

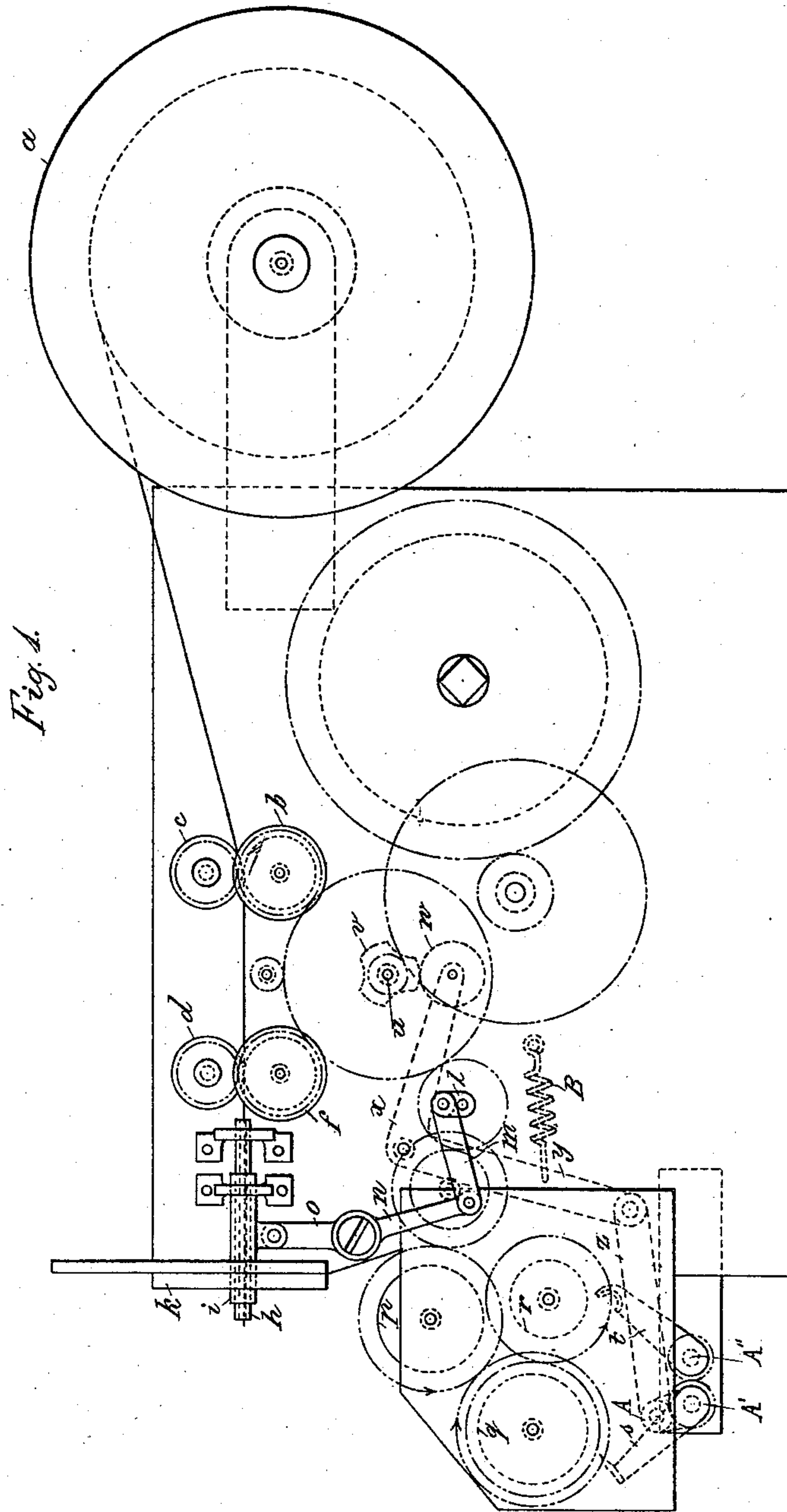
(No Model.)

3 Sheets—Sheet 1.

H. SÜSS.
MAGNESIUM LAMP.

No. 370,904.

Patented Oct. 4, 1887.



Witnesses.

Alfred Jonghman
Robt. & Roy.

Inventor.

