No. 826,842. PATENTED JULY 24, 1906.

H. FRIEDERICHS.

PROTECTING HOOD FOR GRINDING DISKS AND FOR SIMILAR ROTATING OBJECTS AND TOOLS.

APPLICATION FILED MAR. 23, 1905.

2 SHEETS—SHEET 1.

Fig. 1.

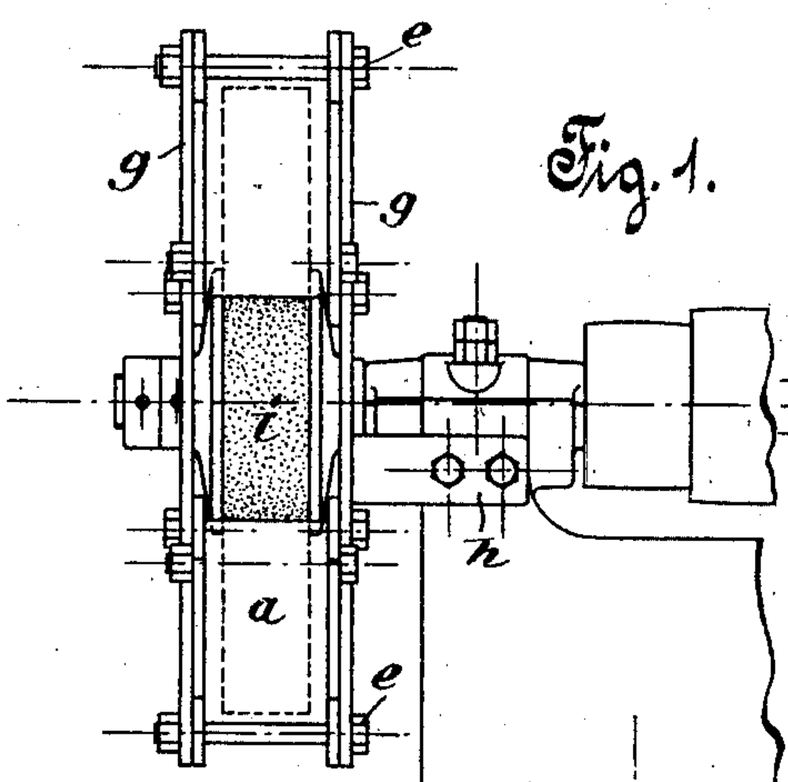

Fig. 2.

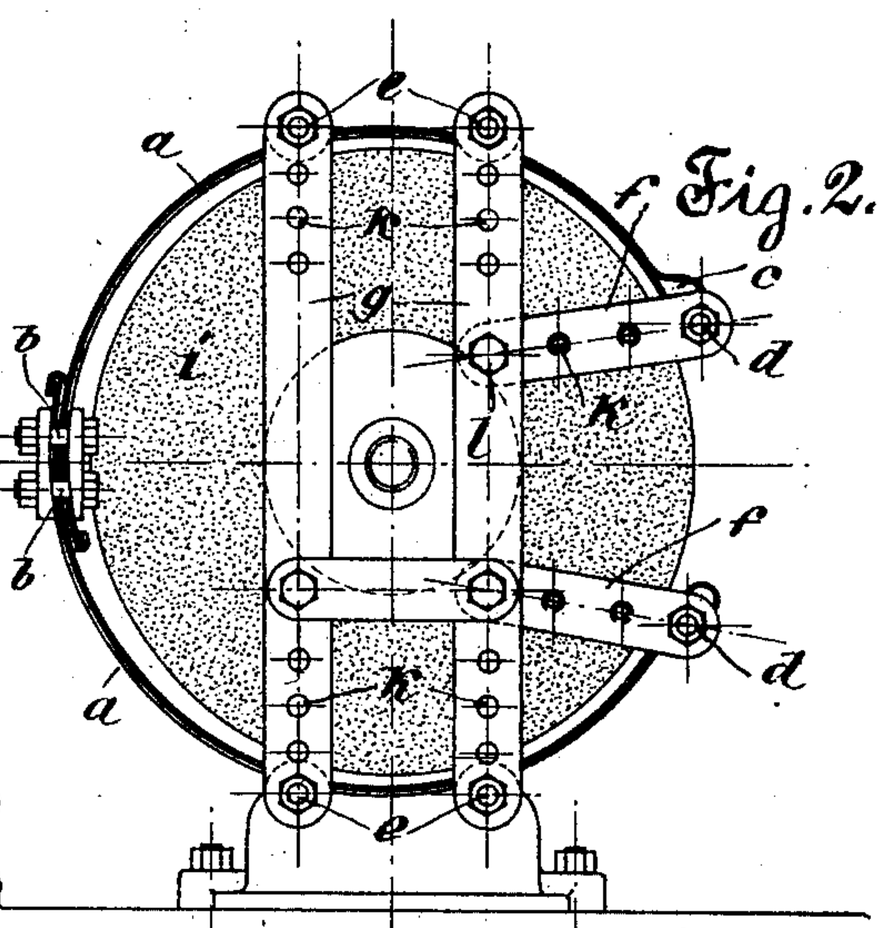

Fig. 3.

