

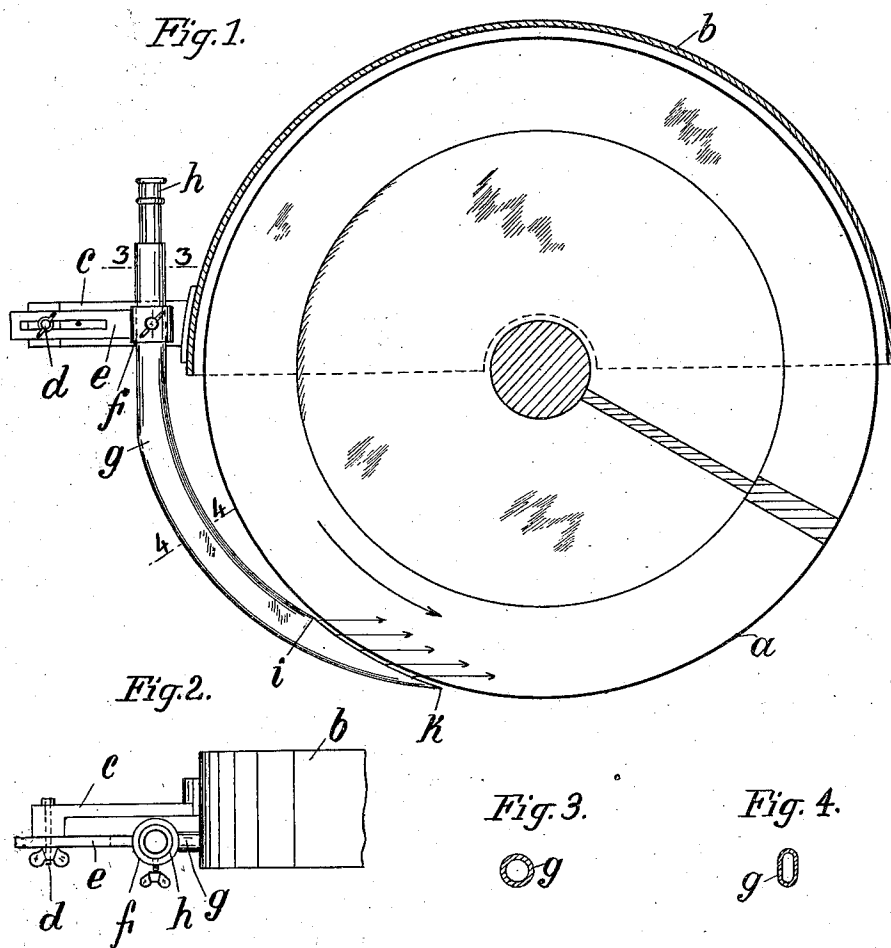
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DEVICE FOR SUPPLYING WATER TO STONE SAWS

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UNITED STATES PATENT OFFICE

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DEVICE FOR SUPPLYING WATER TO STONE SAWS

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This invention relates to a device, designed to supply cooling water directly to the cutting point of a circular saw of carborundum or the like commonly used for cutting stone-blocks. These carborundum-disks work at a rate of 1500 to 2000 revolutions per minute and the cooling water is supplied by a means of a jet tube. The usual water-supply is however not sufficient so that in the cut fire occurs by which the carborundum-disc is heated and worn very rapidly. On the other hand the stone-block is burnt also so that the edges crumble off.

In order to avoid in a certain measure this heating, the machine must be run at low speed so that those advantages are never obtained which might result from a suitable water-supply.

The object of this invention is to provide a water supply which will be sufficient to prevent the heating of the cutting disc to an extent injurious to the stone being cut.

This problem is solved by making the jet-tube so thin and flat that it can be introduced into the cut which is produced at the cutting operation so that water is constantly injected directly on the cutting surface. The cut is about 7 to 8 mms. wide and the jet-tube about 5 mms. thick. As the walls of the jet-tube are $1\frac{1}{2}$ mm. thick, a clearance of 0.1 mm. remains at each side.

An embodiment of the invention is illustrated, by way of example, in the accompanying drawing, in which:

Fig. 1 is a side-elevation, partly in section. Fig. 2 is a part-top-plan-view.

Figs. 3 and 4 are cross-sections on lines 3—3 and 4—4 respectively of Fig. 1.

The carborundum disc *a* is covered on its upper portion by a protecting hood *b* in a manner well understood in the art. On the hood *b* is fixed an arm *c* which is bent at an angle; a screw *d* secures an arm *e* to the arm *c* and the arm *e* has a tubular sleeve *f*. In the sleeve *f* is adjustably secured a jet-tube *g*, and the upper *h* thereof is adapted to be connected to a hose, not shown.

The cross-sections of the jet-tube *g* are shown in Figs. 3 and 4. The mouth of the jet-tube, extending from *i* to *k*, forms a slot

through which the cooling water flows directly to the bottom of the cut, i. e. directly to the main cutting point of the disc *a*.

The tube *g* can be adjusted in the sleeve *f* and this sleeve *f*, on the arm *c* by means of the screw *d* in accordance with the wear of the disk *a*.

The progress obtained by the invention consists in that the cutting disks do not wear so rapidly as at present and that the stone is no longer burnt so that a higher efficiency and work of better quality are obtained.

I claim:

A device for supplying cooling water to the cutting point of circular saws of carborundum or the like for cutting stones, comprising a jet-tube the mouth-end of which is curved, according to the circular shape of the circular saw, and of such narrow cross-section that it can be introduced into the cut down to the bottom thereof.

In testimony whereof, I affix my signature.

ADOLF VATES.

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