Hermann Süß
per Rueder & Bräuer
Attorneys

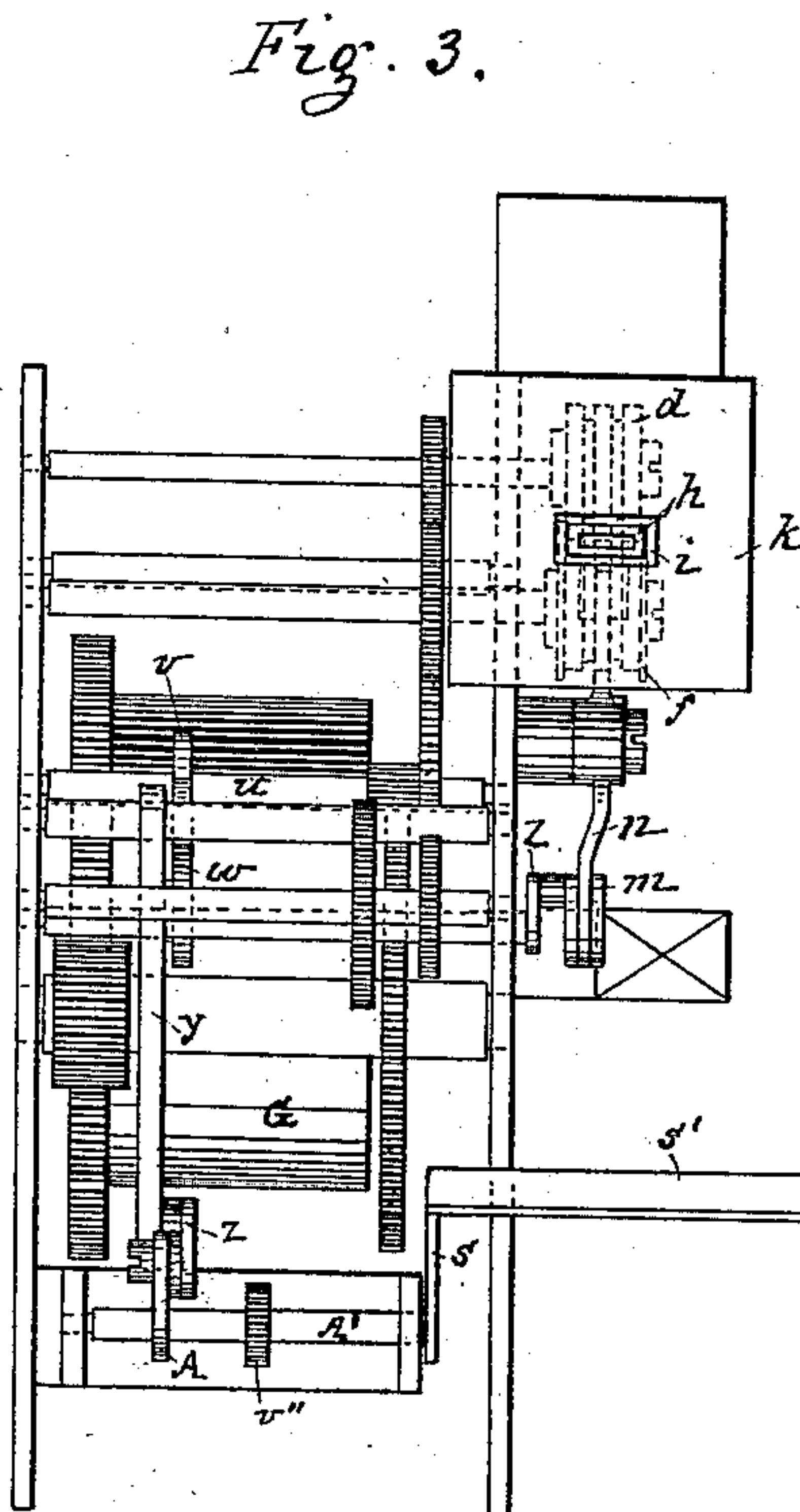
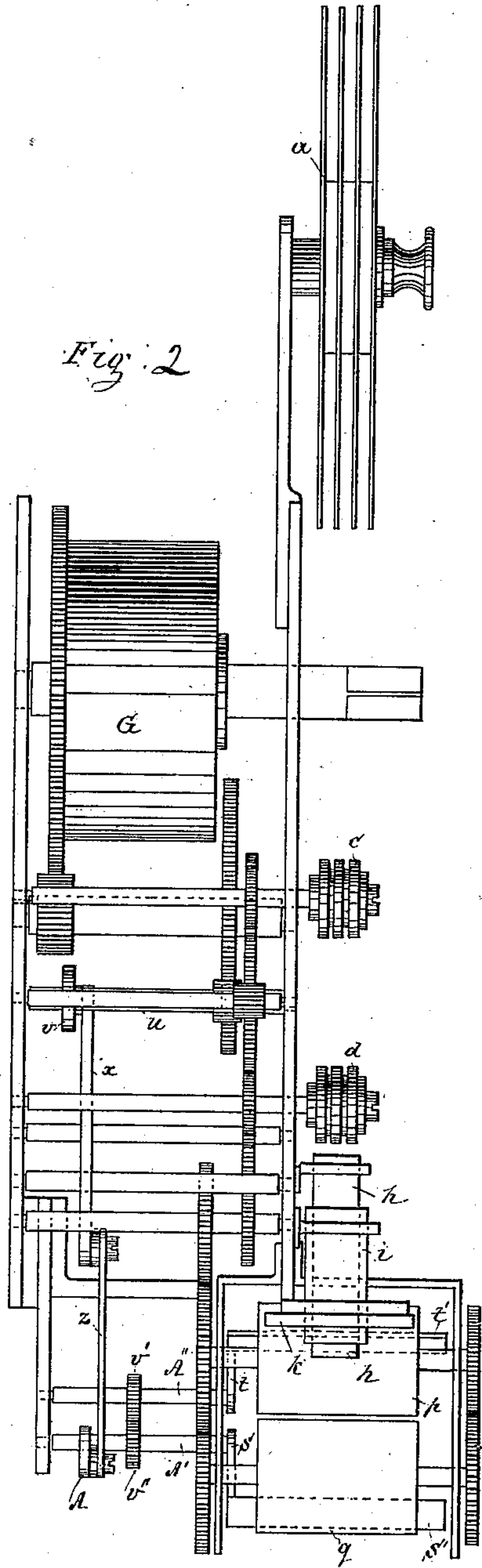
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H. SÜSS.
MAGNESIUM LAMP.

