

(No Model.)

F. H. SCHULE.  
GRAIN POLISHING APPARATUS.

No. 605,922.

Patented June 21, 1898.

Fig. 1.

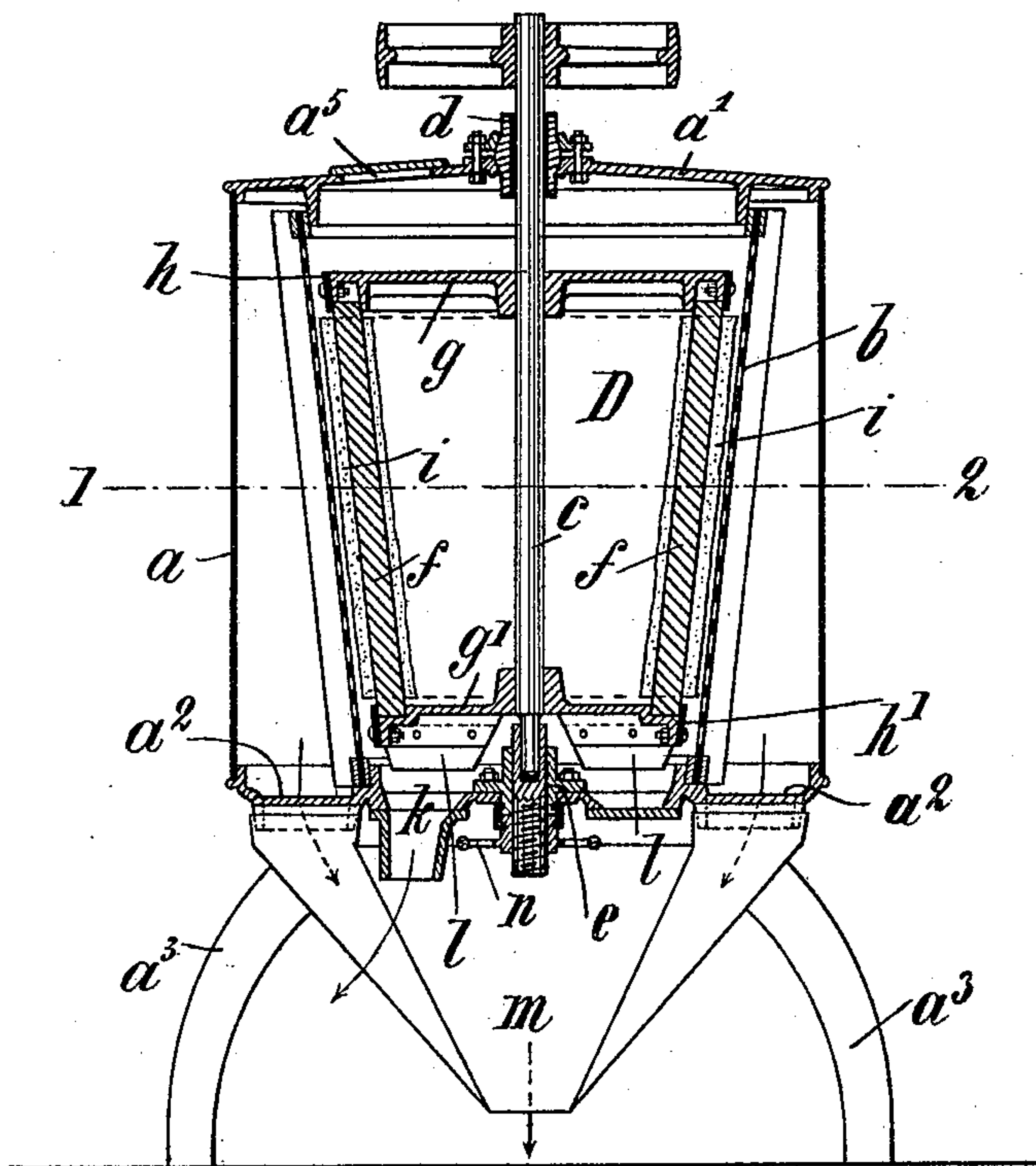
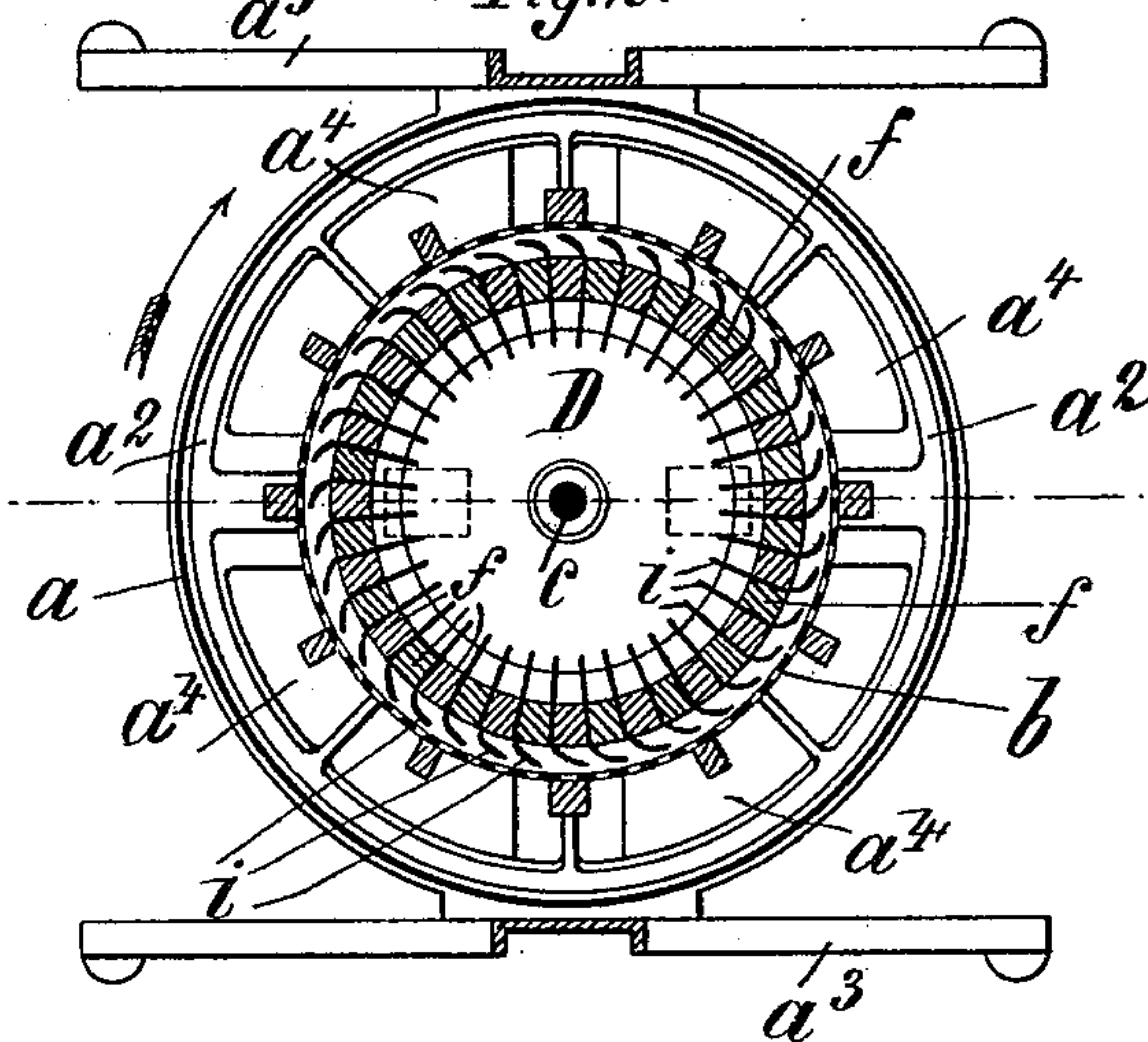


