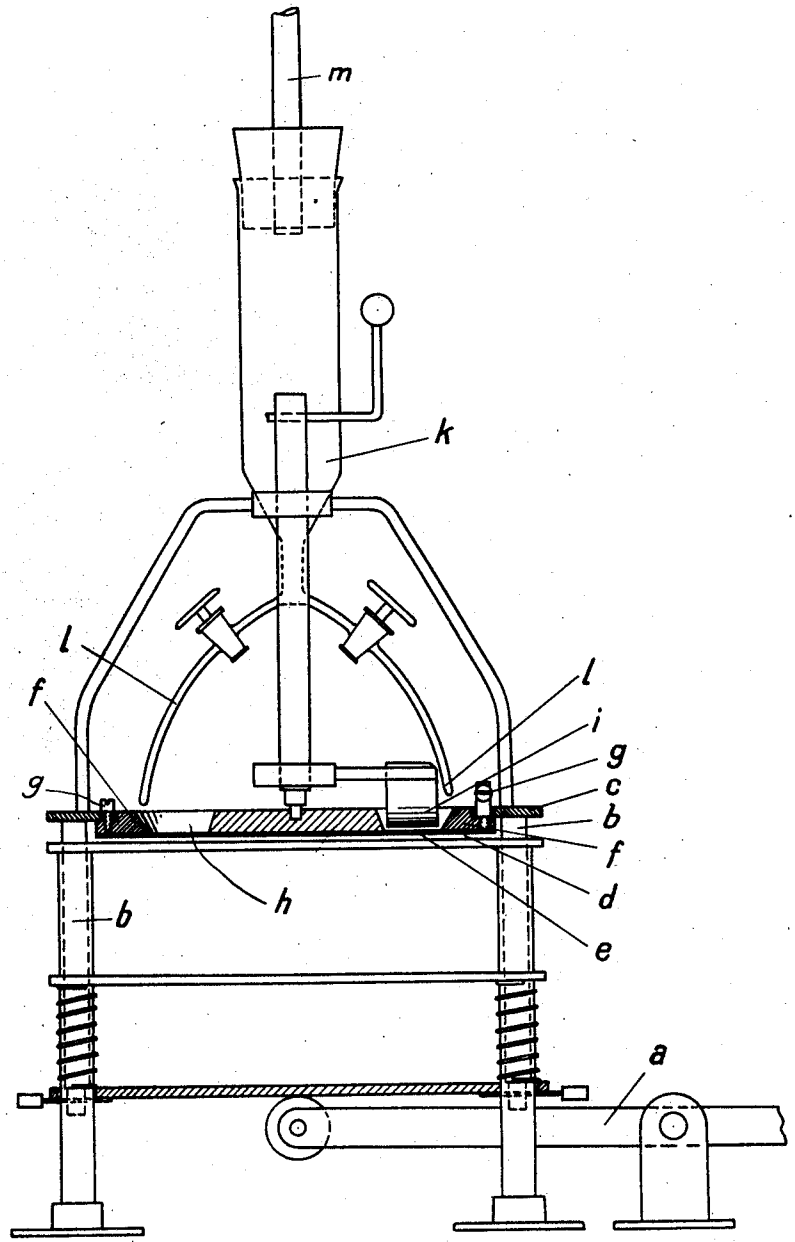
March 22, 1932. M. WOLF ET AL 1,850,253

APPARATUS FOR STENCILING LUMINOUS DIALS FOR CLOCKS, MEASURING INSTRUMENTS, AND THE LIKE

Filed Sept. 12, 1929



Inventors
Max Wolf
and Bruno Marx
by
Lowe, Kellenberg & Farley
Attorneys.

Patented Mar. 22, 1932 1,850,253

UNITED STATES PATENT OFFICE

MAX WOLF, OF BERLIN-HALENSEE, AND BRUNO MARX, OF BERLIN-PANKOW, GERMANY, ASSIGNORS TO DEUTSCHE GASGLUHLICHT-AUER-GESELLSCHAFT M. B. H., OF BERLIN, GERMANY, A CORPORATION OF GERMANY

APPARATUS FOR STENCILING LUMINOUS DIALS FOR CLOCKS, MEASURING INSTRUMENTS, AND THE LIKE

Application filed September 12, 1929, Serial No. 392,014, and in Germany October 24, 1928.