No. 370,904.

Patented Oct. 4, 1887.



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(No Model.)

3 Sheets—Sheet 3.

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Fig. 6.

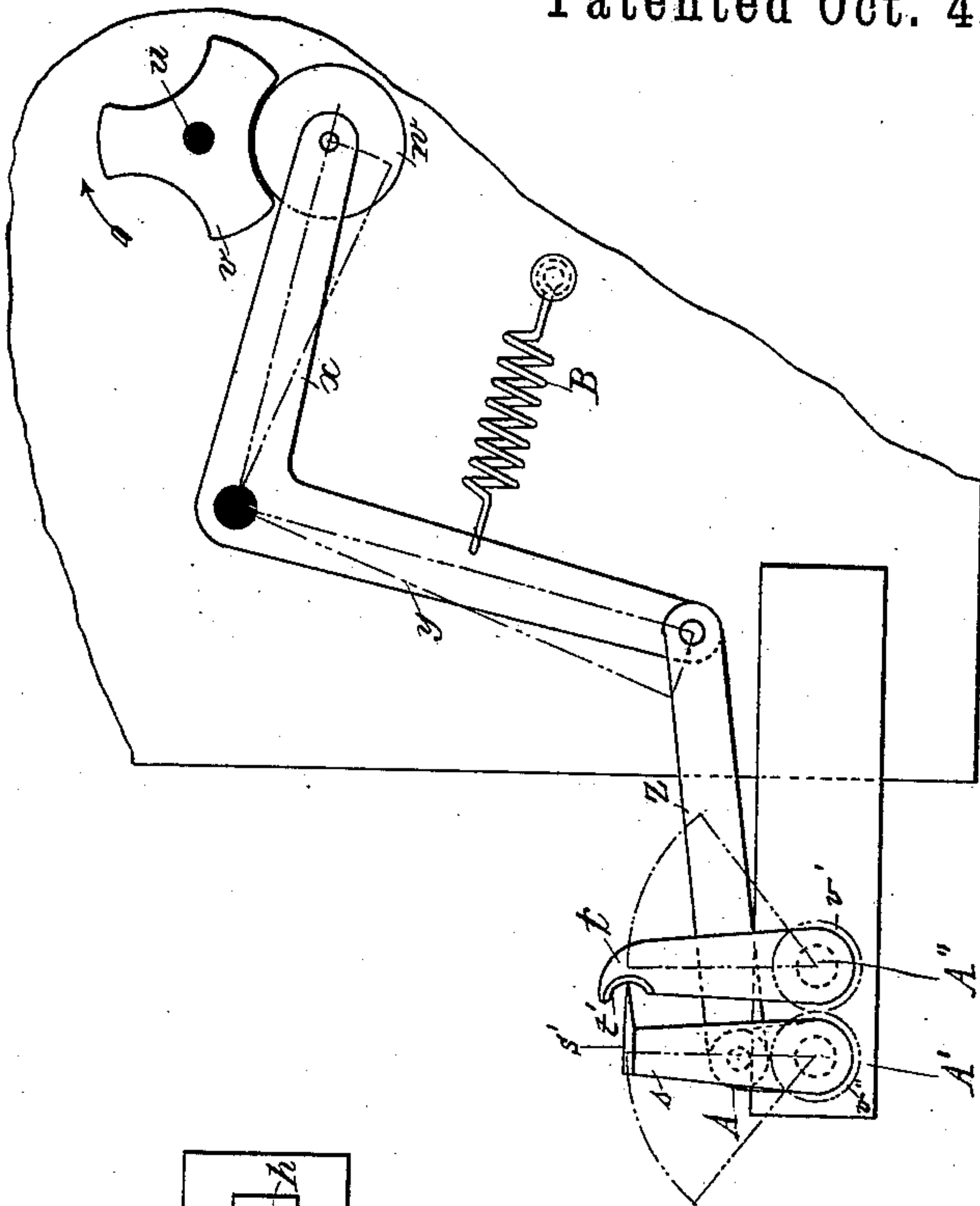


Fig. 5.

