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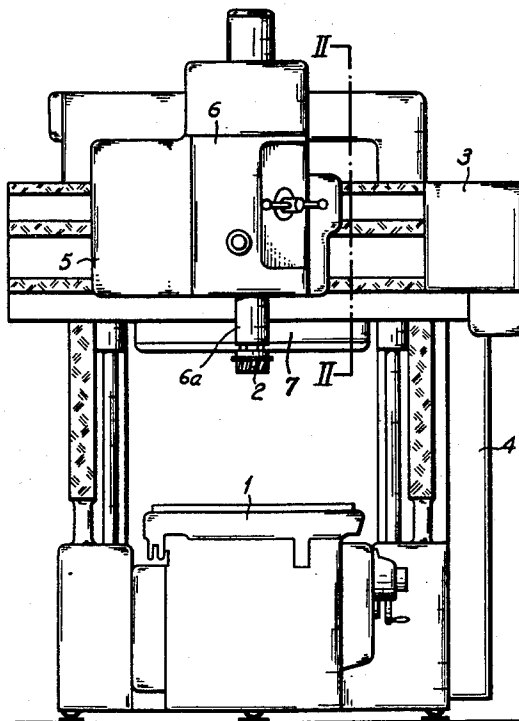
2,926,236

MACHINE-TOOL PROVIDED WITH MEANS FOR ILLUMINATING THE TOOL

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2 Sheets-Sheet 1

FIG. 1



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FIG. 2

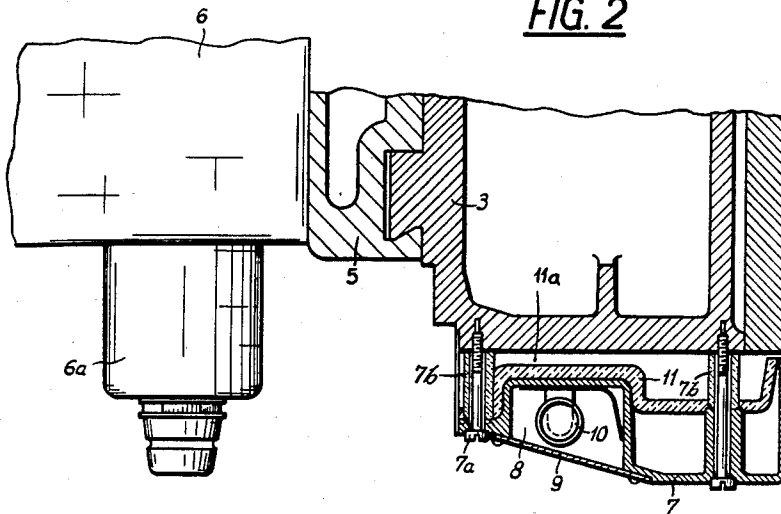
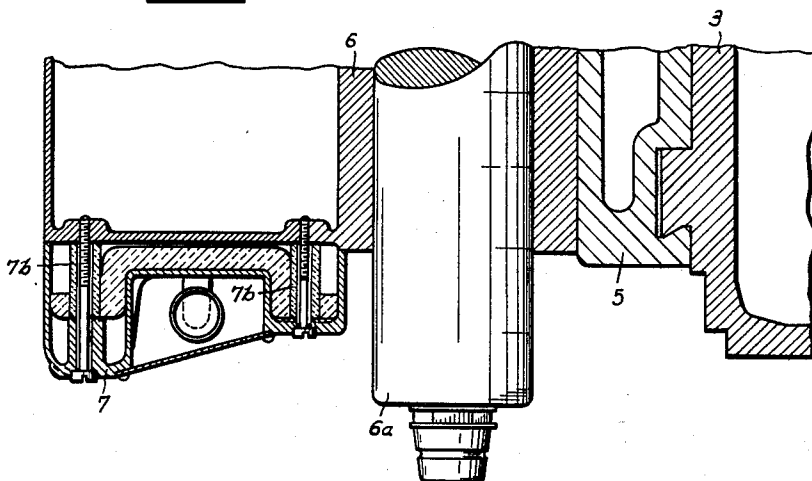


FIG. 3



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3 Claims. (Cl. 240—2)

The present invention has for its object a machine-tool of the type including a bed adapted to carry the work to be machined, a movable support for the tool and means for illuminating the tool fitted on said support.

