Aug. 9, 1927. 1,638,459

E. RITZ

GRINDING WHEEL GUARD

Filed Oct. 23, 1924

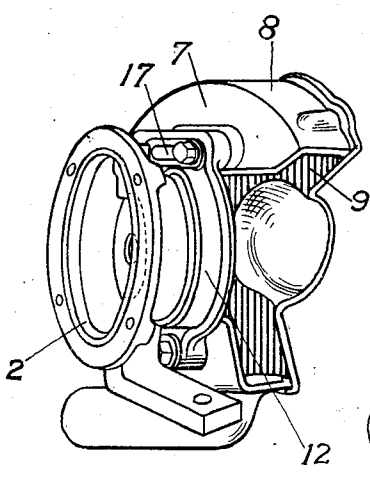


Fig. 1.

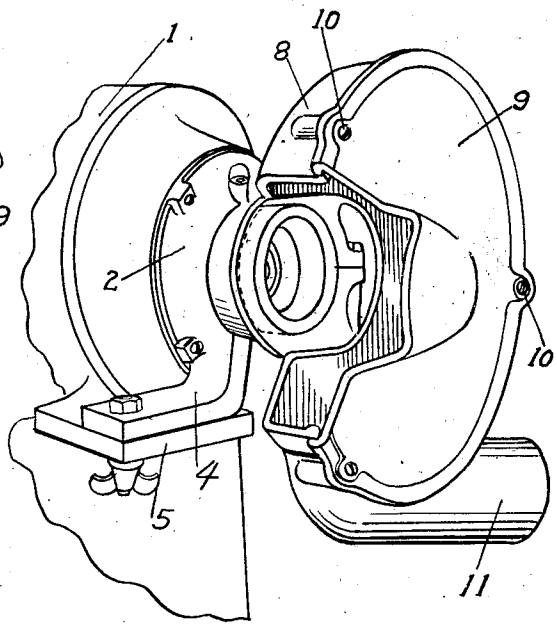


Fig. 2.

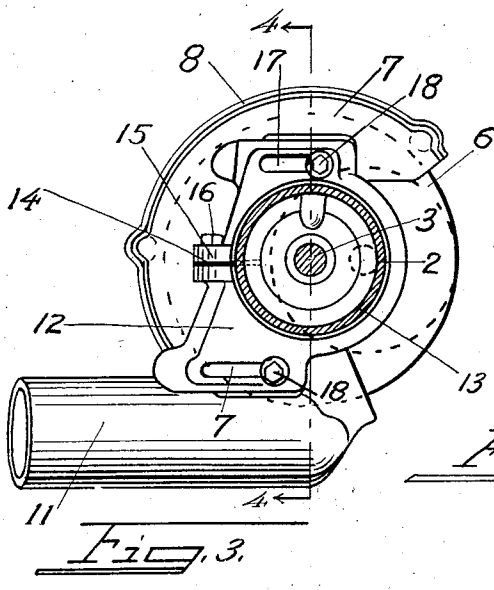


Fig. 3.

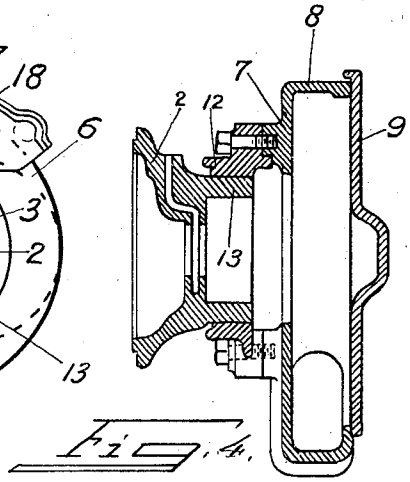


Fig. 4.

INVENTOR:
Ernst Ritz
BY Allen & Allen
ATTORNEYS.

Patented Aug. 9, 1927.

1,638,459

UNITED STATES PATENT OFFICE.

EMIL RITZ, OF MOUNT HEALTHY, OHIO, ASSIGNOR TO THE HISEY-WOLF MACHINE COMPANY, A PARTNERSHIP CONSISTING OF WALTER J. FRIEDLANDER AND JOSEPH A. FRIEDLANDER, BOTH OF CINCINNATI, OHIO.

GRINDING-WHEEL GUARD.

Application filed October 23, 1924. Serial No. 745,506.

My invention relates to safety guards for motor driven grinding wheels, which can be readily and easily attached to the motor casing so as to be interchangeable with any of the standard open type guards, and in which the guard can be both circumferentially adjusted for any desired angle for use, and also transversely adjusted for the wear of the grinding wheel as it is reduced in size in use so as to maintain the top of the guard close to the surface of the wheel to serve as a spark and chip breaker.

The invention consists of that certain novel construction and arrangement of parts to be hereinafter more particularly pointed out and claimed with which the above objects are attained.

In the drawing:

Figure 1 is a perspective view of the guard with the wheel removed, taken from the back of the casing.

Figure 2 is a similar view taken from the front.

Figure 3 is a transverse section taken through the end of the motor casing.

Figure 4 is a vertical section taken on the line 4—4 of Figure 3.

I have shown a portion of the motor casing at 1, with a cap 2 secured by bolts to the end of the casing, this cap 2 providing a bearing for the motor shaft 3.

This cap piece 2 has a lateral bracket arm 4 which is bolted to the frame plate 5. The guard for the grinding wheel 6 on the end of the motor shaft comprises a circular plate 7 with a peripheral flange 8 and an outer cover 9 secured to the flange 8 by screws 10, so that the cover plate can be readily removed for access to the grinding wheel. The flanged plate and cover plate are cut away to leave a suitable opening for the application of the work to the wheel, and there is also preferably cast integral with the peripheral flange an exhaust tube 11 for connection with an exhaust fan to draw off the dust and chips.

For securing the guard to the motor casing so that it may be adjusted both circumferentially and transversely, I provide a plate 12 which has a circular opening to fit around the hub 13 of the cap 2. The engaging portion of the plate is split at 14 and provided with lugs 15 which are drawn together with a bolt 16 to effectively tighten and loosen the plate and permit any desired circumferential adjustment. The attaching plate 12 is provided with slots 17, 17, and is secured through these slots by bolts 18, 18, to the guard 7, so that by loosening the bolts the center of the guard may be shifted to conform to the diameter of the grinding wheel as it is reduced in size in use.

It will be obvious from the foregoing description that a very substantial and effective guard is obtained which is capable of immediate adjustment to conform to the requirements.

Having thus described my invention, what I claim as new and desire to secure by Letters Patent, is:—

1. In a safety guard the combination with a casing, with a shaft projecting therethrough and a grinding wheel mounted thereon, of a safety guard to enclose the wheel, comprising a back plate with a peripheral flange and an outer cover plate, and an attaching plate with means for securing same to the casing around the shaft, with the plate provided with parallel slots and bolts engaging in the slots to secure the guard thereto for adjustment of the guard with relation to the wheel.

2. In a safety guard the combination with a motor casing, and an end hub cap, with a shaft projecting therethrough, and grinding wheel mounted thereon, of a safety guard to enclose the grinding wheel, with a peripheral opening therein for applying the work to the wheel, and an attaching plate with a hollow split hub to clamp the plate to the hub cap, the plate having parallel slots and bolts engaging the slots to attach the guard thereto, whereby the guard may be circumferentially and lineally adjusted as described.

EMIL RITZ.