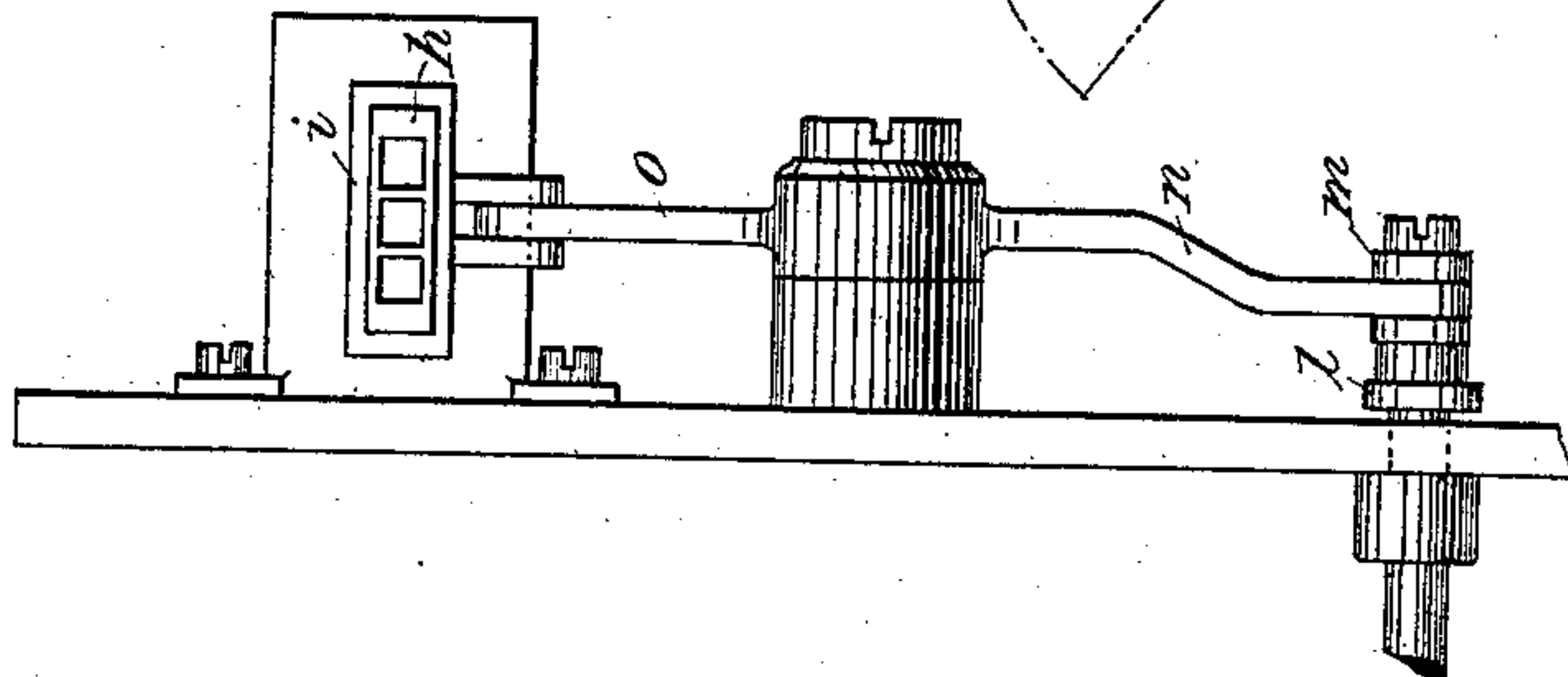
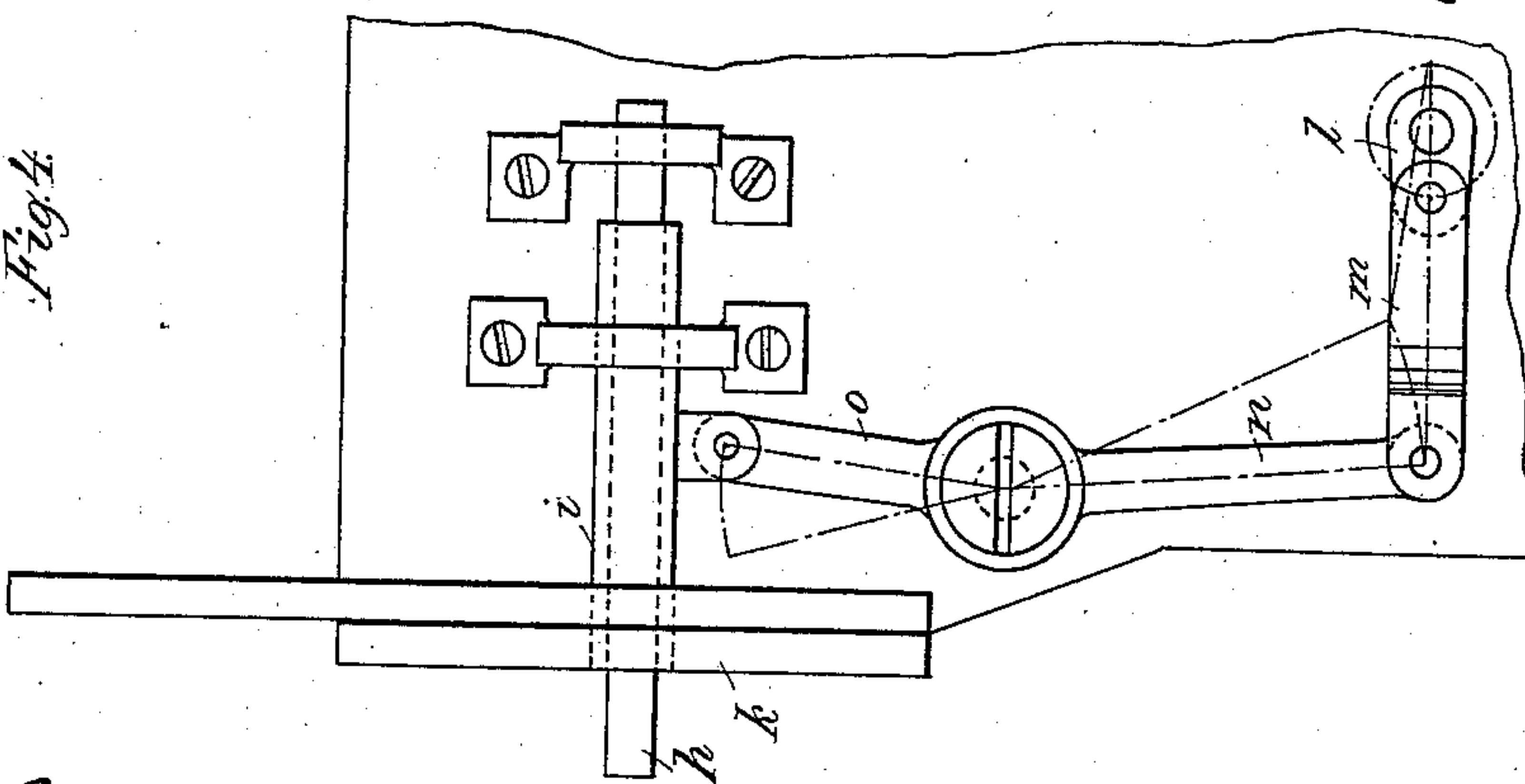


Fig. 4.



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UNITED STATES PATENT OFFICE.

