

KNEPPER Ferdinand

(1888 -)

Septfontaines

Patents (details)

1 - Improvements in or relating to luminous signs

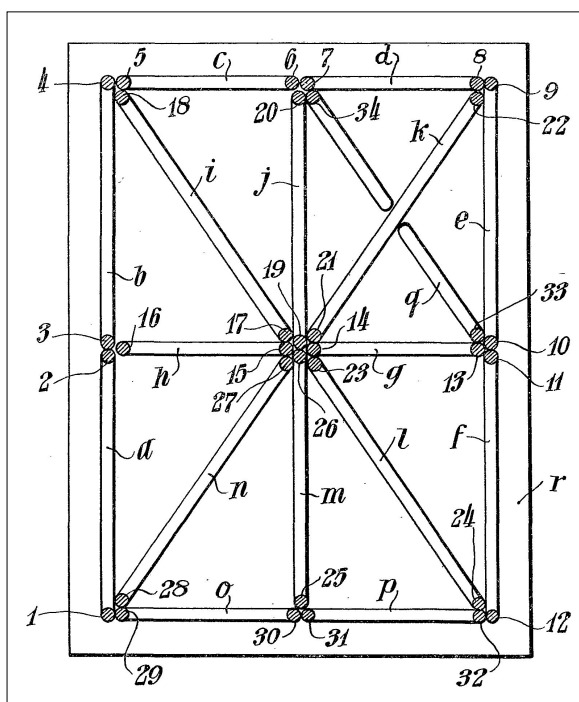
GB patent	523192
Application date	23 December 1938
Patent co-owner	Neograph Limited, London

This invention relates to luminous signs and particularly to illuminated electric signs of the type in which the luminous display is obtained by means of a plurality of elements adapted to be electrically illuminated, such as tubular electric lamps or electric discharge tubes (e.g. neon tubes), so disposed that by selective illumination of one or more lamps or tubes, all the letters of the alphabet, numerals and signs can be formed successively in the same area.

The signs of this type which have been proposed hitherto consist of a complex group of tubular lamps or discharge tubes, of many different lengths enabling letters of the alphabet and numbers and signs to be displayed by selective illumination. The object of the invention is to provide an improved illuminated electric sign of the type referred to.

According to our invention, we provide an illuminated electric sign of the type referred to, composed of linear elements only, enabling the letter of the alphabet and/or numeral and other signs to be displayed, with a minimum number of tubes, that is to say with a minimum number of connections, and therefore a minimum cost of manufacture, the tubes being of three different lengths only, so that only three sizes of spare tubes need be kept in stock for replacement, and said tubes being adapted to be electrically connected to a keyboard or to a switch adapted to automatically switch on simultaneously all the tubes forming any desired letter or numeral.

The sign proper consists of a panel of discharge tubes, with or without background, so disposed that, by exciting some of the tubes in various combinations, any one of all the signs, designs or symbols of a series may be displayed.



Corresponding patent:

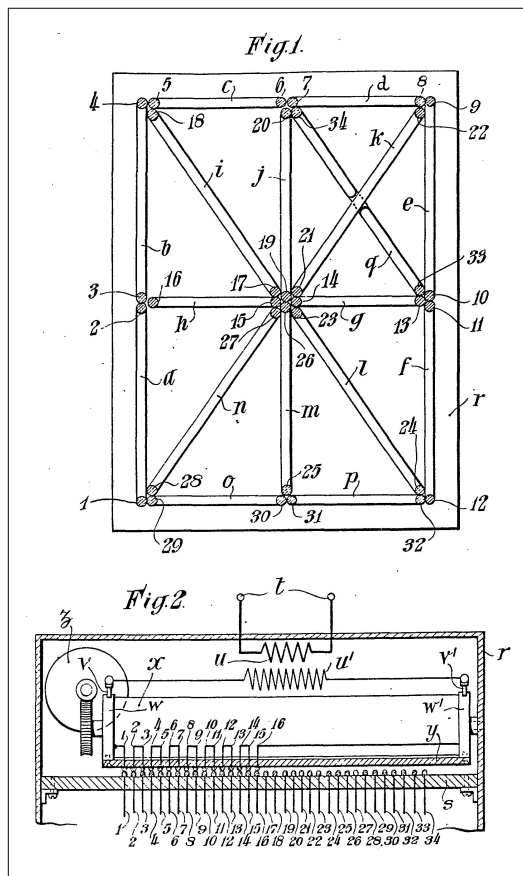
CA

2 - A new or improved switch for use with luminous signs adapted to display different symbols within the same frame-area Improvements in or relating to luminous signs

