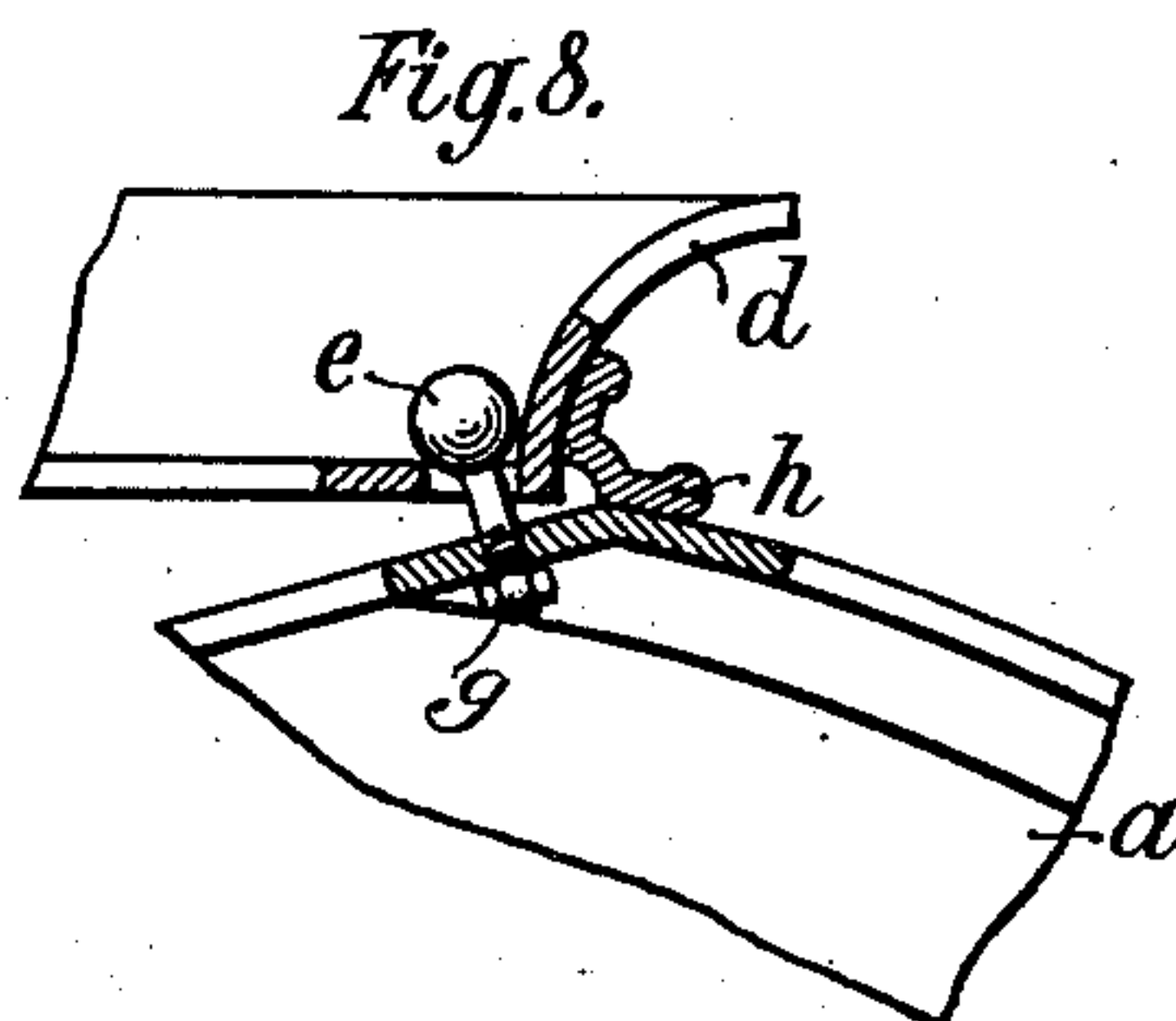
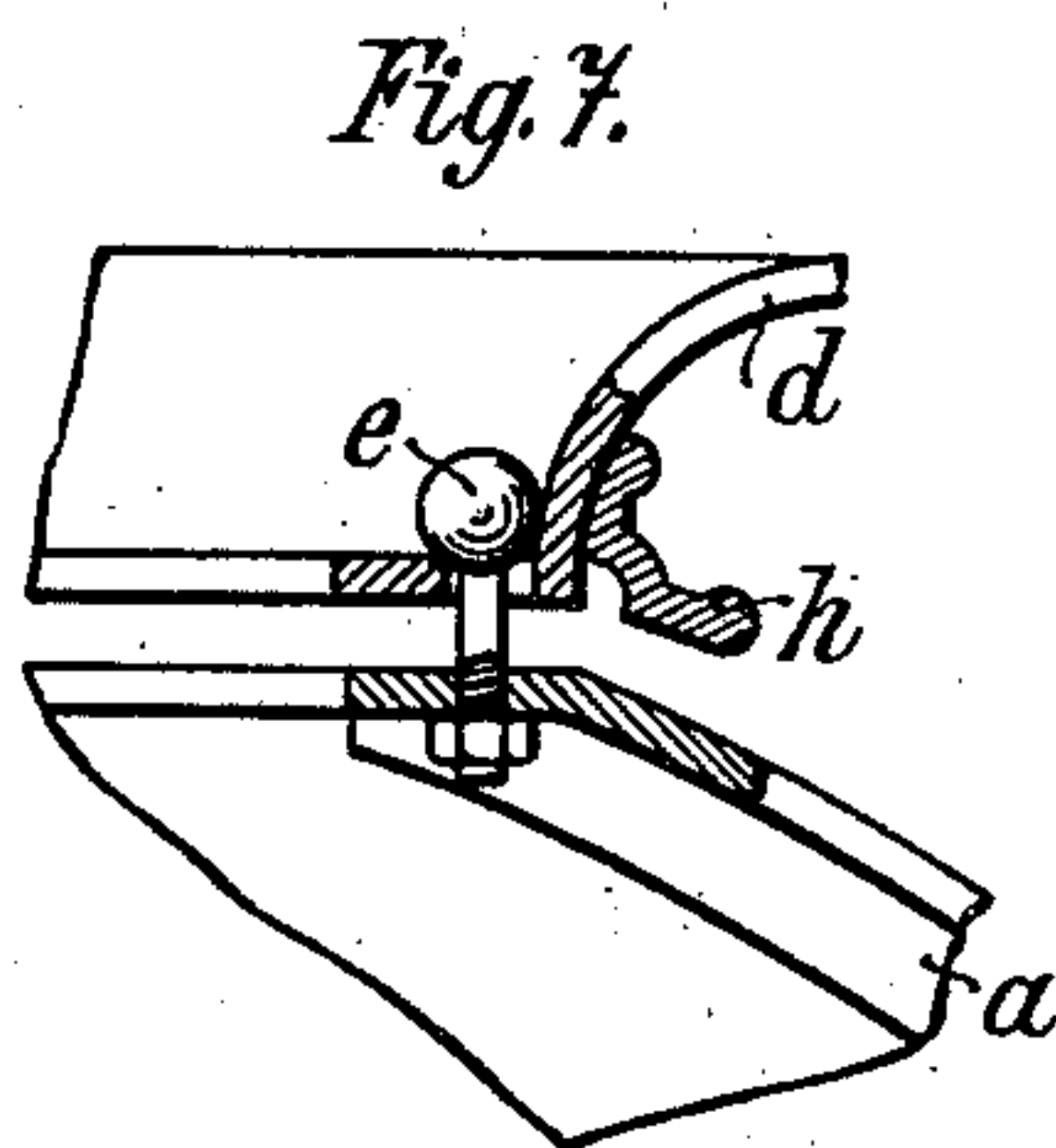
