

No. 652,704.

Patented June 26, 1900.

A. J. WURTS.
ELECTRIC LAMP AND FIXTURE.

(Application filed Aug. 19, 1899.)

(No Model.)

Fig. 1

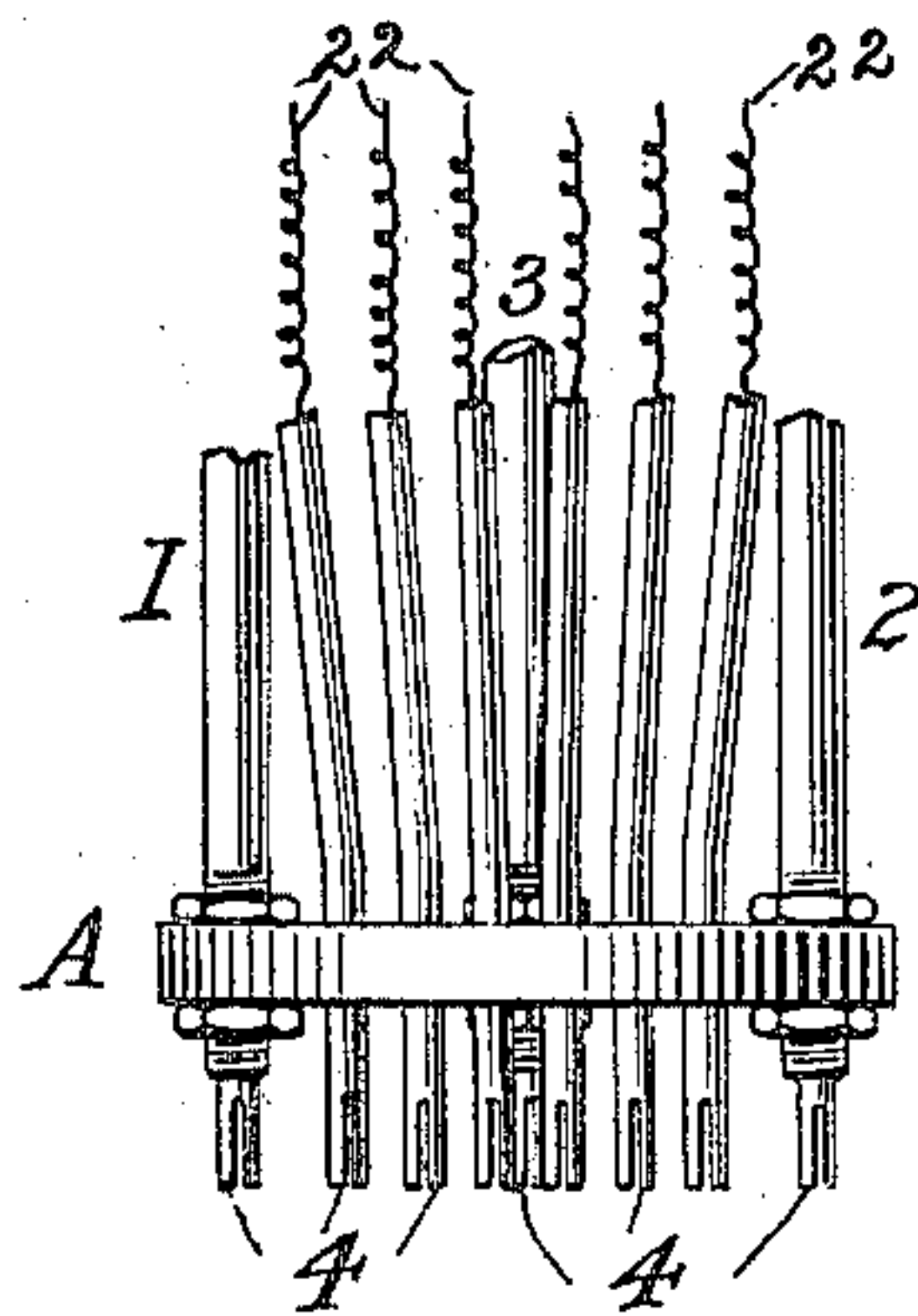


Fig. 4