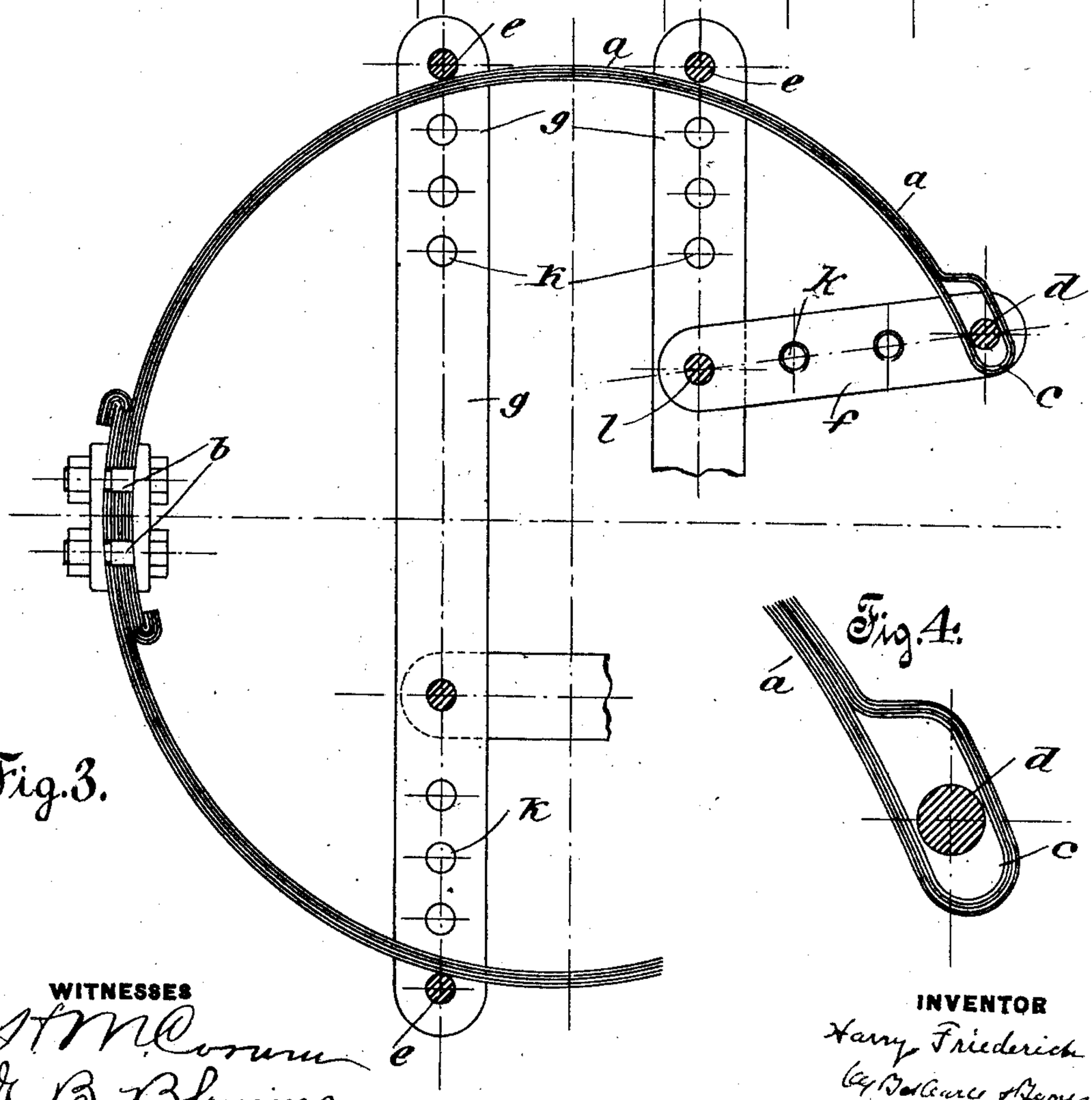

Fig. 4.

