

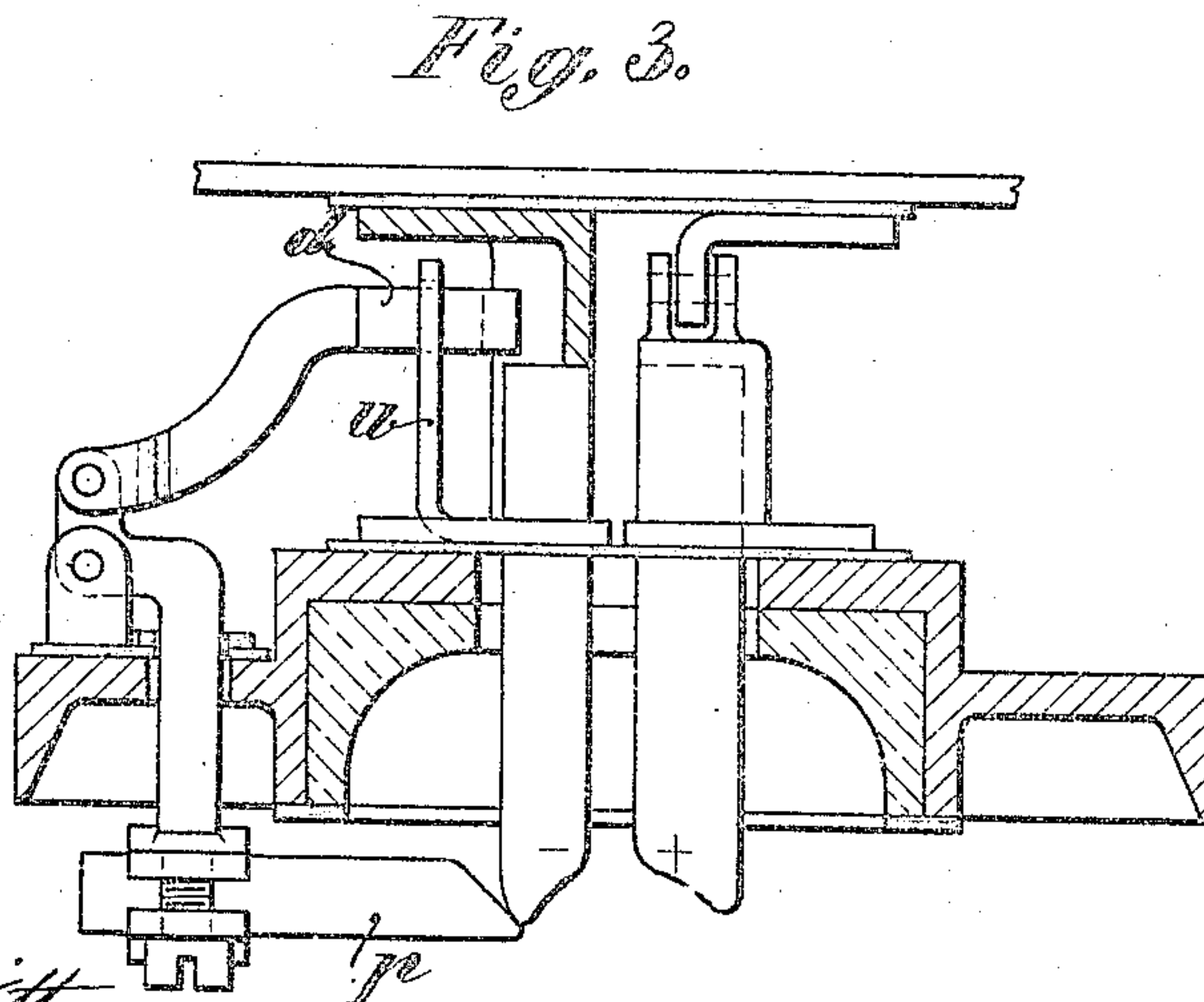