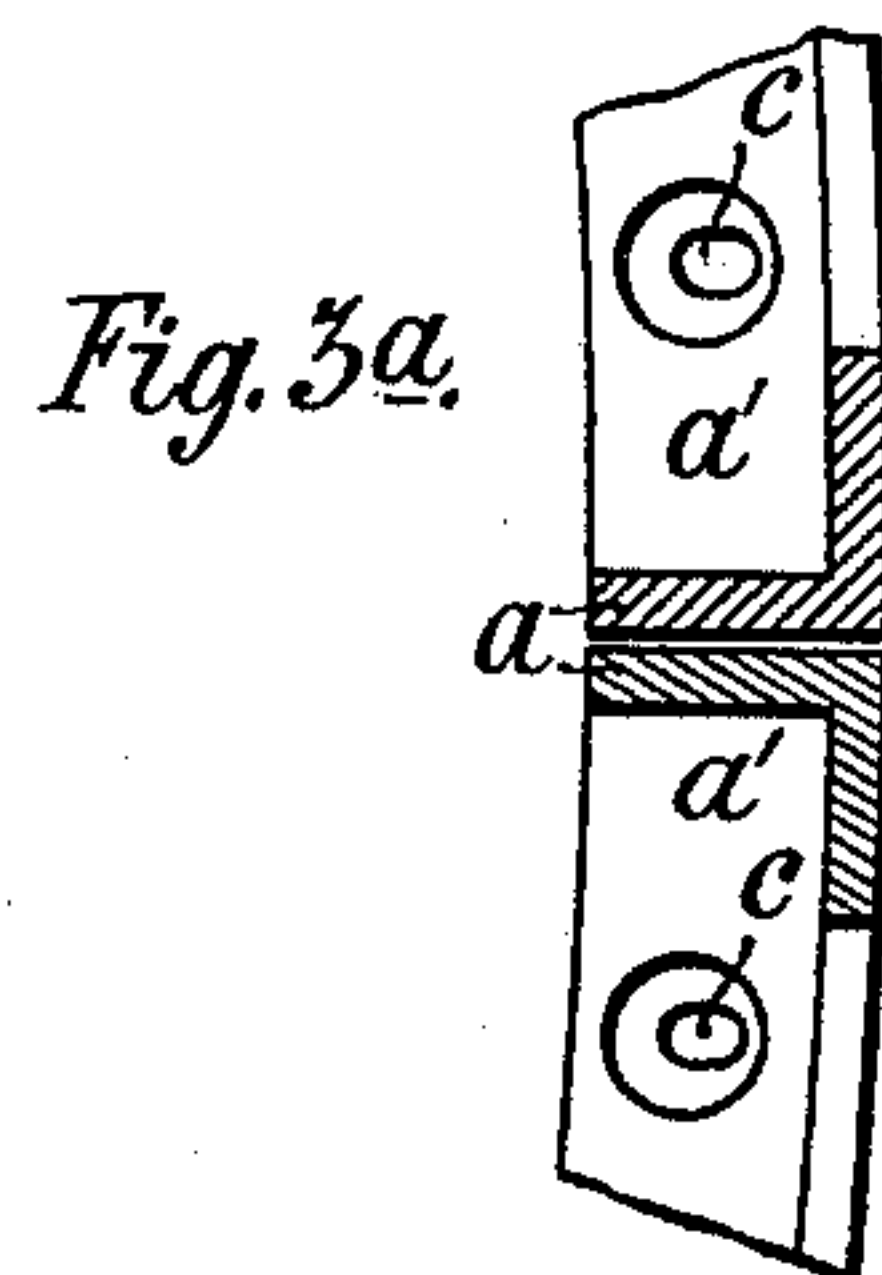
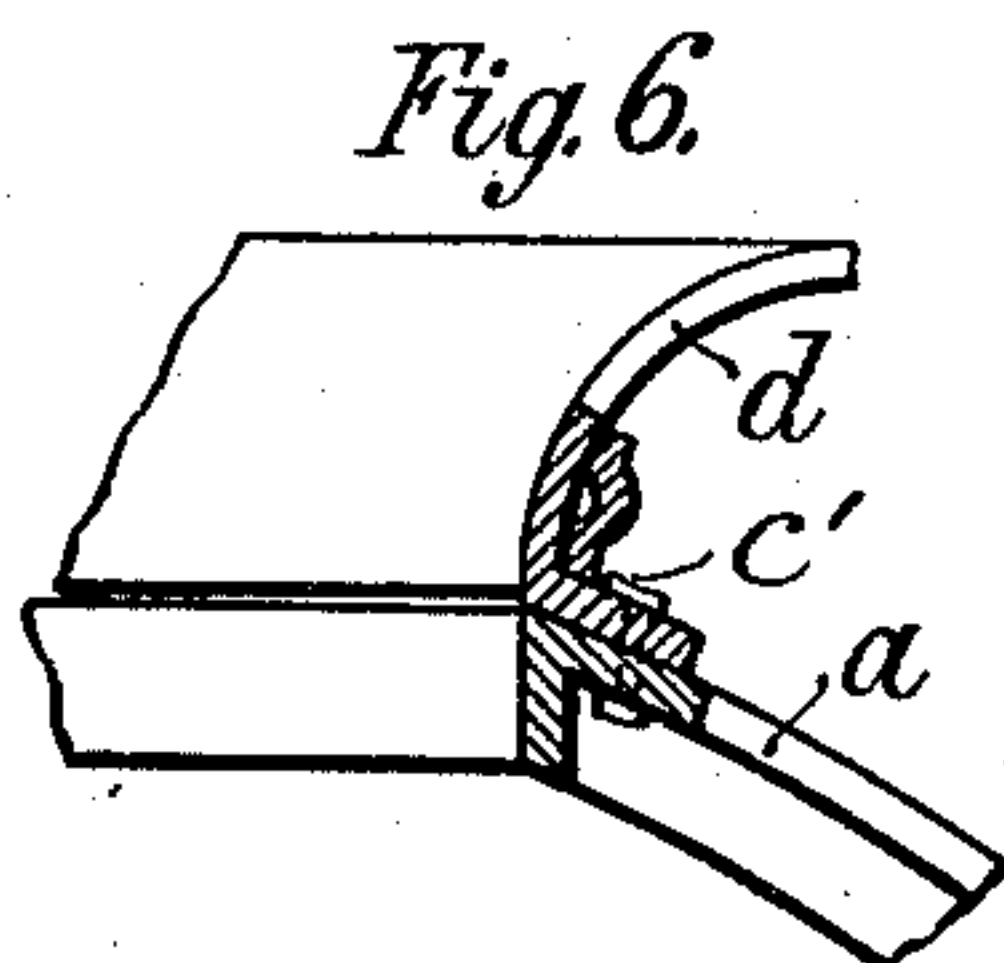