WITNESSES

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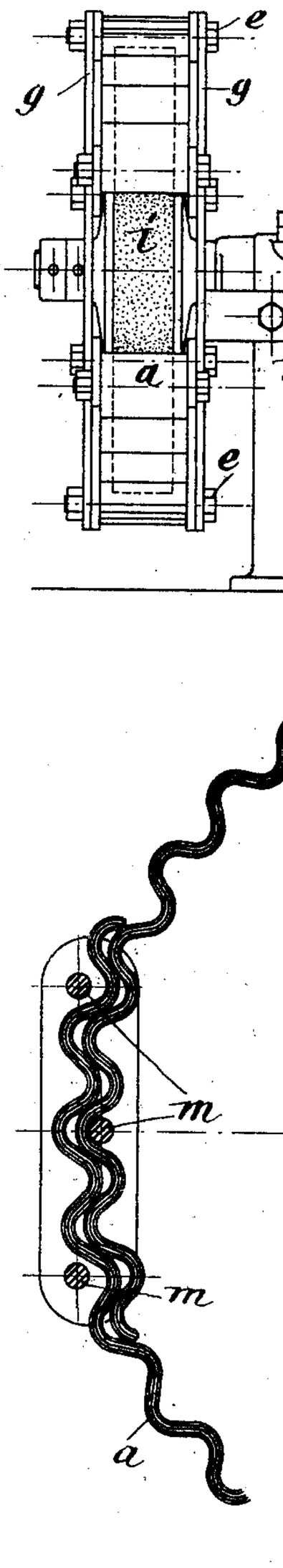

Fig. 5.

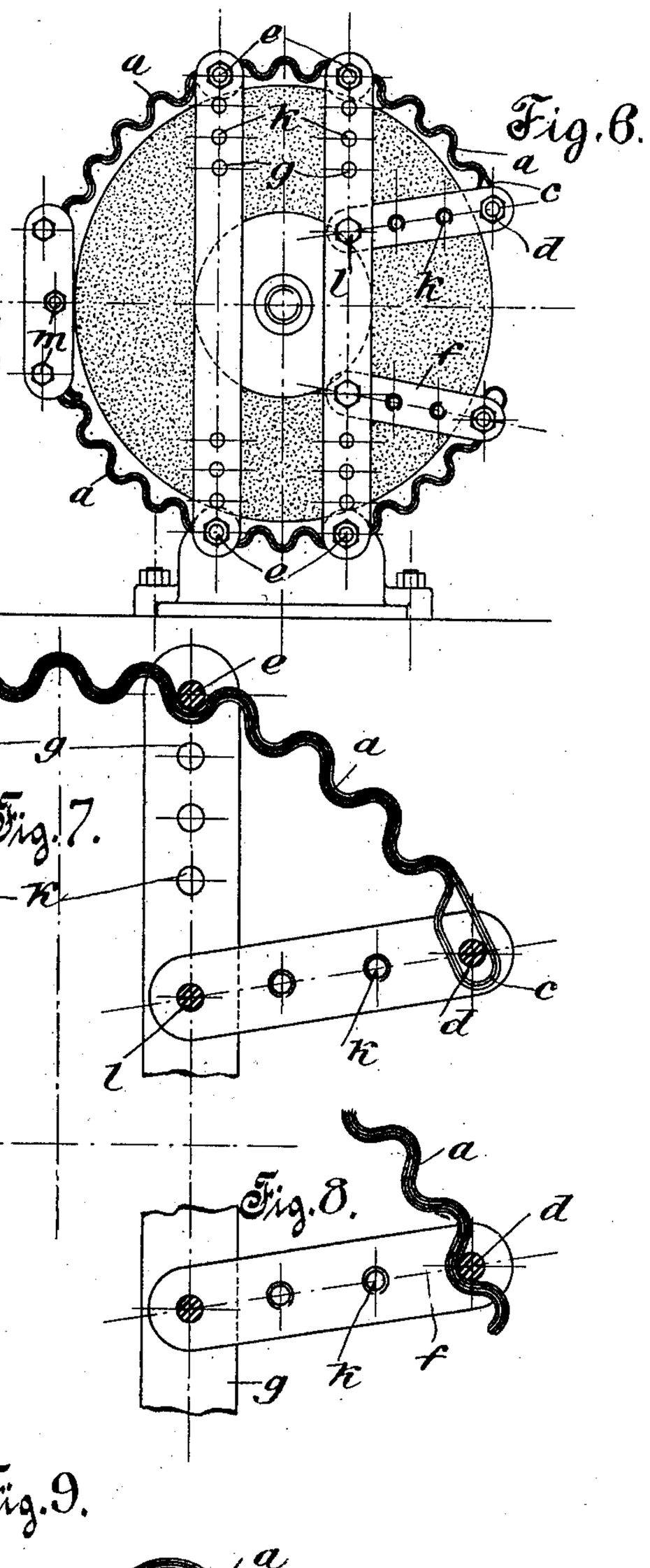

Fig. 6.

Fig. 7.

Fig. 8.

Fig. 9.

WITNESSES

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UNITED STATES PATENT OFFICE.

HARRY FRIEDERICHS, OF HANOVER, GERMANY.

PROTECTING-HOOD FOR GRINDING-DISKS AND FOR SIMILAR ROTATING OBJECTS AND TOOLS.

