Oct. 25, 1932. H. G. WEINLAND 1,884,438

SPARK ARRESTER

Filed Aug. 12, 1929

FIG 1

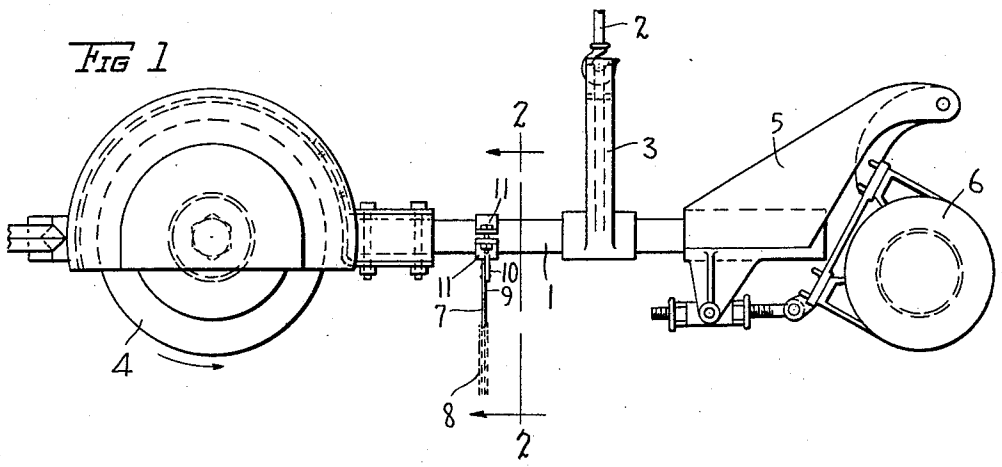


FIG 2

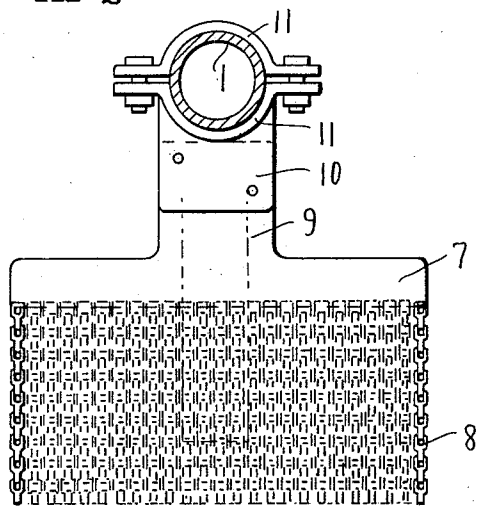
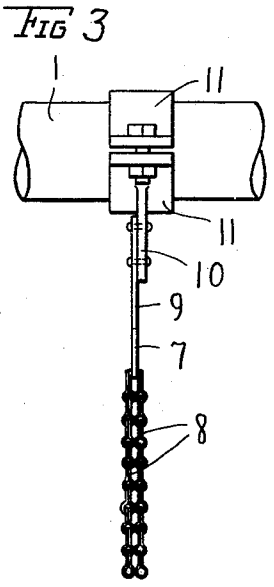


FIG 3



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UNITED STATES PATENT OFFICE

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SPARK ARRESTER

Application filed August 12, 1929. Serial No. 385,348.

This invention relates to spark arresters, it more particularly relating to spark arresters for grinding machines and especially to grinding machines of the portable type, although not necessarily limited to that particular type of machine.

The object of my invention is to provide a spark arrester which will be fire-proof and unbreakable with ordinary usage, and also one which will not interfere with the necessary movements of the machine to which it is applied.

In the accompanying drawing:

Fig. 1 is a side elevation of a grinding machine to which my improved spark arrester has been applied.

Fig. 2 is an enlarged side elevation of the spark arrester, showing in section that portion of the grinding machine to which it is attached.

Fig. 3 is an end elevation of the parts shown in Fig. 2.

Referring to the drawing, in the present case the machine to which my improved spark arrester is shown applied is a grinding machine of the portable type. The machine has a tubular frame member 1 suspended from a freely movable rod 2 by a hanger 3. At one end of the support 1 is mounted in any usual and well known manner a grinding wheel 4. The other end of the support 1 has a head 5 from which is suspended an electric motor 6, power being applied to the grinding wheel from the motor through a belt and pulleys which are not shown in the present case. The grinding wheel is revolved in the direction of the arrow in Fig. 1 so that the sparks from the wheel are projected rearwardly. These hot sparks, which are in the form of hot metallic particles, unless arrested, accumulate upon the rear portion of the machine.

My improved spark arrester consists of a curtain of flexible metallic character shown in the present case in the form of metallic chains. There is provided a thin elongated head 7 to each side of the lower edge of which are attached a series of flexible metallic chains 8 which hang downwardly to provide the curtain. The head is preferably of sheet metal and the preferred manner of attaching the chains to the head is by welding. The sheet metal head has an integral upwardly extending shank 9 which is attached by rivets or otherwise to a depending ear 10 on the lower member of a clamping collar 11. The clamping collar is clamped to the tubular support 1 so that the curtain formed by the chains 8 hangs in the path of the sparks.

By this construction a spark arrester is provided which will not be affected by the heat of the sparks and which will not be broken nor bent by contact with the work or other objects when the machine is moved from one position of operation to another and is therefore not subject to the objections of other forms of spark arresters, such as leather which burns, asbestos which breaks, and sheet metal which bends and breaks.

Having thus described my invention, I claim:

1. In a spark arrester, a head, a series of closely placed metallic chains depending from said head to form a curtain impervious to sparks, a clamping collar, and means for securing said head to said clamping collar.

2. In a spark arrester, an elongated sheet metal head having an integral shank, a series of closely placed metallic chains secured to and depending from said head to form a curtain impervious to sparks, a two-part clamping collar, one member of which has an ear, and means for securing said shank to said ear.

3. In a spark arrester for a grinding machine which has a freely suspended support, a grinding wheel at one end of said support and a motor at the other end of said support, of a series of closely placed depending metallic chains to form a curtain impervious to sparks, together with means for suspending said chains from the grinding wheel support in the path of sparks from said grinding wheel.

In testimony whereof, I have hereunto set my hand this 7th day of August, 1929.

HERMON G. WEINLAND.