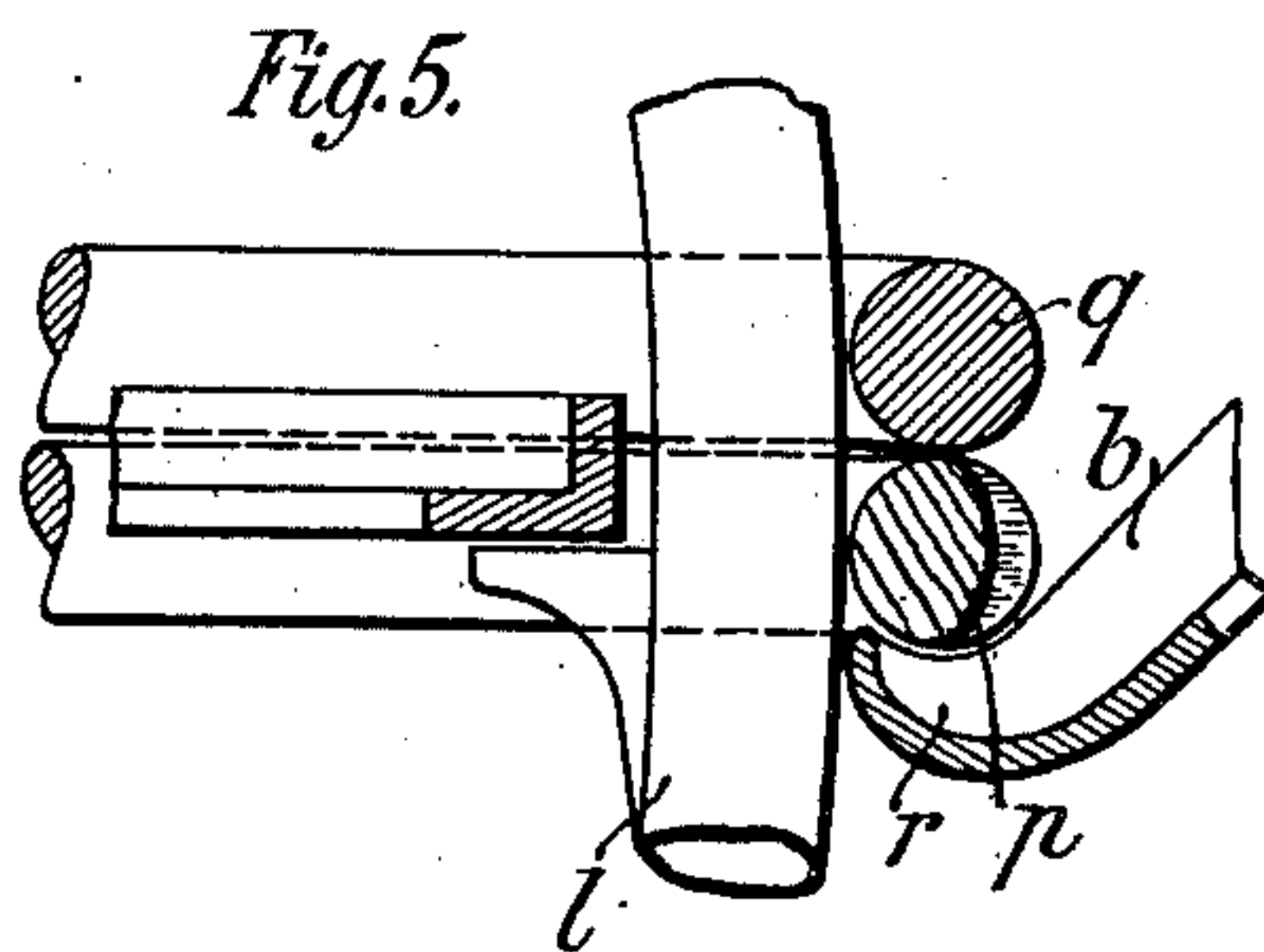
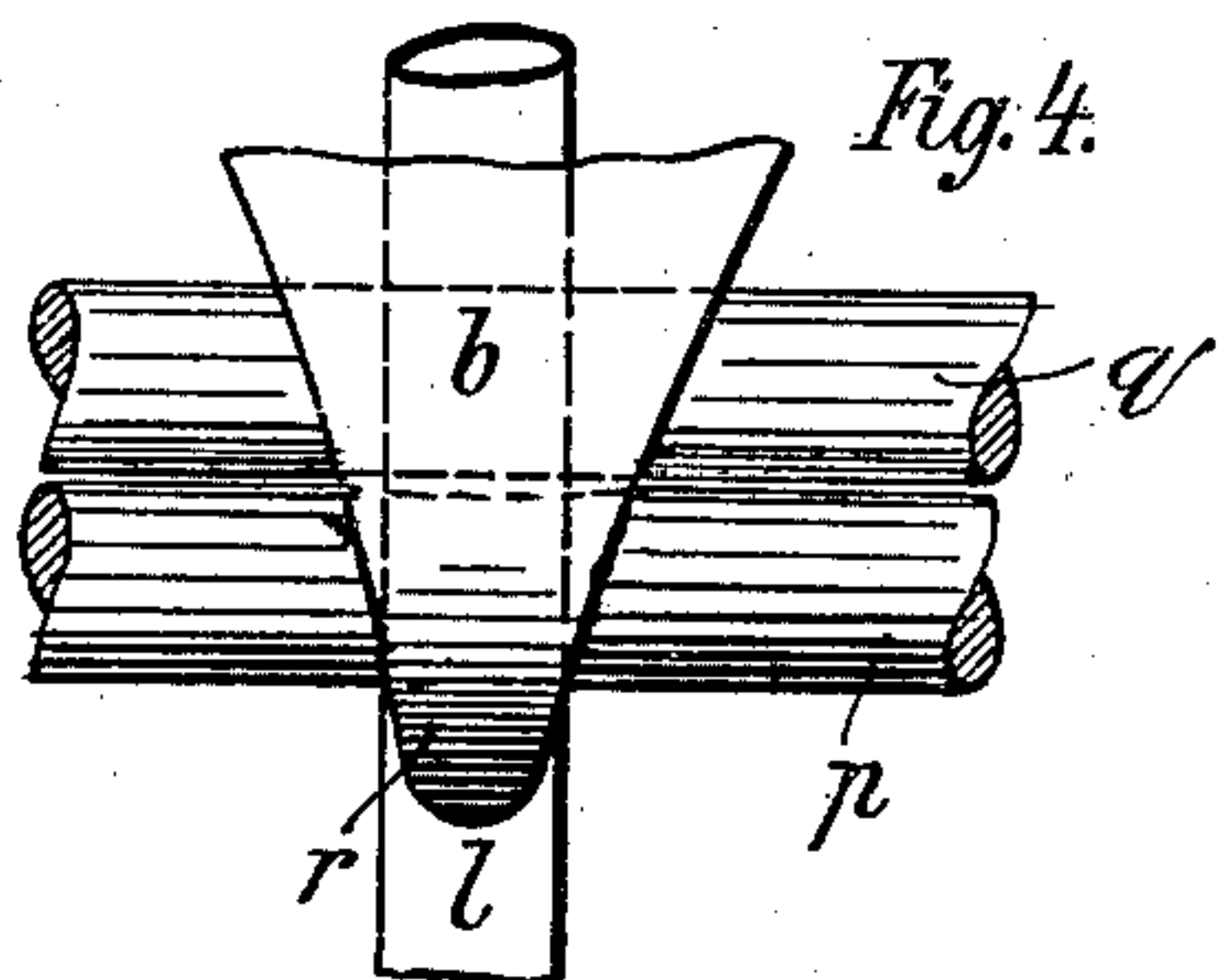
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(Application filed Mar. 14, 1899.)