No. 826,842. Specification of Letters Patent. Patented July 24, 1906.

Application filed March 23, 1905. Serial No. 251,603.

To all whom it may concern:

Be it known that I, HARRY FRIEDERICHS, chief engineer, a subject of the King of Prussia, German Emperor, residing at 134 Schulenburger Landstrasse, Hanover, Germany, have invented a certain new and useful Improved Protecting-Hood for Grinding-Disks and for Similar Rotating Objects and Tools, of which the following is a specification.

This invention relates to the protecting hoods or covers of grinding-disks, the object being to provide a form of hood which is of adequate strength to resist and retain the flying fragments in the event of a breakage of the disk, while at the same time it is sufficiently elastic to permit of reduction in size as the diameter of the disk decreases in wear.

Protecting-hoods with caps made from one piece of sheet metal are known; but these necessarily have been made of sufficient strength to resist the fragments of a broken disk of maximum diameter, and consequently have been too rigid or inelastic to permit of reduction in size.

The invention briefly consists in building up the hood from metallic laminæ, either plain or corrugated, so that a hood of the required strength is obtained and at the same time one sufficiently elastic to permit alteration in size to suit the decreasing size of the grinding-disk in wear, the decrease in size of the hood being further facilitated by the laminæ being so arranged that one or more can be removed to decrease the resistance of the hood to alteration in shape.

The accompanying drawings illustrate two modes of carrying out the invention.

Figures 1 and 2 are respectively front and side elevations of a grinding-disk with a plain form of hood according to the invention. Figs. 3 and 4 are detail views of the hood. Figs. 5 and 6 are respectively front and side elevations of a grinding-disk with a corrugated hood according to the invention. Figs. 7, 8, and 9 are detail views of the hood.

In carrying out the invention according to one mode, as illustrated in Figs. 1 to 4, the hood is built up from sheet-metal laminæ *a*. These may be formed by ending one piece on itself, so as to form two laminæ, as shown in Fig. 2, or more than two may be so bent, as shown in Figs. 3 and 4. It is preferred to form the hood in segments joined together, for instance, by bolts *b*. The free ends are formed with loops *c*, through which bolts *d* are passed. (See Fig. 4.) The hood is sustained by these bolts in conjunction with others *d* and *e*. The bolts *d e* are carried by arms or plates *f g*, which form a framework. This framework may be supported in any suitable manner, as by a bracket *h*. The hood passes from one bolt *d* within the retaining-bolts *e* around the disk to the other bolt *d*. As the disk *i* wears and decreases in diameter the bolts *d e* are shifted to other holes *k* in the frame-bars nearer the center of rotation. In addition to this the hood may be further adjusted by moving the arms *f* on their connecting-bolts *l*.

To facilitate the adjustment of the hood to a disk of greatly-decreased diameter, one of the laminæ *a* may be removed to make the head more flexible, as the strength required will be less, due to the decreased effect of the centrifugal action in event of fracture of the disk.

In carrying out the invention according to another mode, as illustrated by Figs. 5 to 9, the hood is built up from corrugated laminæ. The segments are not bolted together, as in the previous case, but simply held together by bolts *m*, which are arranged on either side, so as to lock the corrugations of one segment within those of the other. This arrangement permits of adjustment at this point of juncture. Similarly the loops *c* may be dispensed with and the arrangement shown in Fig. 8 adopted, in which the bolt is retained by a corrugation of the laminæ. Figs. 7, 8, and 9 illustrate on a larger scale than the other figures portions of the corrugated hood. The similar parts in this modification of the invention to those in that first described are correspondingly lettered.

It will be understood that the hood may always be adjusted close to the disk, thereby lessening the effect of flying fragments in the event of fracture and that it may be easily adapted to the decreasing size of the disk, as its pliabilty or elasticity can be decreased by removing one or more laminæ, enough thickness being left of course to give the requisite strength.

The invention is also applicable as a hood or cover for other revolving parts or tools than grinding-disks.

Having now particularly described and ascertained the nature of my said invention and in what manner the same is to be performed, I declare that what I claim is—

1. A protecting-hood for grinding-disks and other rotating objects and tools, con-

sisting of a number of associate, flexible laminæ extending over the entire length of the hood, said laminæ consisting of several parts joined together to form the hood, substantially as described.

2. A protecting-hood for grinding-disks and other rotating objects and tools, consisting of a number of associated flexible laminæ extending over the entire length of the hood, said laminæ being corrugated; substantially as described.

3. A protecting-hood for grinding-disks and other rotating parts, consisting of a number of superimposed, flexible laminæ, one or more of which can be removed for facilitating the adjustment of the hood; substantially as described.

In witness whereof I have hereunto signed my name in the presence of two subscribing witnesses.

HARRY FRIEDERICHS.

Witnesses:

ANNA DIPPEL,

HERMINE GÖDECKE.