GB patent 523042
 Application date 23 December 1938
 Patent co-owner Neograph Limited, London

This invention relates to luminous signs, and particularly to luminous signs of the type in which the luminous display is obtained by means of electric discharge tubes, for example by means of neon tubes so disposed as to enable any one sign or symbol of a series such as alphabetical letters or numerical characters or both to be displayed without modifying the disposition of the tubes. According to our invention we provide a rotary switch, adapted to switch on simultaneously all the tubes forming any desired letter or numeral, and so constructed that the letter or numeral formed when the switch is in any position may be easily modified according to requirements.

The rotary switch may be of any suitable form: drum, disc, ring, belt, bar or other shaped moving member, whether rotating or having a movement of translation, whether continuously moving or reciprocating, the switch being so disposed as to bring in the course of its motion a bar carrying a set of contacts, connected to the tubes on the panel, successively in juxtaposition with each of a series of contact carriers, hereafter referred to as "selectors", on which are provided contacts corresponding to the tubes forming one particular letter, numeral, sign, design or symbol to be displayed, which is lighted while the contacts on the selector make contact with the corresponding contacts on the bar. The bar carrying the first set of contacts may be fixed and the selectors may be moving, or reciprocally the bar may be moving and the selectors may be fixed. The rotary switch according to the invention is characterised in that the selectors corresponding to particular letters, numerals, signs, designs or symbols are interchangeable, their contacts being so disposed that, when any selector is brought into the operative position by the action of the switch, the contacts put in circuit the particular tubes required to form a letter, numeral or the like, and no other, so that, by changing the carriers, any succession of letters or numerals or the like may be displayed as may be desired.



Corresponding patent:

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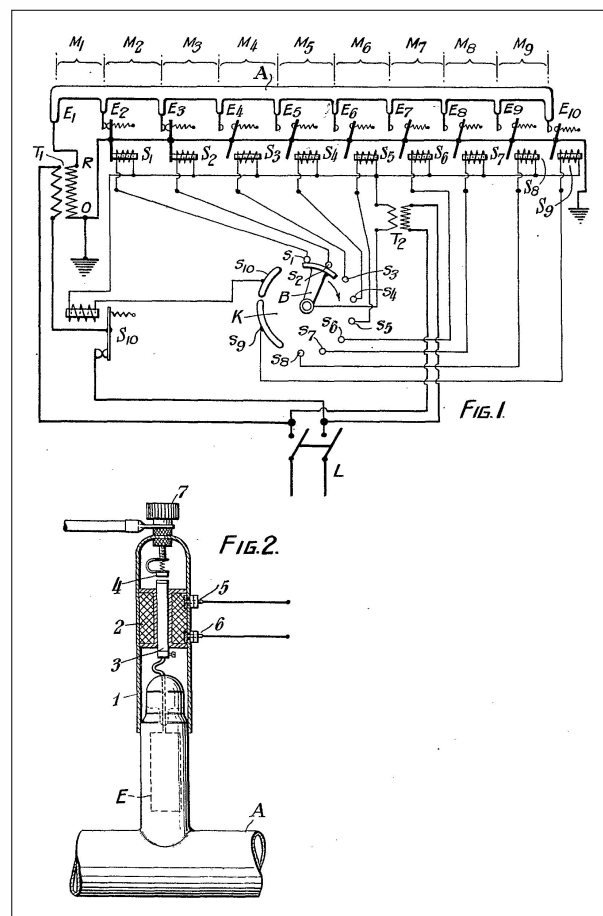
3 - Improvements in or relating to luminous discharge tubes

GB patent 524748
 Application date 6 February 1939
 Patent co-owner Neograph Limited, London

The subject matter of this invention is a novel means for connecting into circuit the electrodes of luminous discharge tubes to give an appearance of continuous writing or movement and has as its object the minimisation of the employment of high-tension cable.