According to the invention, the illuminating means for the tool are constituted by a casing housing a source of light, said casing being located on the outside of the tool support and being heat-insulated with reference to the latter.

Accompanying drawing illustrates by way of example a preferred embodiment of the invention, together with a modification thereof, in said drawing:

Fig. 1 is a front elevational view of said embodiment. Fig. 2 is a cross-section on line 2—2 of Fig. 1.

Fig. 3 is a similar cross-section showing a modification in which the casing for the illuminating means is secured to the headstock instead of to the frame carrying slidably the latter.

The machine illustrated in Figs. 1 and 2 includes a table 1 adapted to carry the work to be machined and to slide forwardly and rearwardly in a direction perpendicular to the plane of Fig. 1.

Over said table is fitted a frame carrying the tool 2 and including a cross-member 3 adapted to move vertically along the stationary uprights 4, while a slider 5 is adapted to move horizontally along said cross-member and carries the headstock 6. The latter is provided with a quill 6a carrying the tool 2. This general arrangement is well known per se and need not be described with any further detail.

To the lower surface of the cross-member 3 is removably secured a casing 7 which is secured thereto through the screw 7a engaging coaxially insulating spacing sleeves 7b. The casing 7 encloses a chamber 8 opening downwardly so as to form a recess closed at its lower end by a transparent plate 9. Inside said chamber 8 is fitted a luminescent tube 10 adapted to illuminate the tool 2 and the work to be machined by the latter. Between the casing 7 and the lower surface of the cross-member is inserted a heat-insulating wall 11 which covers in particular the outside of the bottom of the recess or chamber 8 together with the major part of the side wall of said chamber. Between the wall 11 and the lower surface of the cross-member 3, there is provided an empty space 11a through which air may flow freely.

Machine-tools are already known which are provided with lamps for illuminating the tool, but these lamps have been fitted hitherto inside a chamber provided inside the cross-member, which cuts out the mechanical resist-

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ance of the latter, and makes the thermal insulation of the cross-member, with reference to the lamps, more difficult and it is well known that in a highly accurate machine-tool, a modification by a few degrees of the temperature of the frame section carrying the tool may objectionably affect the proper operation of the machine.

The modification illustrated in Fig. 3 shows a cross-section similar to that of Fig. 2, but passing through the middle of the headstock. A casing 7 similar to that illustrated in Fig. 2 is secured in this case to the lower surface of said headstock.

What I claim is:

1. In a machine-tool including a table adapted to carry the work to be machined and a movable support for the tool, the provision of tool-illuminating means including a casing, external of said support, a source of light adapted to illuminate the tool and housed inside said casing, a wall of heat insulating material rigid with the casing and extending between the casing and the outer surface of the tool support, and mounting means supporting said heat-insulating wall at a distance from said outer surface of the tool support to provide an air space between said wall and said outer surface, said mounting means including spacing members of insulating material between said wall and said support.

2. In a machine-tool including a table adapted to carry the work to be machined and a movable support for the tool, the provision of tool-illuminating means including a casing external of said support, a source of light adapted to illuminate the tool and housed inside said casing and heat-insulating means holding said casing at a distance from the outer surface of the tool support and including heat-insulating sleeves engaging the tool support and casing to space the casing from the support and screws extending coaxially through said sleeves into the support and adapted to secure said casing to said support with the interposition of said sleeves.

3. In a machine-tool including a table adapted to carry the work to be machined and a movable support for the tool, the provision of tool-illuminating means including a casing external of said support, a source of light adapted to illuminate the tool and housed inside said casing and heat-insulating means holding said casing at a distance from the outer surface of the tool support and including a wall of heat insulating material engaging the surface of the casing facing the tool support, heat-insulating sleeves fitted in said heat-insulating wall and engaging the tool support to space the casing from the support and screws extending coaxially through said sleeves into the support and adapted to secure said casing to said support with the interposition of said sleeves.

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