The manufacture of luminous dials for clocks, measuring instruments and similar devices in many instances up to the present was done by hand, and many thousands of dials put on the market daily at present are produced by workingmen with the aid of brush and stylus. Up to the present there were difficulties in the mechanical production of such dials, which made impossible a practical realization. For instance the luminous colour, particularly radio-active luminous matter, which is produced by employing radium and radioactive substances, is a highly valuable product which will require utmost economy in manufacture. In addition the nature of such luminous paste will require special steps while applying it to the stencils. Its viscidity and high tendency to adhere to other bodies must be particularly considered.

According to the present invention it is possible to carry through the stenciling of luminous dials mechanically on a large scale and in an economical manner.

In the drawing one mode of execution of the apparatus according to the present invention is shown by way of example in longitudinal section.

In the drawing *a* is a pedal for actuating the device, *b* the guiding pins for lifting the upper table *c*, which is in the form of an annular ring, while *d* represents the intermediate space for accommodating the dial plate; *e* is the stencil and *f* the supporting member for the said stencil. The member *f* is of circular form and is rotatably carried by the table *c* in any suitable manner. Any convenient means may be provided for rotatably adjusting the member *f* and with it the stencil *e*, the illustrated example showing a screw *g* for this purpose, said screw projecting through and being movable in a slot formed in the table *c*; a set screw *g'* may be provided for fixing the member *f* and stencil *e* in an adjusted position. The member *f* is provided with an annular groove *h* in which a preferably elastic palette-knife *i* is movable in any convenient manner. *k* is the container for the luminous substance, *l* the admission channels for the luminous substance to the groove and *m* the connection for compressed air.

The apparatus represented operates as follows: By means of the pedal the upper table *c* and member *f* are raised by the guiding pins *b* in such a manner, that a prepared dial can be introduced laterally into the intermediate space *d* and adjusted therein to the proper position relatively to the annular groove *h*. When the pedal *a* is lowered the table *c* and the stencil *e* secured to the member *f* are pressed down upon the said dial, and subsequently the elastic palette-knife *i* is caused to rotate in the aforesaid annular groove *h* and pressed down upon the stencil. The luminous paste is confined within the predetermined limits of application by the groove *h* and is forced through the perforations in the stencil upon the dial placed beneath, by the palette-knife *i* whereby a smooth sweeping of the stencil is effected, so that the excess of luminous paste will only adhere to the palette-knife. Then the table *c*, member *f* and stencil *e* are raised again by means of the pedal and the finished dial is removed.

We claim:

1. An apparatus for stenciling luminous dials, comprising a vertically movable device provided with an annular groove, a stencil carried by said device in registry with said groove, a pedal for vertically moving said device, means for supplying luminous material to said groove, and a palette-knife arranged to rotatably traverse said groove whereby said luminous material is forced through said stencil.

2. An apparatus for stenciling luminous dials, comprising a vertically movable device provided with an annular groove, a stencil carried by said device in registry with said groove, a pedal for vertically moving said

device, a container for luminous material, an outlet from said container for supplying luminous material to said groove, and a palette-knife arranged to rotatably traverse said groove whereby said luminous material is forced through said stencil.

3. An apparatus for stenciling luminous dials, comprising a vertically movable device provided with an annular groove, a stencil carried by said device in registry with said groove, a pedal for vertically moving said device, a container for luminous material located above said device, outlet tubes extending in opposite directions and downwardly from said container for supplying luminous material to said groove, and a palette-knife arranged to rotatably traverse said groove whereby said luminous material is forced through said stencil.

4. An apparatus as set forth in claim 1 in which the palette-knife is elastic.

In testimony whereof we affix our signatures.

DR. MAX WOLF.
BRUNO MARX.