In the case of the known systems for obtaining the appearance of handwriting or movement with luminous discharge tubes that are controlled by the usual neon transformers, each electrode of the discharge tube is connected to the switching apparatus by means of a high-tension cable. Consequently, the field of application of such systems is restricted. For example, in the case of a small installation of ten letters measuring 20 in. x 10 in., about 50 high-tension cables of an average length of three yards - i.e., a total length of about 150 yards - would be required merely for connecting the electrodes to the switching apparatus. Even so, to avoid the necessity of more high-tension wiring, it is necessary to place the switching apparatus close to the tube installation. The installation of such a quantity of high-tension cable involves many difficulties in addition to increasing the cost.

According to the invention, these disadvantages are avoided by employing, in association with and in proximity to the electrodes which succeed one end electrode of a luminous discharge tube, electromagnetic contact elements which are adapted to be operated by low-tension current and thus to connect the corresponding electrode into the circuit of the discharge-producing current, the said contact elements being connected with the switching apparatus in such a manner that the movement of a movable - e.g. rotary - element of the switching apparatus connects the said electromagnetic contact elements successively with the source of low-tension current.



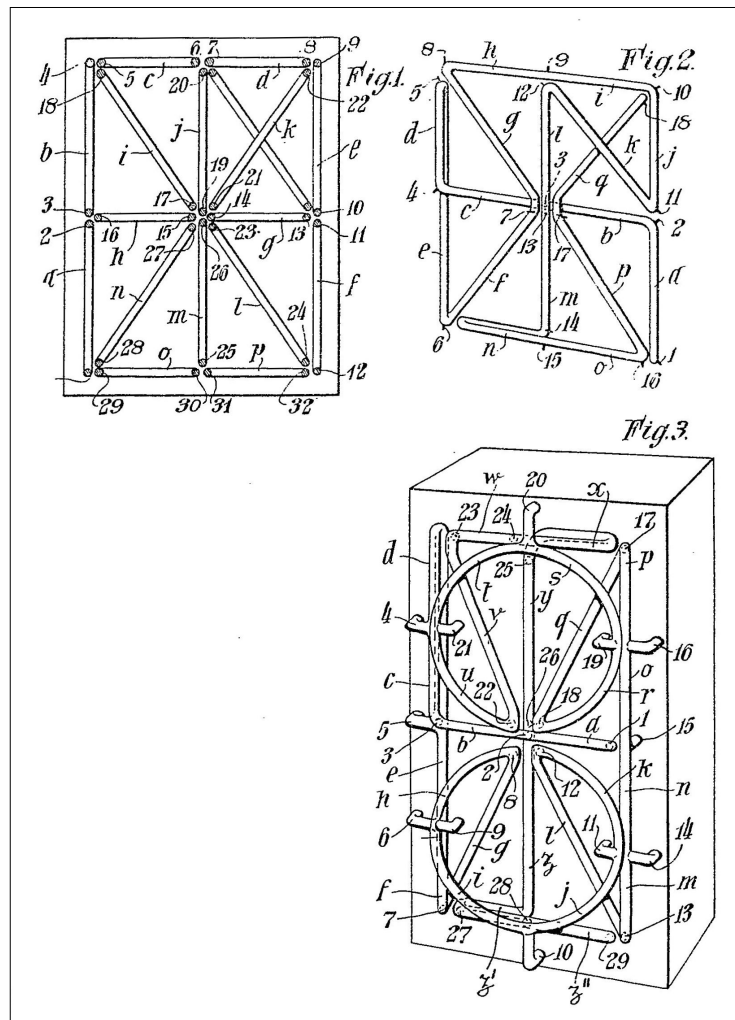
4 - Improvements in or relating to luminous signs

GB patent 525855
 Application date 2 March 1939
 Patent co-owner Neograph Limited, London

The present invention is an improvement in or a modification of our invention described and claimed in GB523192.