(No Model.)

3 Sheets—Sheet 2.



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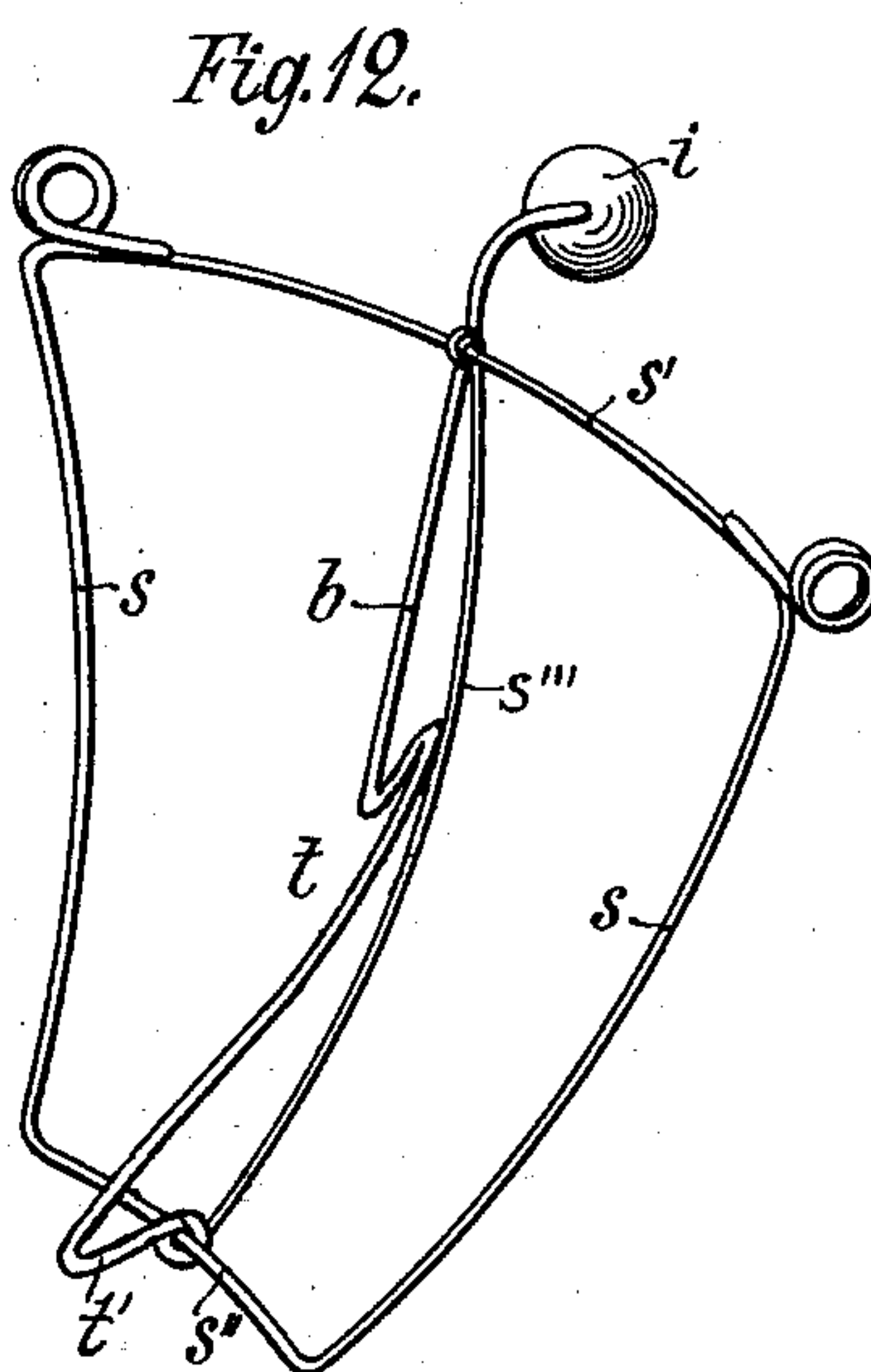