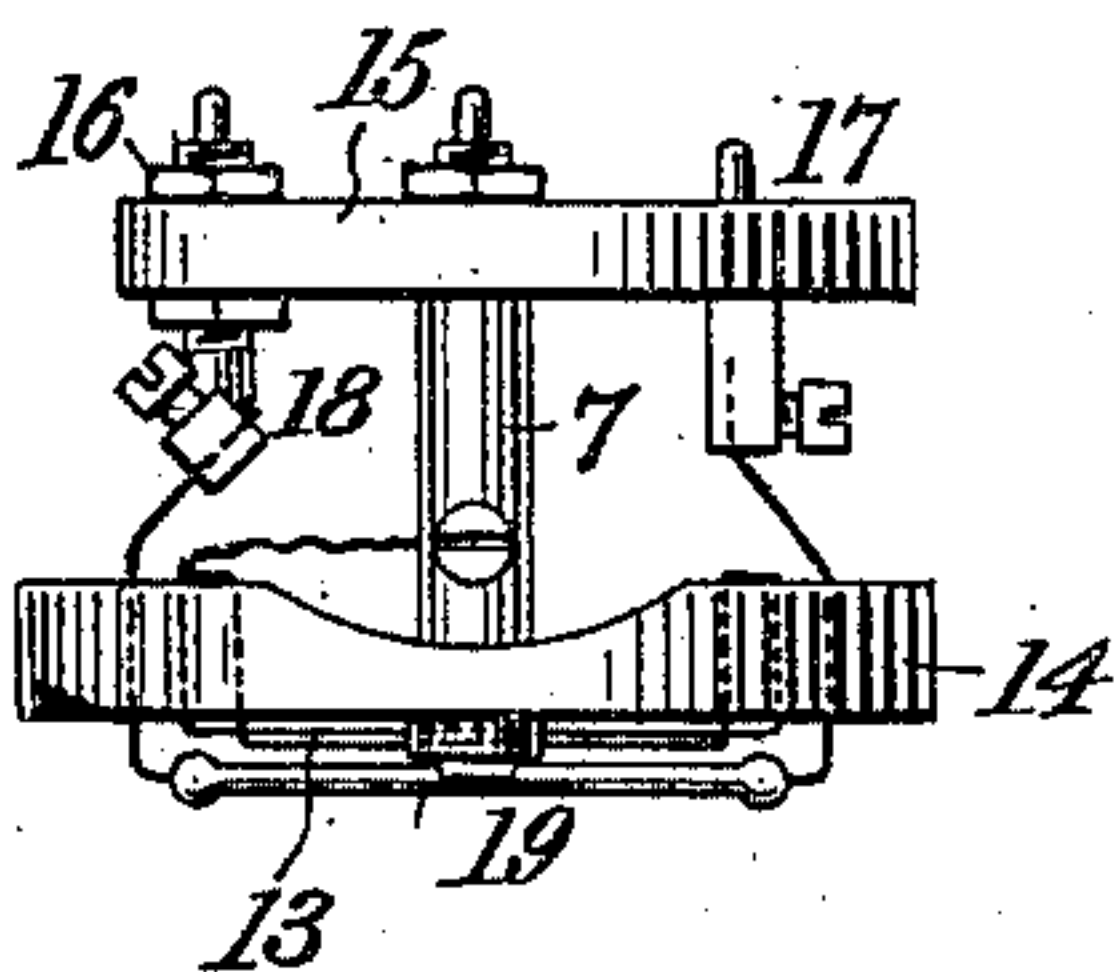


Fig. 2

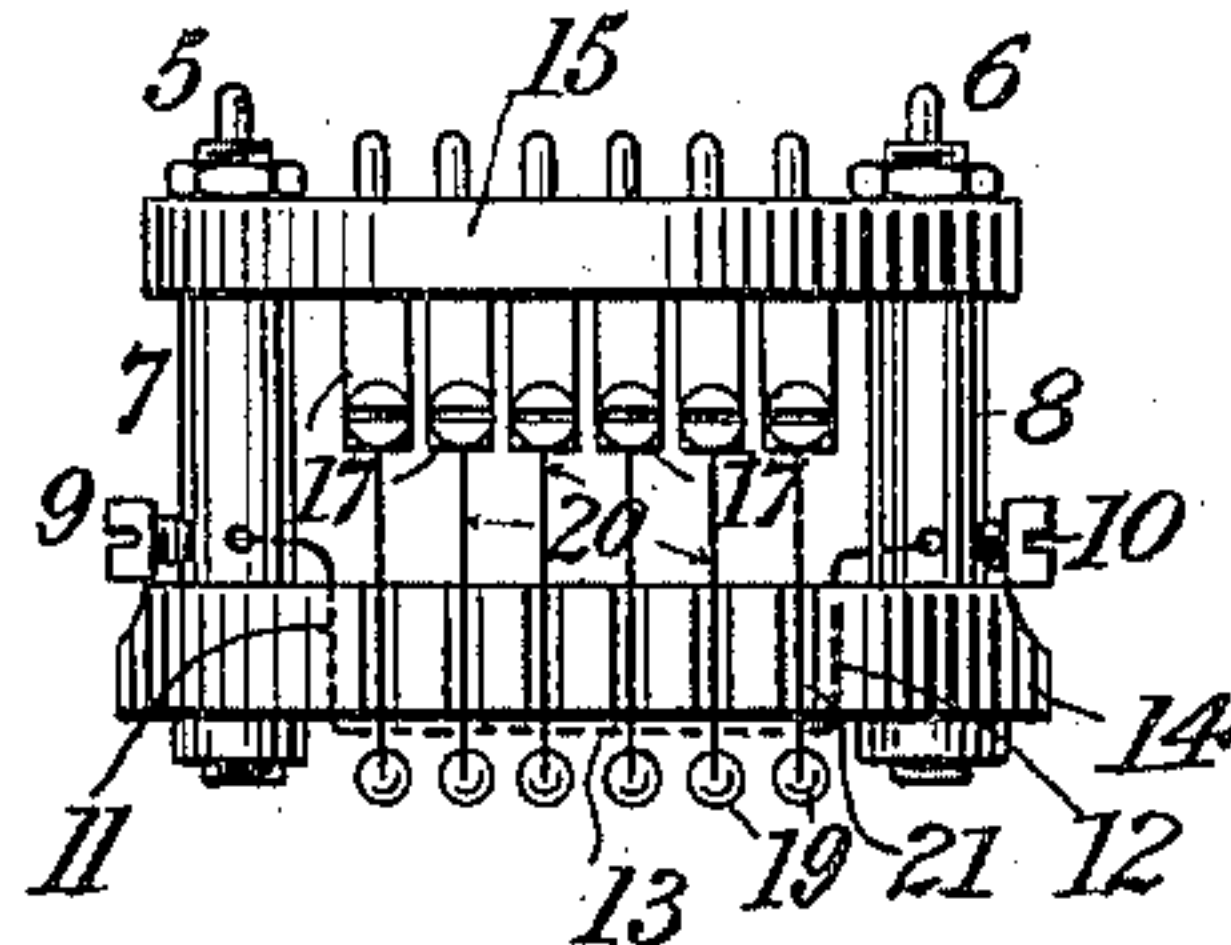