According to our invention, we provide a single discharge tube, bent to such a configuration as to enable any one sign or symbol of a series such as alphabetical letters or numerical characters or both, to be displayed by rendering luminous one or more portion or portions of the tube, the said tube being provided with electrodes at intervals along its length, in order to enable any desired portion or portions of the tube to be rendered luminous by an electric discharge. Any other known electrical means adapted to achieve this result may also be employed.

The said tube may be a two-ended tube, with an electrode at each end if desired, as well as with intermediate electrodes along its length, or it may be an endless tube closed upon itself. In this latter case, the tube may be so connected as to give the appearance of movement along the tube, either of one bright portion or of alternatively bright and dark portions or striae, either in one direction or in two opposite directions simultaneously, as may be desired.



Corresponding patents:

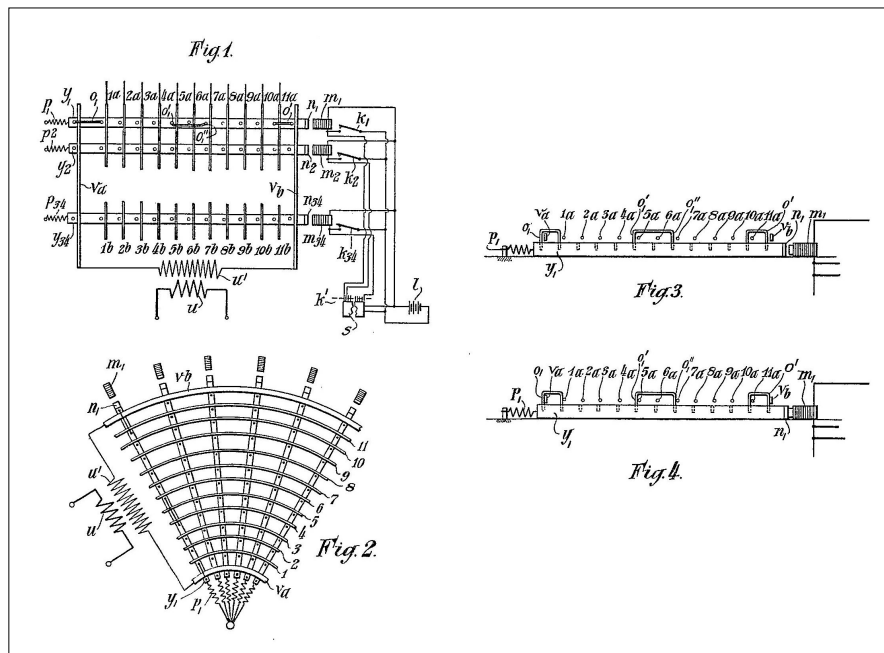
DE, CA

5 - Improvements in or relating to luminous signs

GB patent 533504
 Application date 5 July 1939
 Patent co-owner Neograph Limited, London

The contactor and selector, in the devices described in specification GB523042, are in relative motion, the contactor being preferably fixed and the selector in motion so that each set of contacts of the selector brush, in turn, pass the contacts of the contactor, each time causing the display of a letter or numeral, in an order which can only be altered by interchanging selector bars.