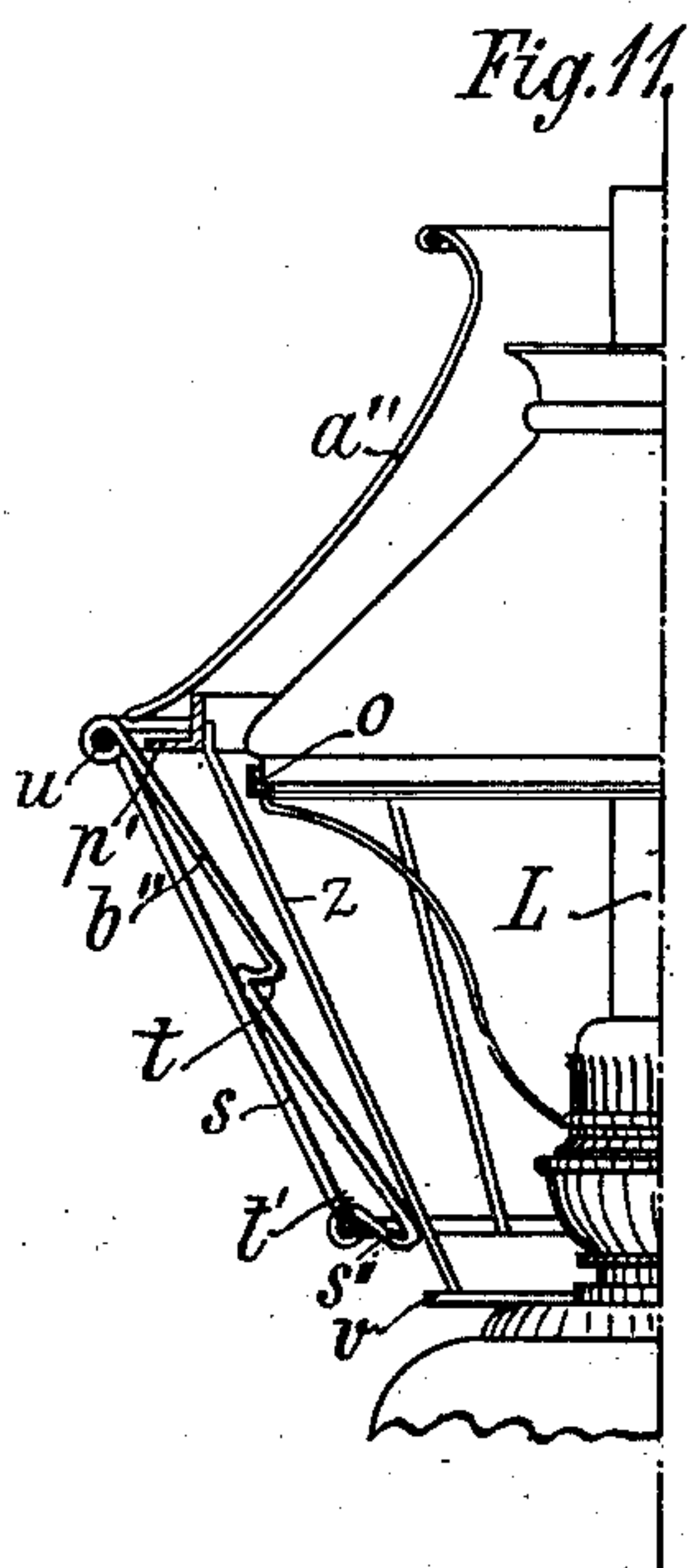
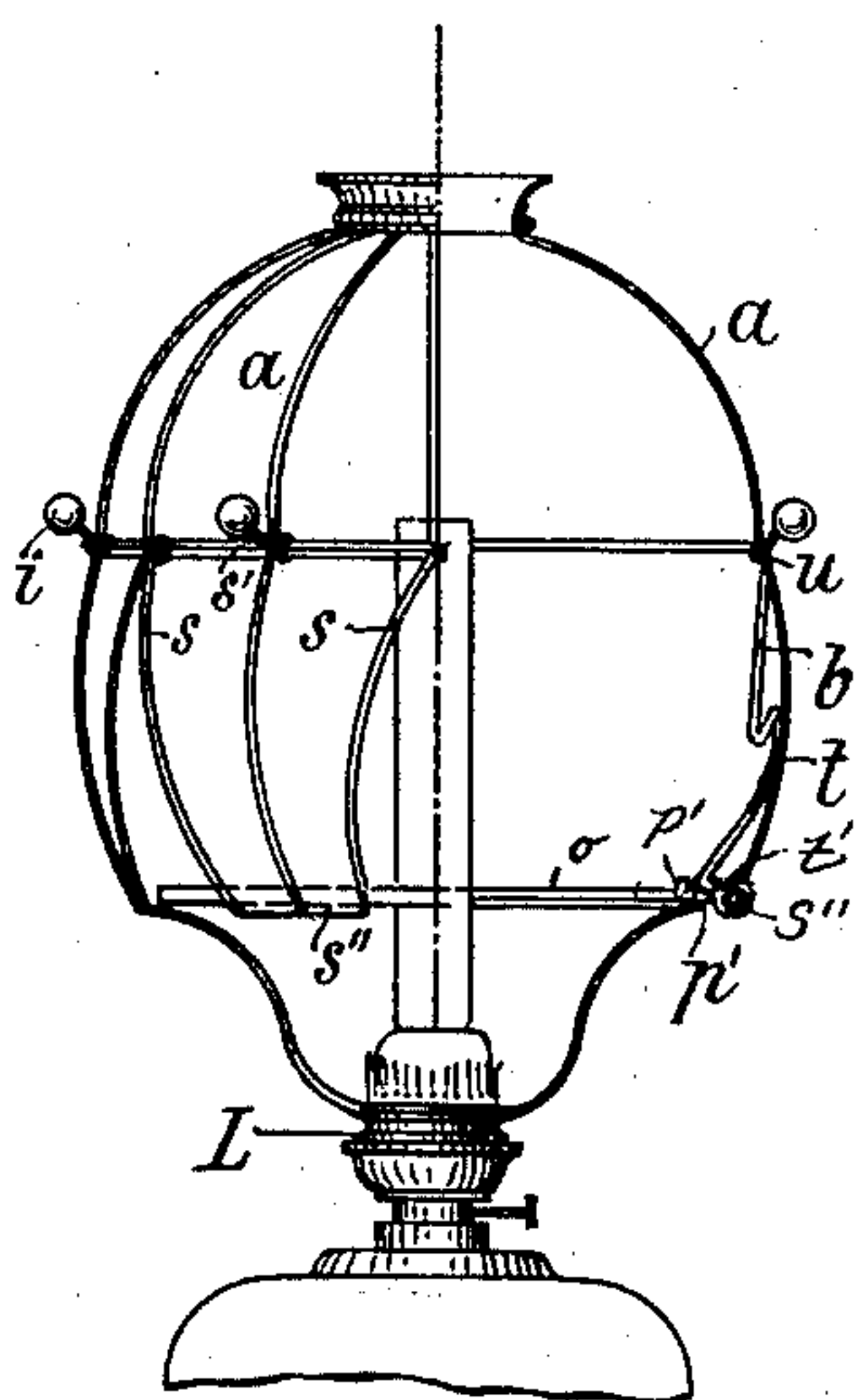
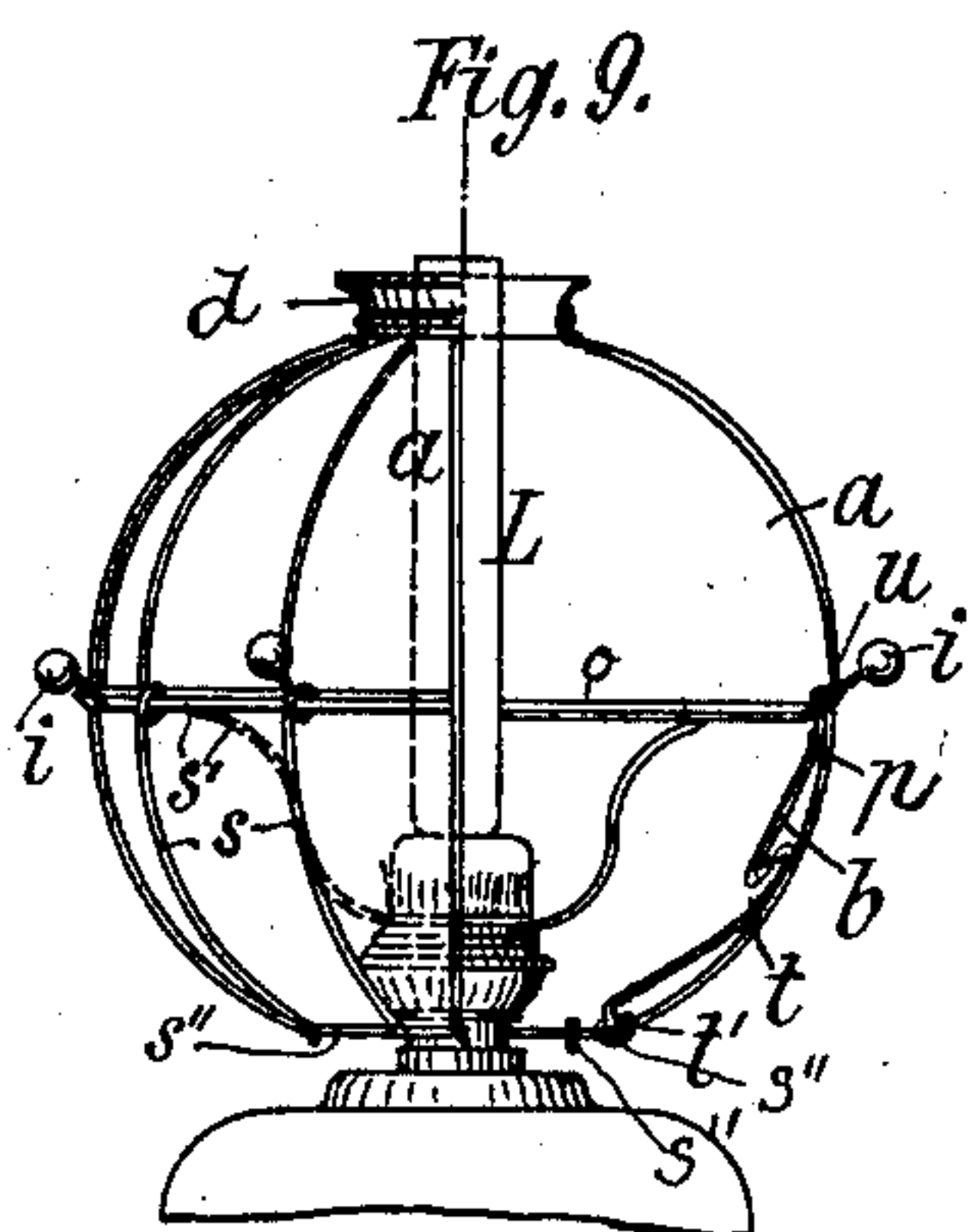
A. LEPEL & F. SCHULTZE.