Fig. 3

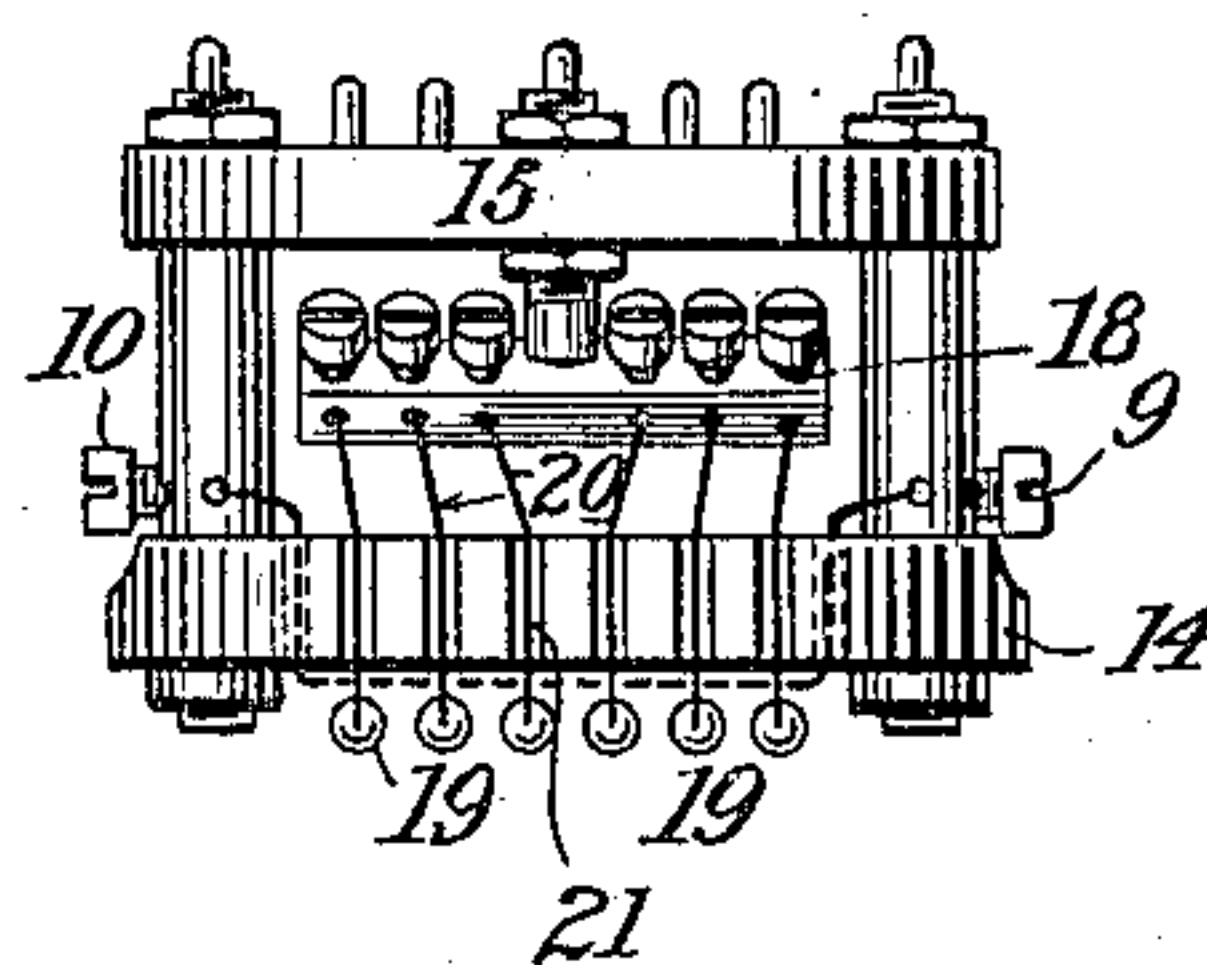
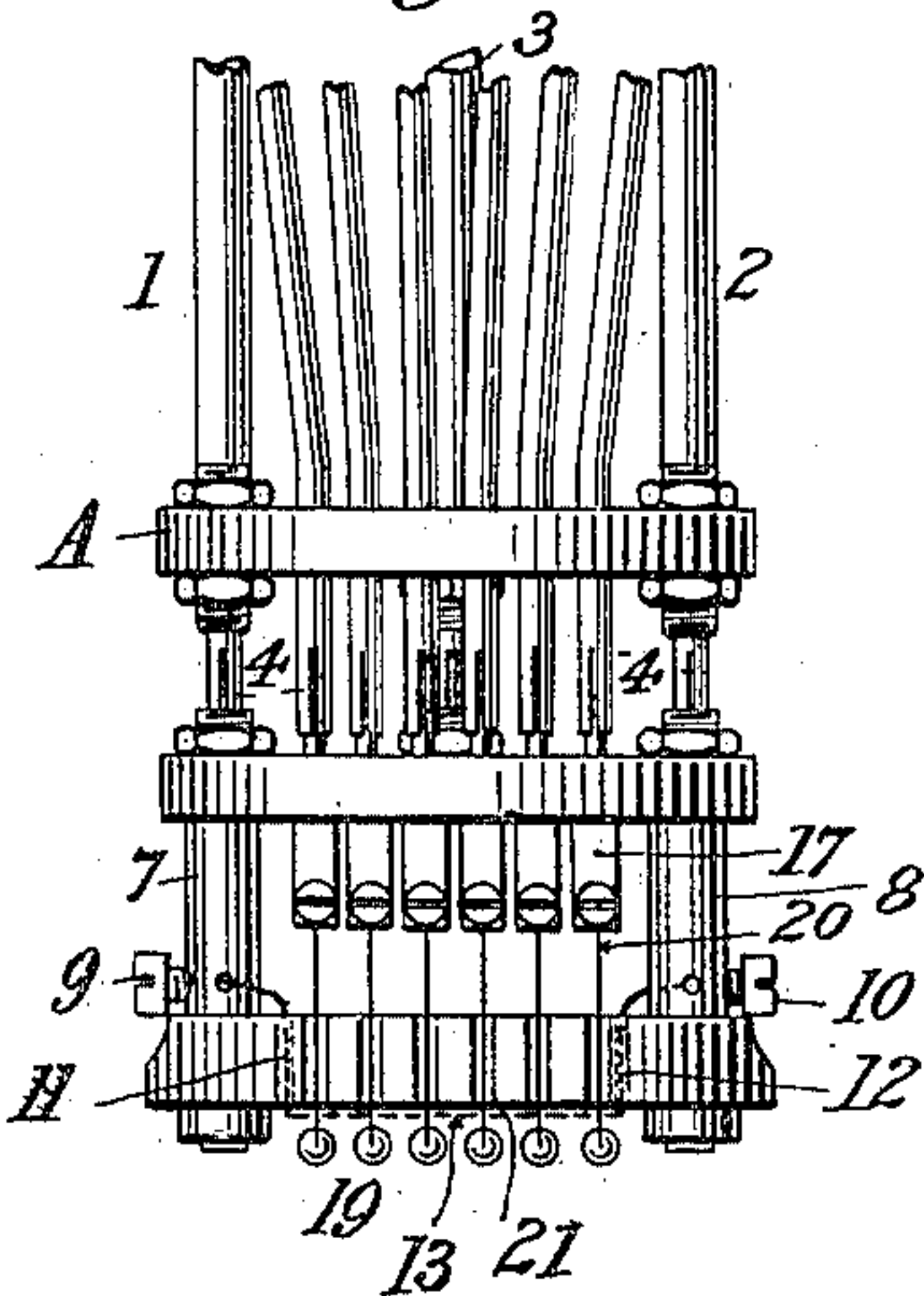