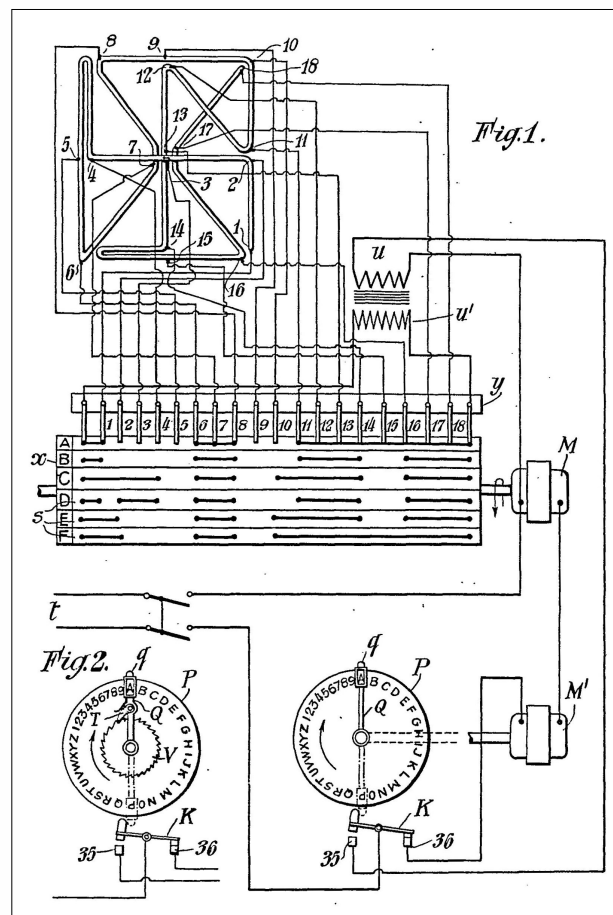
According to our invention, we provide an automatic switch as claimed in specification GB523042, characterised by a series of sets of selector contacts, disposed on selector bars disposed side by side, and a contactor the contacts of which extend to the immediate vicinity of all the selector bars, so that the contacts of each selector bar may be juxtaposed to selected contacts of the contactor by imparting to it a slight movement of translation, either longitudinal or lateral or vertical, or of rotation about a vertical or horizontal axis. For example, the selector bars may be disposed on a flat panel, parallel to each other, and the contactor may consist of parallel conductors disposed transversely to the selector bars in close proximity thereto or the selector bars may be disposed radially, diverging from a central point, and the contactor may consist of circular conductors having that point for centre, transverse to the said selector bars. The displacement of the latter may be caused by mechanical, pneumatic, electrical or other means. Whatever may be the arrangement, the current from a transformer is led to each bar, for example, by contact pieces on the selector bar and brushes connected to the terminals of the transformer, and the contacts on the selector bars are such as to connect to the circuit of the transformer selected conductors of the contactor, and, consequently, selected lighting elements.



6 - Improvements in or relating to luminous signs

GB patent 531487
 Application date 24 July 1939
 Patent co-owner Neograph Limited, London

According to our invention, we provide a switch for the selective display of various combinations of the lighting elements constituting the layout of the luminous sign, comprising a transformer the secondary winding of which is connected to the outer terminals of a contactor comprising a set of contacts connected to the electrodes of the layout lighting elements, individually, a selector comprising a drum carrying sets of selector contacts adapted to close the circuit of selected lighting elements when the corresponding set of selector contacts is juxtaposed to the set of contacts of the contactor, and a synchronous motor adapted to rotate the said drum in synchronism with a second synchronous motor adapted to rotate a controlling member the angular position relationship of which with respect to the drum is adjustable manually to correspond to any given sign to be displayed and which is adapted to break the circuit of the two motors and to close the circuit of the primary of the transformer or perform any similar operation which switches on the selected lighting elements of the layout, when the position of the controlling member is such that the set of contacts of the contactor is juxtaposed to the particular set of contacts of the selector corresponding to the corresponding sign position, to which the controlling member has been set.