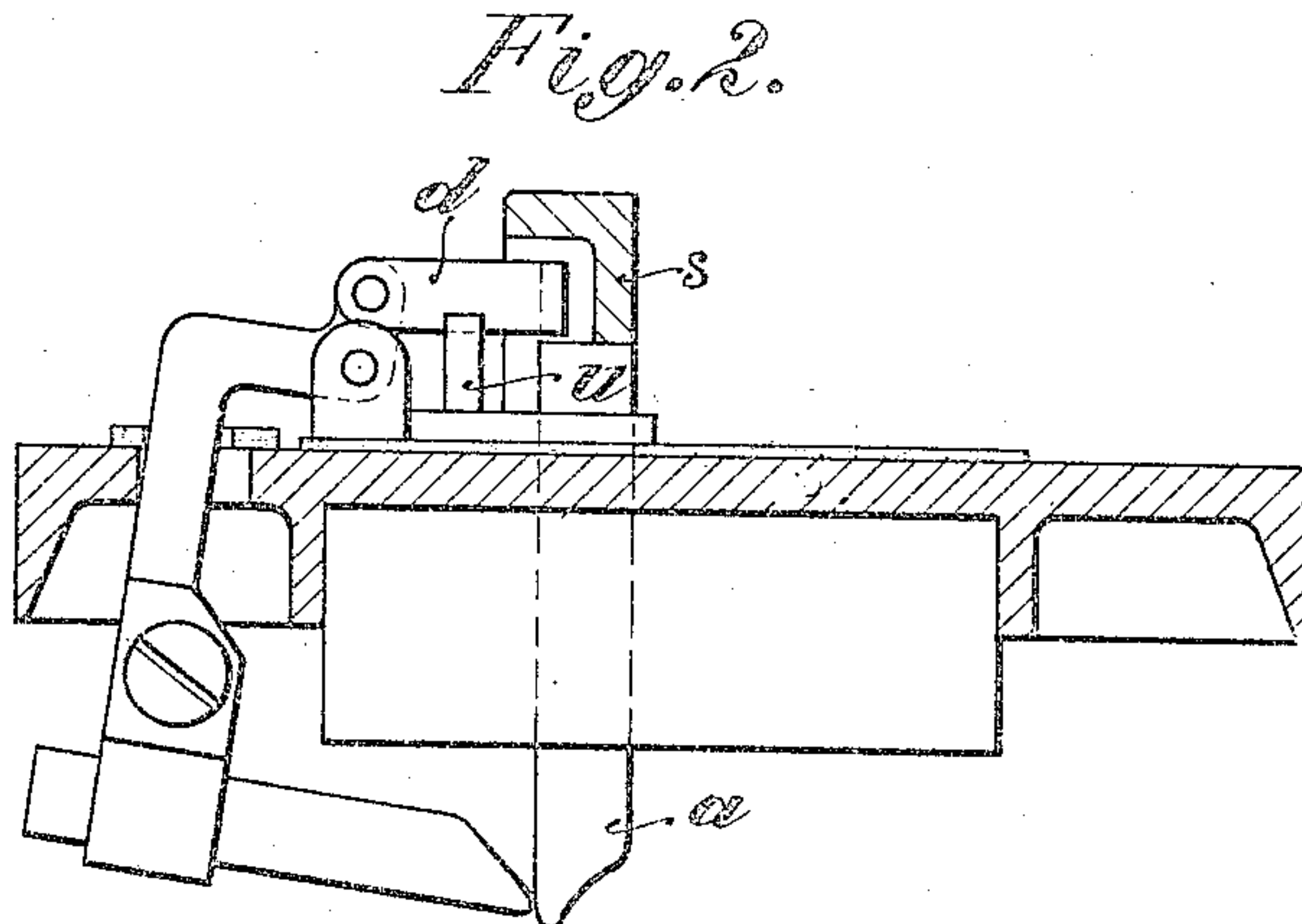
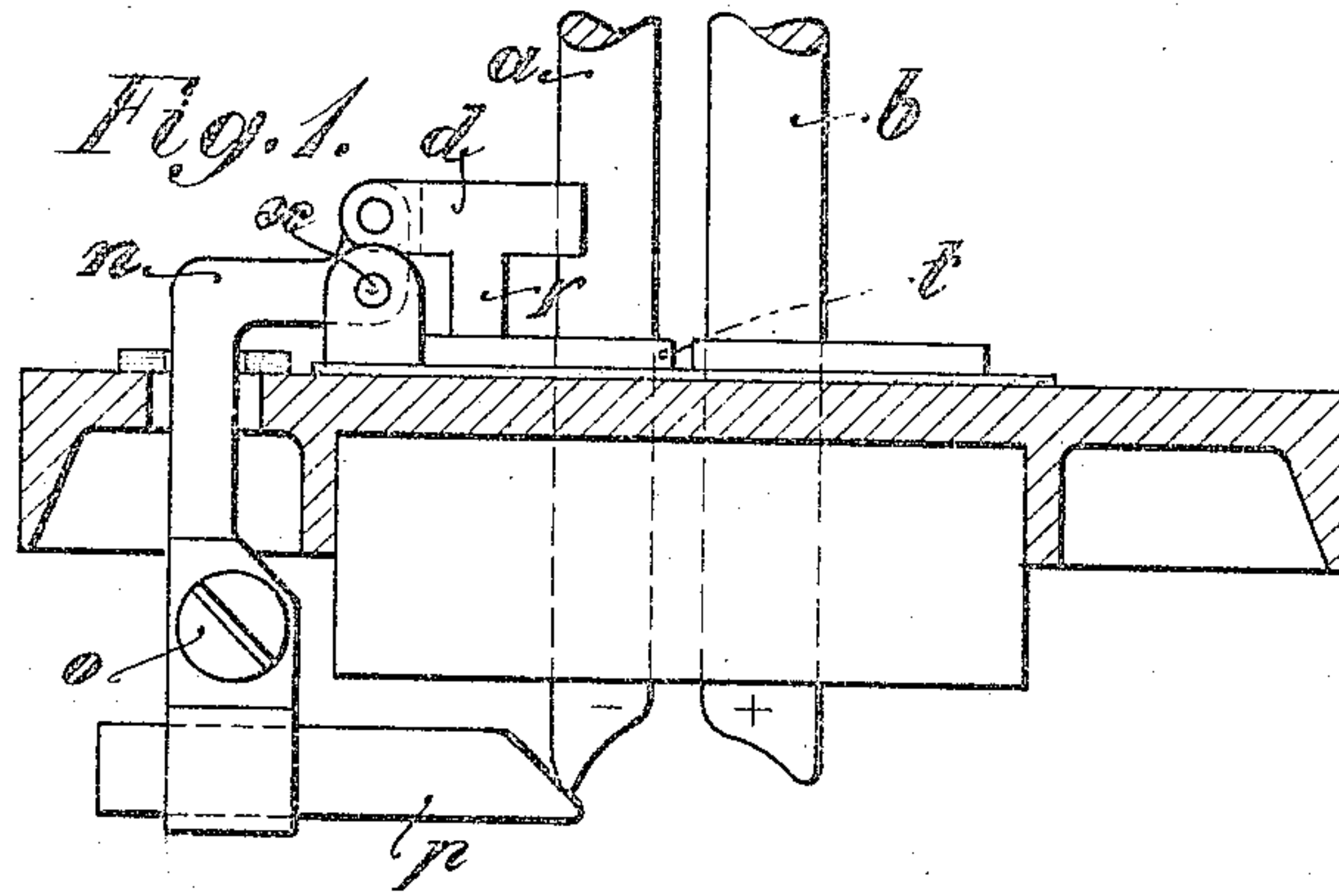
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ARC LAMP.