Fig. 5



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UNITED STATES PATENT OFFICE.

ALEXANDER JAY WURTS, OF PITTSBURG, PENNSYLVANIA, ASSIGNOR TO
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ELECTRIC LAMP AND FIXTURE.

SPECIFICATION forming part of Letters Patent No. 652,704, dated June 26, 1900.

Application filed August 19, 1899. Serial No. 727,785. (No model.)

To all whom it may concern:

Be it known that I, ALEXANDER JAY WURTS, a citizen of the United States of America, and a resident of Pittsburg, in the county of Allegheny and State of Pennsylvania, have invented certain new and useful Improvements in Electric Lamps and Fixtures, of which the following is a specification.

My invention relates particularly to the means for connecting the fixed and removable parts of lamps belonging to the Nernst class, the object being to obtain a good mechanical and electrical union between the said parts. Lamps of this kind are generally provided with two sets of circuits, one including one or more glowers of rare earth or an intimate mixture of rare earths and a ballast-conductor for each glower, and the other including an electrical heating device, which is usually a small wire placed in proximity to the said glower or glowers. In some instances the ballast-wires for the different glowers are contained within the removable part of the lamp, in which case the two lamp parts which have to be joined together need to carry only four circuit-terminals, two for each of the circuits described. In other instances the ballast-wires are located in the fixed portion of the lamp, and the terminals of the glower-circuit will then be represented by a single terminal on one side thereof and as many terminals on the other side as there are glowers in the lamp. In the structure which is illustrated in the accompanying drawings, forming a part of this specification, the lamp contains six glowers, and on one side of the glower-circuit I represent six circuit-terminals.

In said drawings, Figure 1 is a side elevation of the lower portion of the fixed part of a Nernst lamp. Fig. 2 is a side elevation of the removable portion of such a lamp. Fig. 3 is a side elevation of the said removable portion, the view being taken from the side opposite that which appears in Fig. 2. Fig. 4 is a side elevation of the same looking from the left of the view in Fig. 3, and Fig. 5 is an elevation showing the fixture and the removable part connected together.

In the drawings, A is a disk, of porcelain or other heat-resisting and insulating material, forming the lower insulating-support of

the fixed part of the Nernst lamp. To the said disk are connected binding-posts 1 and 2, which connect with the terminals of the heater-circuit on the removable part of the lamp. The terminals connecting with the glower-circuit are respectively the terminal 3 on one side and the terminals 4 4 4 4 4 4 on the other. The terminals 4 are respectively connected with corresponding ballast-conductors diagrammatically indicated at 22. The purpose of these ballast-conductors is to prevent an undue flow of current as the conductivity of the glowers is increased by increasing temperatures.