Corresponding patent:

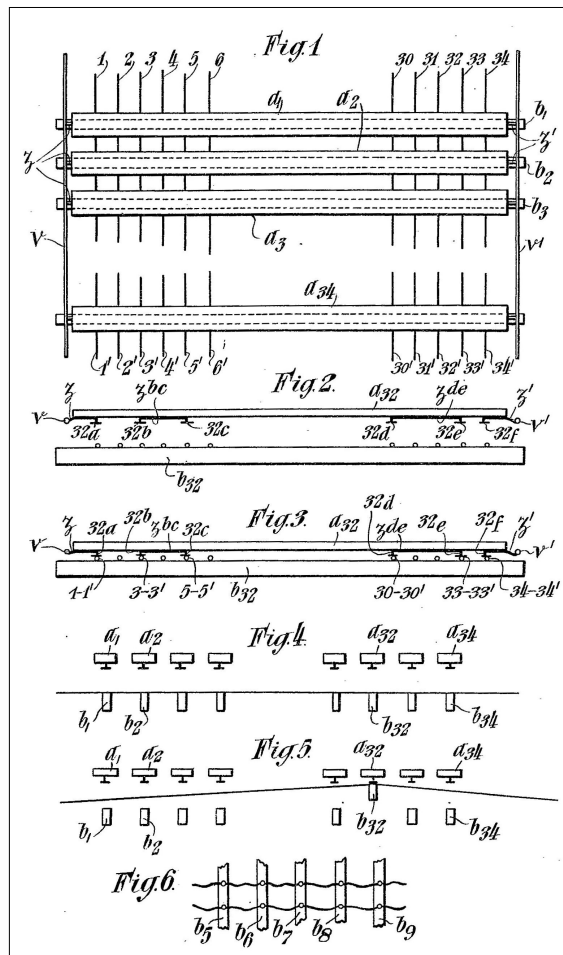
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7 - Improvements in or relating to electric switches for selectively operating luminous signs

GB patent 543997
 Application date 9 January 1941
 Patent co-owner Neograph Limited, London

According to our invention, we provide an automatic switch as, claimed in specification GB523042, characterised by a series of sets of selector contacts, disposed on fixed selector bars arranged in any suitable manner, and a contactor constituted by a set of contacts, so conformed and so disposed that they extend so as to be in the immediate vicinity of all the selector bars, so that selected contacts, of the contactor may be caused to engage suitably disposed contacts on any one selector bar by imparting to the assembly of contacts of the contactor a slight displacement, the order in which, the selector bars are in this manner caused to contact with selected contacts of the contactor being independent of the position of the said selector bars and being capable of being altered without any modification of these bars with respect to the frame of the apparatus, thereby causing the display of any desired elements of the layout constituting any desired sign.

The essential feature of the invention is that a slight displacement only of the contactor is necessary to obtain the desired contact of contactor and selector bar.



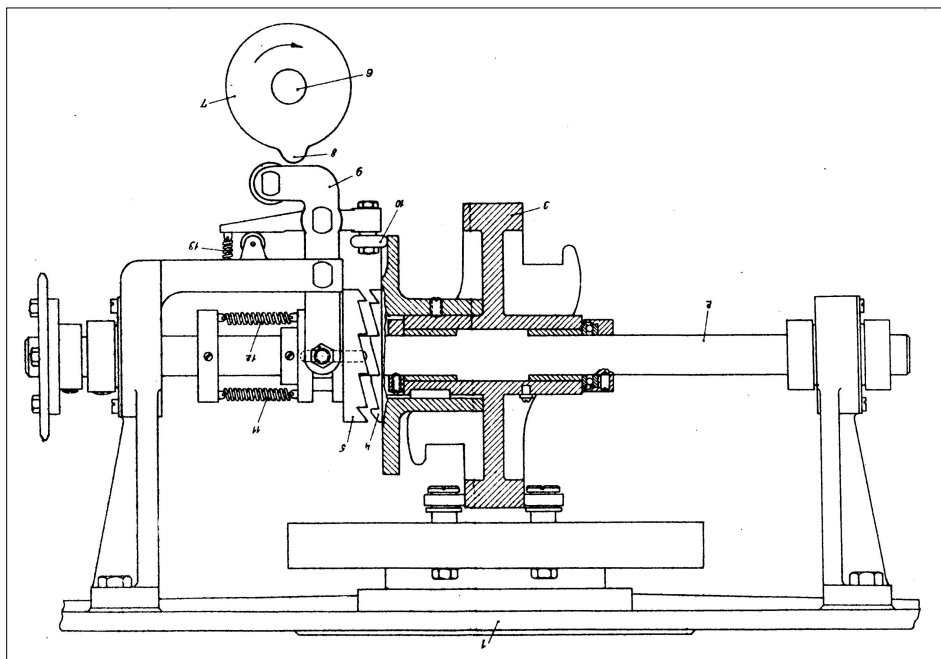
8 - Steuerung für Glasbearbeitungsmaschinen