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953,140.

Patented Mar. 29, 1910.



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UNITED STATES PATENT OFFICE.

PAUL HANISCH, OF COLOGNE, AND JOSEF ROSEMEYER, OF COLOGNE-LINDENTHAL, GERMANY.

ARC-LAMP.

953,140.

Specification of Letters Patent.

Patented Mar. 29, 1910.

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To all whom it may concern:

Be it known that we, PAUL HANISCH, a subject of the Emperor of Germany, residing at Luxemburgerstrasse 319, Cologne-on-the-Rhine, Germany, and JOSEF ROSEMEYER, a subject of the Emperor of Germany, residing at Dürrenerstrasse 272, Cologne-Lindenthal, Germany, have invented a new and useful Improvement in Arc-Lamps, of which the following is a specification.

This invention relates to arc lamps with electrodes mounted side by side, and particularly to those lamps in which the forward feeding of the carbons is effected by the aid of a brake or clamping device which in the normal position of the carbons holds fast and when necessary is loosened so that the carbons can be fed forward as they are consumed. While up to the present this brake or clamping device has been actuated through an electromagnetic control apparatus, the object of the present invention is to dispense with such control apparatus. For this purpose the brake or clamp is connected with a movable piece resting against the lower end of a carbon in such a way that the small and almost imperceptible movement of the contact piece resulting from the consumption of the carbon is transmitted in the brake or clamp. By the use of a suitable system of levers the pressure exerted upon the brake or clamp can be very considerably increased.

Figure 1 is a sectional view with parts in elevation. Fig. 2 is a similar view of a modified form. Fig. 3 is a similar view of still another form.

In the drawing a construction of this kind is illustrated in various modifications.

a is the negative, *b* the positive electrode which is connected with the former so that they are fed down to an almost exactly equal extent in the known manner. The brake or clamp is indicated by *d*, and *p* is the movable piece which rests against the lower pointed end of the electrode *a*. This piece *p* is connected with the brake *d* through the lever *n* pivoted at *w*, which lever preferably has unequal arms.

As may be seen from the drawing the brake *d* is pressed against the electrode *a* with a force equal to the greater or less pressure between the movable piece *p* and the electrode increased by the ratio of the

lever arms, so that the electrode is braked or clamped by being forced against the side of the opening *t* through which it passes. If on account of the consumption of the end of the carbon the movable piece *p* ceases to rest against the carbon the clamp *d* is released and the electrode slips downward until a normal pressure of contact and clamping pressure is again set up.

The distribution of the weight and the ratio of the lever arms may be so chosen that the body *p* plays no part in consequence of its weight; or so that it tends to let the brake or clamp slip as is the case in Fig. 1; or tends to lock it as is seen in Fig. 3. In the last mentioned case a constant pressure is added to the variable braking or clamping pressure due to the contact between the movable body *p* and the end of the electrode. The pivoting point *w* can thus be set lower than or on a level with the end of the electrode, the brake being connected therewith through a suitable lever. The brake *d* may be connected rigidly or pivotally with the lever *n*. In the latter case it is desirable to guide the brake horizontally by means of a support *r* upon it (Fig. 1) or by a guide *u*, Figs. 2 and 3. Since everything depends upon proper contact between the movable body and the electrode it is desirable to arrange the body *p* or the lever *d* adjustably, for instance by means of a clamping screw *v*.

In Figs. 2 and 3 the brake *d* is shown as engaging in a recess *s* of the carbon holder when the carbon has been so far consumed that its upper end passes beneath the brake *d*. The used up electrode can then fall out so that the damage which might otherwise occur to the lamp after the carbon has completely burned away is avoided. Since the pressure of contact between the movable body and the lower end of the electrode is always small, the end of the electrode has not to resist any pressure worth mentioning; consequently the point is not broken off and a gentle uniform downward movement can take place. Further the point of the electrode can become so far extended that it shuts off the body *p* from the crater of the arc sufficiently to protect it from overheating and consequent damage.

Having now particularly described and ascertained the nature of our said invention

and in what manner the same is to be performed, we declare that what we claim is:

1. An apparatus for feeding the electrodes in arc lamps having the carbons mounted side by side, consisting in a brake for the one electrode, a movable piece adapted to rest against the lower end of the said electrode and a lever mechanism adapted to transfer the arising pressure of contact to the said brake as set forth.

2. An apparatus for feeding the electrodes in arc lamps having the carbons mounted side by side, consisting in a brake for the electrode, a movable piece adapted to rest against the lower end of the said electrode,

a lever mechanism adapted to transfer the arising pressure of contact to the said brake and the holder of the electrode having a recess in which the said brake is adapted to engage when the electrode is nearly consumed as set forth.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

PAUL ILANISCH.

JOSEF ROSEMEYER.

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