Referring now to the figures which illustrate the removable part of the lamp, the terminals which correspond to terminals 1 and 2 on the fixture are shown at 5 and 6, the same being connected by binding-posts 7 and 8 and binding-screws 9 and 10 to the opposite ends 11 and 12 of a heater 13. The said heater is supported upon the lower side of a plate or disk 14, of porcelain or some other good insulating and heat-resisting material, while the terminals 5 and 6 are supported upon a similar plate or disk 15. The posts 7 and 8 are arranged between the two disks or plates, as shown. The removable part of the lamp also carries terminals corresponding to the terminals 3 and 4 on the fixture, such terminals on the removable part being represented at 16 and 17. It will be observed that the terminal 16 is connected below the plate or disk 15 with a terminal 18, which is common to a number of glowers 19 19, supported under the disk or plate 14. On the opposite side of the said disk 14 the several glowers are connected by wires 20 20 to independent insulated binding-posts 17 17. The lower disk 14 is notched, as shown at 21 21, on both sides, and the lead-wires for the glowers extend through the said notches into connection with the proper circuit-terminals. Now in order to make good mechanical and electrical connection between the fixture-terminals and the corresponding terminals on the removable part of the lamp I employ split tubes as the junction elements of one set of terminals and posts or pins adapted to fit tightly within the said split tubes as the junction elements of the other set of terminals.

In the present instance I make the fixture-terminals end in split tubes, as shown, while the corresponding terminals on the removable part of the lamp appear as posts or pins adapted to enter the ends of the said split tubes and fit tightly therein. It will be understood that the tubes are adapted to spread somewhat in passing over the ends of the posts or pins, whereby a good mechanical and electrical union between the respective parts is effected.

I claim as my invention—

1. In an electric lamp, the combination of multiple glowers, a contact-point electrically connected with corresponding ends of all the glowers, insulated contact-points respectively connected with the remaining ends of the glowers, an insulating-support therefor, a fixture for receiving the support, separable connections carried by the fixture and the support respectively, for forming connections with the several contact-points, and ballast-conductors carried by the fixture and respectively adapted to be connected with the several insulated contact-points through the corresponding connections.

2. The combination of multiple glowers, a supporting-plate therefor, a heating-conductor carried upon the surface of the plate adjacent to the glowers, and terminal connections for the glowers located upon the opposite side of the said plate from the heating-conductor.

3. In an electric lamp of the type described, the combination of a glower, a heating-conductor therefor, a plate of insulating material carrying the heating-conductor upon one side, and contact-points connected with the respective ends of the glower located upon the side of the plate remote from the heating-conductor.

4. In an electric-lighting device, the combination of one or more glowers, a heating-conductor therefor, a disk carrying the heating-conductor upon the surface adjacent to the glower or glowers and having openings through which the terminals of the glower

or glowers are led to the opposite side of the disk from the heating-conductor, and means for forming electrical connections with said terminals.

5. In an electric-lighting device, the combination of multiple glowers, a heating-conductor therefor, a common binding-post receiving corresponding terminals of all the glowers, insulated binding-posts receiving the remaining terminals of the several glowers, a plate of insulating material carrying the said binding-posts, a second plate of insulating material carrying the heating-conductor, and means for uniting the two plates with each other.

6. In an electric-lighting device, the combination of one or more glowers, a heating-conductor for said glowers, a plate of insulating material carrying the heating-conductor upon its surface adjacent to the glowers, a fixture for carrying said plate, separable connections between the plate and the fixture, and a ballast-conductor carried by the fixture.

7. The combination of the glower-supporting plate, the contact-supporting plate, a plurality of contacts carried by the latter and insulated from each other, and multiple binding-posts also carried by the contact-supporting plate; substantially as described.

8. The combination, in a multiple-glower lamp, of multiple glowers, a heater-supporting plate adjacent to the glowers, slots in the edges of said plate, conductors extending therethrough from the respective glowers, a contact-supporting plate, binding-posts receiving the terminals of the conductors leading from the glowers and carried by the contact-supporting plate, a lamp-supporting structure, and means for detachably securing the contact-supporting plate thereto.

Signed at Colorado Springs, Colorado, this 15th day of August, 1899.

ALEXANDER JAY WURTS.

Witnesses:

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