DE patent	853043
Application date	22 December 1943
Patent owner	C. Lorenz AG

Bei Glasbearbeitungsmaschinen, bei denen eine Aufheizung des zu verarbeitenden Glasteils stattfindet, wie Einschmelzmaschinen, Preßfußmaschinen, Pumpautomaten usw., beispielsweise zur Herstellung von elektrischen Entladungsgefäßen, sind gewöhnlich auf einem rotierenden Arbeitstisch mehrere Positionen vorgesehen, so daß das Werkstück nacheinander verschiedenen Arbeitsgängen, beispielsweise einer von Position zu Position zunehmenden Erwärmung unterworfen werden kann.

Eine derartige Glasbearbeitungsmaschine hat meistens einen zentralen Antrieb, der sowohl die einzelnen Positionen antreibt, beispielsweise beim Einschmelzen von Elektronenröhren diese in drehende Bewegung versetzt sowie den Transport des Arbeitsstücks, beispielsweise der Elektronenröhre, von einer Position zur anderen vornimmt. Dabei ist die Hauptwelle der Maschine fest mit dem Vorschub von Position zu Position sowie mit dem Antrieb für die einzelnen Positionen gekuppelt. Läßt man, um eine geringe Stückzahl zu erreichen, die Maschine langsam laufen, so findet auch der Transport von einer Position zur anderen langsam statt. Man strebt aber danach, diesen Transport mit der größtmöglichen Geschwindigkeit der Maschine auszuführen, damit beispielsweise bei einer Einschmelzmaschine durch die Bewegung von einer Position zur anderen die Abkühlung des Kolbens möglichst gering ist.

Zur Erreichung dieses Ziels wird erfindungsgemäß vorgeschlagen, eine Kupplung zwischen der Hauptwelle und der Steuerwelle für den Transport einzubauen. Diese Kupplung ist so eingerichtet, daß beim Einrücken derselben die Antriebskurvenscheibe, die die Bewegung des Arbeitstisches von Position zu Position vornimmt, eine Umdrehung ausführt, und zwar mit der Höchstgeschwindigkeit der Hauptwelle unabhängig von der Geschwindigkeit der Steuerwelle. Dabei schaltet sich die Kupplung nach einer Umdrehung der Hauptwelle selbsttätig wieder aus. Auf die angegebene Art und Weise wird erreicht, daß die Steuergeschwindigkeit unabhängig von der Arbeitsgeschwindigkeit ist; die Steuergeschwindigkeit kann höchstens gleich der Arbeitsgeschwindigkeit sein, im allgemeinen wird sie kleiner sein.



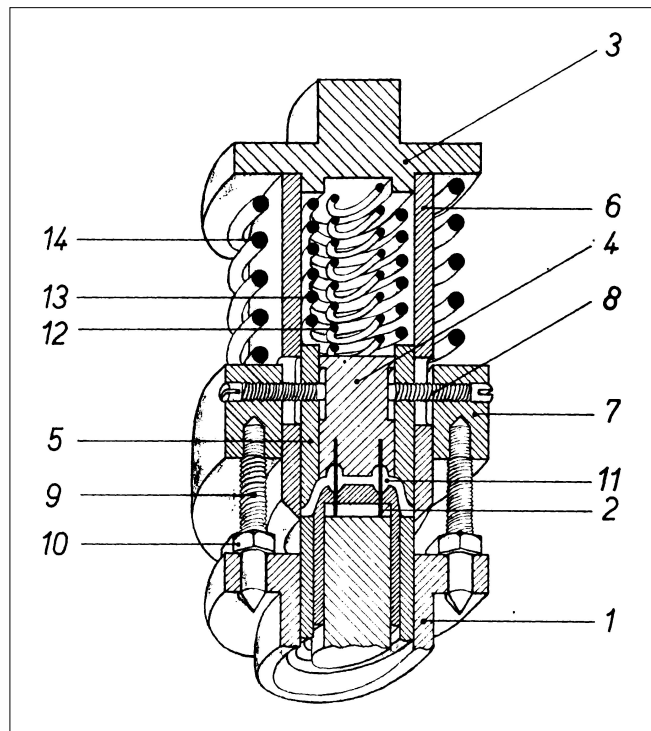
9 - Presswerkzeug für Formteile aus Glas für elektrische Entladungsgefäße, insbesondere Elektronenröhren