GLOBE GUARD.

(Application filed Mar. 14, 1899.)

(No Model.)

3 Sheets—Sheet 3.



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UNITED STATES PATENT OFFICE.

ALFRED LEPEL, OF BERLIN, AND FRITZ SCHULTZE, OF GRUNEWALD,
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GLOBE-GUARD.

SPECIFICATION forming part of Letters Patent No. 676,331, dated June 11, 1901.

Application filed March 14, 1899. Serial No. 709,034. (No model.)

To all whom it may concern:

Be it known that we, ALFRED LEPEL, mechanical engineer, residing at Luisen-Strasse 7, Berlin, and FRITZ SCHULTZE, architect, residing at Trabener-Strasse 2, Grunewald, near Berlin, in the German Empire, subjects of the German Emperor, have invented certain new and useful Improvements in Globe-Guards, of which the following is a specification.

10 The spherical or nearly spherical globe-guard illustrated in the accompanying drawings has the characteristic feature of opening below in order to obtain a better downward radiation of the light inclosed by it. However, this is not the only practical purpose of the present globe-guard, as its form also serves to satisfy demands which may be made from an esthetic point of view.

Figure 1 of the drawings represents in part 20 sectional view the globe-guard arranged for a suspended lamp. Fig. 2 shows the globe-guard opened below. Fig. 3 shows in section and on a larger scale the connection of the lower half of the globe-guard with the upper half at *y* in Fig. 2. Fig. 3^a is a detail horizontal section through two upper parts of the guard. Figs. 4 and 5 are detail views at right angles to each other. Fig. 6 shows the connection of a portion of the upper part of the 30 globe-guard with the top band or ring. Fig. 7 shows a modification of Fig. 6, the upper half of the globe-guard being in its details turnable in sector form around the top. Fig. 8 shows the same form with the difference of the sectors being represented open. Fig. 9 shows the globe-guard modified for table-lamps closed, and Fig. 10 shows the same opened. Fig. 11 is another modification, and Fig. 12 is a view of a sector seen in Figs. 9 40 and 10.

As shown in Figs. 1 and 2, the globe-guard consists of several sectors, viz: six sectors *a* for the upper half and six sectors *b* for the lower half. It is not necessary, however, for 45 the globe-guard to be composed exactly of twelve sectors, as it may instead be constructed of more or less than twelve such parts, although to make it in twelve parts is the most suitable arrangement. The upper 50 six sectors are held together at the top *d* by screws or bolts *c* through the adjacent flanges.

Fig. 6 shows a simple manner in which this may be effected. The lower six sectors *b*, however—that is to say, each individual sector—turns on the lower edge of the corresponding 55 upper sector *a*, as shown by Fig. 3. According to this the lower rim *a'* of each upper sector *a* is provided with two oval holes *c*, through each of which passes a short rod *f*, with a ball *e* at the upper end and a nut *g* at 60 the lower end. By means of this nut *g* or a similar fastening device the upper rim *b'* of the lower sector *b* is held. The ball *e* and the oval hole *c* (see also Fig. 3^a) enable the lower sector *b* to take up a slanting position, as indicated by dotted lines, Fig. 3, 65 with relation to the upper sector. At *y* in Fig. 2 this slanting position is shown. Two such ball-bearings are provided for every lower sector *b*. In order to cover the open 70 part, an annular ledge *h* is suitably arranged at the lower rim of the upper sectors and a covering-ledge *k* at the lower sectors. On this ledge *k* weights *i* are provided, which serve to return the sectors to their original 75 closed position.