HERMANN SÜSS, OF MARBURG, PRUSSIA, GERMANY.

MAGNESIUM-LAMP.

SPECIFICATION forming part of Letters Patent No. 370,904, dated October 4, 1887.

Application filed July 30, 1886. Serial No. 209,600. (No model.)

To all whom it may concern:

Be it known that I, HERMANN SÜSS, of Marburg, on the Lahn, Prussia, Germany, have invented a new and Improved Magnesium-Lamp, of which the following specification is a full, clear, and exact description.

The invention relates to the construction of a magnesium-lamp having a constant luminous effect.

The hitherto-constructed magnesium-lamps had the great inconvenience that the flames burned very irregularly, and that the lighting-power fluctuated considerably. This inconvenience resulted partially from the large quantities of residues of combustion, which are deposited on the combustion place, and thus prevent the wire from advancing in a regular manner, or from the ashes produced by the combustion being not stripped away, but adhering for some time to the metallic band, and thus cause by their weight an accelerated advancement of the wires. The herein-described construction has for its purpose to remedy these inconveniences.

The invention consists of the various features of improvement hereinafter more fully described.

In the accompanying drawings, Figure 1 is a side view of the lamp. Fig. 2 is a top view, and Fig. 3 is a front view, of the same. Figs. 4, 5, and 6 are details, on an enlarged scale, referred to in the specification.

The magnesium band is wound on a bobbin, *a*, in one or more strips close to each other, and conducted between two pairs of rollers, *b* and *c* and *d* and *f*, which are put in motion by means of a clock-work, *G*. The band is regularly moved forward by these rollers, and passes them over a holder, *h*, on the outer edge of which it is burned. This holder is provided with a casing, *i*, which surrounds the holder, and capable of being moved backward and forward. During this to-and-fro motion the forward edge of the case passes over the forward edge of the holder *h* and into the plate *k*, supporting the reflector of the lamp. This plate *k* is perforated, and surrounds both the holder *h* and casing *i*, being set back from the forward edge of the holder, as shown. The

deposit produced by the combustion is thus removed from the holder and the case at the same time. This forward-and-backward motion is produced by the clock-work by means of the levers *l*, *m*, *n*, and *o*. The ashes formed by the combustion do not detach themselves immediately from the metal, but adhere sufficiently, so that they hang down as fillets, which pass between the rollers *p q r*, put in motion by the clock-work, and rotating in the direction indicated by the arrows, (see Fig. 1,) and arrive at the cutting device *s t*, where they are cut into small pieces, which fall down one after another. The above-mentioned inconvenience—that the ashes by their weight cause an accelerated advancement of the magnesium band, and consequently an accelerated consumption—is entirely removed.

The two arms *s* and *t* of the cutting device are provided with cutters *s'* and *t'*, respectively, which in cutting off the fillet come in contact with each other only for a moment. A stagnation or a tearing off of the fillets is thus prevented.

The cutting device is moved by means of the clock-work *G* in the following manner: On a rotating shaft, *u*, is a curved disk, *v*. Upon this disk slides a roller, *w*, which is fixed to one end of a bent lever, *x y*. On the other end of this lever is pivoted a rod, *z*, which is attached to a crank, *A*, fixed with the arm *s* of the cutting device on the same axle *A'*. The other arm, *t*, of the cutting device is attached to a shaft, *A''*, provided with a wheel, *v'*, which meshes with a wheel, *v''*, fast on the shaft *A'*. The roller *w* is pressed, by means of a spiral spring, *B*, attached to the bent lever *x y*, against the disk *v*. As the recesses in the disk *v* are arcs which have the same radius as the roller *w*, the reciprocal position of the cutting device is continuously changed, and the cutting-edges of the arms *s* and *t* touch each other only for a moment.

Having now fully described the nature of this invention and in what manner the same is to be constructed and used, I declare that what I claim is—

1. The combination of bobbin *a* and clock-work *G* with holder *h* and casing *i*, which sur-

rounds said holder and is connected to the clock-work G by a train of levers, and with perforated plate *k*, surrounding both the holder *h* and casing *i*, and set back from the forward edge of the holder, substantially as specified.
5 2. The combination of bobbin *a*, holder *h*, and casing *i*, surrounding the same, with the rollers *p q r* and cutters *s' t'*, and with the cam *u*, roller *w*, bent lever *x y*, and arms *s t* to op-

erate said cutter, substantially as and for the purpose specified.

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

HERMANN SÜSS.

Witnesses:

O. WICHMANN,

B. ROI.