DE patent	5289/1944
Application date	18 November 1944
Co-inventors	Arthur FELSNER Helmuth BIELKE
Patent owner	C. Lorenz AG

Bei der Herstellung elektrischer Entladungsgefäße, insbesondere von Elektronenröhren aus Glas, werden vielfach Pressglasteile, beispielsweise Napf- oder Scheibenfüsse verwendet. Die hieran benutzten Presswerkzeuge arbeiten so dass ein Unterstempel die Kontaktstifte und die zu formende Glasmasse aufnimmt, während der Oberstempel beim Niederdrücken dieser Glasmasse die endgültige Form gibt, wobei gleichzeitig der aus der Form heraustretende Überschuss des Pressmaterials abgeschert wird.

Diese Werkzeuge haben den Nachteil, dass beim Abscheren der überschüssigen Glasmasse Spannungen in den bereits fertiggestellten und erstarrenden Pressglaskörper auftreten. Aus diesem Grunde ergibt sich ein grosser Prozentsatz Bruch. Dies ist darauf zurückzuführen, dass der Pressglaskörper während des Abscherens weiterhin den Druck der Presse ausgesetzt ist.

Zur Vermeidung dieses Nachteiles wird bei Presswerkzeugen für Formteile aus Glas für elektrische Entladungsgefäße, insbes. Elektronenröhren, erfindungsgemäss vorgeschlagen, an den Presswerkzeug verstellbare Begrenzungsstifte anzubringen, durch die der Bremsdruck nach der Fertigstellung des Formteiles abgefangen wird und dann erst das Abscheren der überschüssigen Glasmasse stattfindet, ohne dass auch nur der geringste Druck auf den sich in der Form befindlichen Presskörper ausgeübt wird.



10 - Vorrichtung zur selbsttätigen Zuführung von Durchführungsstiften usw. bei der Herstellung von Pressglasteilen für elektrische Entladungsgefäße, insbesondere Elektronenröhren

DE patent	4231/1944
Application date	27 November 1944
Patent owner	C. Lorenz AG

Die Erfindung betrifft eine Vorrichtung zur selbsttätigen Zuführung von Durchführungsstiften usw. bei der Herstellung von elektrischen Entladungsgefäßen, insbesondere Elektronenröhren. Erfindungsgemäß wird vorgeschlagen, entsprechend der Anzahl der ein zu pressen Stifte, trichterförmige Vorratsbehälter über zylinderförmigen, rotierende Verteiler anzuordnen, unter denen sich Ablauftrichter mit Führungsrinnen befinden, die die einzelnen Stifte zu einer über dem Presswerkzeuge angeordneten Führungsplatte leiten. Dabei sind die Verteiler auf einer gemeinsamen Antriebswelle angeordnet. In jedem der Ablauftrichter befindet sich eine Führungseinrichtung, damit die Stifte mit der Spitze nach unten in die Führungsschiene fallen.

Die neue Vorrichtung gestattet es, die Beschickung der Presswerkzeuge so schnell vorzunehmen, wie es die Arbeitsgeschwindigkeit der Maschine, beispielsweise eines Pressglasautomaten, bedingt. Die Maschine erzielt daher unter Einsparung mehrerer Arbeitskräfte die volle Leistung.