As will be seen by comparing Figs. 1 and 2, the lower part of the globe-guard opens when the lamp is pulled down by the ring *l'*. This is done in the following manner: The 80 lamp is arranged, as usual, in a harp *l*, which, as shown, terminates at *l'* in the gas-supply pipe *m*. When the harp carrying the lamp *L* is pulled down by the ring *l'*, a ring *p*, secured to and around the harp, meets the inner edges of the sectors *b* and presses the latter outward by gliding along on the inner edges of said sectors. This continues until the ring *p* meets the lower rim *r* of the sectors *b*, as shown in Figs. 2, 4, and 5. Thus the 90 sectors *b* have gradually opened and the light of the lamp freely radiates downward between the sectors. The ring *p* is fastened to the rods *l* of the harp, and consequently goes up and down with the same. Now the lamp can 95 be pulled down together with the opened globe-guard and said guard may be opened or closed in any position of the lamp. According to this arrangement the lamp can only project as far out of the globe-guard as 100 shown in Fig. 2. In some cases it is desirable, however, to let the lamp project farther and

to use it entirely without the globe-guard. For this purpose the ring p may be slightly recessed or indented opposite the sectors to allow the lower rims r of the sectors b to pass.

5 Thus the lamp can be pulled down by itself without the guard; but in order to avoid the sectors coming together with their points r over the upper half of the globe these ends must be kept apart. This is done by the aid
10 of a second ring q , which lies loosely on the lower ring p , and is therefore not connected with the harp-rods l . It will be easily seen by Fig. 5 that should the lamp, with the harp l and attached ring p , be pulled down
15 below the points r of the sectors b the loose ring q will then place itself on r , and thus prevent the meeting of the lower sector ends. The said loose ring q is made sufficiently heavy so as to hold the sectors apart without
20 any tendency to slide upward thereon. In pushing the lamp upward the rounded under sides of the points r of the sectors b will permit the ring p to pass. In pushing the lamp still farther up the loose ring q is taken up
25 with the ring p and the sectors close, as shown in Fig. 1.

In a suspension-lamp the globe-guard is supported by means of any usual suspension devices connected with the top d , as shown
30 in Fig. 1.

Figs. 7 and 8 show a modification in which the movement of the sectors takes place at the upper rim or flange of the upper sectors. In this case the upper and lower sectors are
35 of course firmly connected with each other where they meet at their flanged ends, so that the globe-guard only consists of six opening-sectors. The support can be effected, as shown in Figs. 7 and 8, by means of ball-
40 joints in the same manner as in Fig. 3; but as the upper flanges of the sectors are somewhat narrow any other hinge-joint may be used. This arrangement can be used for table-lamps as well as for suspended lamps,
45 but of course with the difference that the globe-guard is to be moved up while the lamp remains in its place. In Figs. 9 and 10 this arrangement is shown in closed and open position, respectively. According to Fig. 9 the
50 lamp L is surrounded by a spherical globe-guard composed of wires. The lower half of this globe-guard is suitably constructed of six sectors of the form shown in Fig. 12 or the like arranged on a ring u , Figs. 10 and
55 11, connected with the upper half of the globe-guard. As also shown in Fig. 12, every sector is composed of the two side wires s s , the upper wire s' , and the lower wire s'' . Between the upper wire s' and the lower wire s''
60 an intermediate wire s''' may be arranged for bracing the sector. The space between the wires is suitably covered with cloth. A wire b'' , with two knees t and t' , reaches from the upper wire s' to the lower wire s'' . The ring
65 of the globe-guard, on which in ordinary lamps the globe is placed, also serves to carry

a ring p' , against which the wires b'' are leaning when the globe-guard is pushed up. If the globe-guard is lifted, the wires b'' slide
70 along on the ring p' , and thus the lower sectors are opened. At about half the height of the guard the knee t can place itself on the ring p' , in which case it serves as a rest. If the globe-guard is pushed higher, the lower
75 part of the wire b'' , reaching from t to t' , slides past the ring p' until another rest t' places itself on the ring p' , resulting in the position indicated by Fig. 10. The ring p' may be slightly notched or indented opposite
80 the sectors. If, therefore, the globe-guard is to be closed again, it is turned with its rests t' on the ring p' until each of the notches for the several sectors stands opposite to the wires b'' . Then the rests t' loose their hold
85 on the ring p' and the globe-guard can be pulled down, so that the sectors close until the position indicated by Fig. 9 is rearrived at.

Fig. 11 shows a modification in which the upper half of the globe-guard a'' remains immovable, while the lower half consists of sec-
90 tors, as shown in Fig. 12. Fig. 11 also shows how such an arrangement may be applied to existing lamps. In this case a ring or a plate v is in a suitable manner fastened, say, immediately under the lamp-burner proper.
95 This plate carries by means of some wires z the ring p' , which, as will at once be seen by Fig. 11, supports the whole arrangement quite independently from the lamp L .

What we claim as our invention is—

1. A spherical or nearly spherical globe-guard, for lamps, comprising a number of sectors curved throughout their entire length and provided with inwardly-turned flanged ends, said sectors being suitably supported
105 from above and adapted to automatically open outward at their lower ends, in combination with a fixed ring on the lamp-frame, and a loose ring above said fixed ring, for guiding said sectors in opening and closing
110 the globe-guard, substantially as described.

2. A globe-guard comprising a number of upper sectors and a number of lower sectors, said upper and lower sectors being suitably
115 connected to permit the lower sectors to open outward at their lower ends which are provided with inwardly-turned flanges, in combination with a fixed ring on the lamp-frame, a loose ring above said fixed ring, and weights
120 on the lower sectors, substantially as described.

3. A globe-guard comprising a top, and a number of jointed sectors adapted to open outward at their lower ends which are provided with inwardly-turned flanges, in combination with a ring on the lamp-frame to engage the inner edges of said sectors in opening the globe-guard, and weights on said sectors to close said guard, substantially as described.
125

4. A globe-guard comprising a number of jointed sectors adapted to open outward at
130

their lower ends which are provided with inwardly-turned flanges, weights on said sectors, and rests or knees *t t'* carried by said sectors, in combination with a ring on the
5 lamp-frame to be engaged by said rests for supporting the guard at different heights, substantially as described.

In testimony whereof we have hereunto set

our hands, in presence of two subscribing witnesses, this 24th day of February, 1899.

ALFRED LEPEL.
FRITZ SCHULTZE.

Witnesses:

HENRY HASPER,
WOLDEMAR HAUPT.