Fig. 2.



Witnesses:  
B. S. Ober.  
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Inventor  
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# UNITED STATES PATENT OFFICE.

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## GRAIN-POLISHING APPARATUS.

SPECIFICATION forming part of Letters Patent No. 605,922, dated June 21, 1898.

Application filed April 17, 1897. Serial No. 632,625. (No model.)

*To all whom it may concern:*

Be it known that I, FRIEDRICH HERMANN SCHULE, a subject of the German Emperor, and a resident of Hamburg, in the German Empire, have invented certain new and useful Improvements in Grain-Polishing Apparatus, of which the following is a specification.

My invention relates to improvements in polishing apparatus of the kind used for polishing grains coming from grinding-mills and like apparatus.

The object of the improvements is to provide means for facilitating the renewal and adjustment of the polishing-surface.

With this end in view my invention consists of certain novel features of construction and combinations of parts, as will be hereinafter fully described with reference to the accompanying drawings, in which—

Figure 1 is a sectional side elevation of my improved grain-polishing apparatus; and Fig. 2, a horizontal transverse section of the same on the line 1 2, Fig. 1.

Similar letters refer to similar parts throughout the figures.

In a suitable casing *a*, closed at the top and bottom by suitable covers *a'* and *a''*, respectively, and carried by supports or brackets *a'''*, is mounted an annular sieve *b*, of a preferably conical form, as shown in Fig. 1. Within this conical sieve *b*, made of wire-gauze or perforated sheet metal, there is arranged a conical revolving drum *D*, fixed upon a vertical driving-shaft *c*, journaled in suitable bearings *d* and *e* of the top and bottom cover *a'* and *a''*, respectively. The conical drum is composed of a series of sector-shaped staves or bars *f*, held together, like the staves of a bucket or cask, by means of a top plate *g*, a bottom plate *g'*, and detachable hooks *h* and *h'*.

Between the bars or staves *f* are clamped strips or flaps *i*, of a flexible material—*e. g.*, moleskin—adapted for polishing purposes. The said strips *i* are of such a breadth that when placed in proper position will radiate from the conical drum, as shown in Fig. 2, their outer edges collectively forming a circular yielding polishing-surface designed for polishing the grains passing down the annular space between the sieve *b* and the revolving drum *D*, while the inner edges project be-

yond the opposite faces of the drum into the interior thereof and are designed to be pushed forward to the outer periphery to take up the wear. The neatly-polished grains leave the polishing apparatus through an outlet *k*, to which they are conveyed by suitable sweepers *l*, attached to the bottom plate *g'* of the drum *D*. The waste, dust, and the like will pass through the sieve *b* into the casing *a*, whence they fall through openings *a''* of the bottom plate *a''* into a suitable chute *m*, each half of the casing *a* being provided with such a chute *m*. The feeding of the grains to be polished may be effected through a suitable inlet-hole *a'''* of the top cover *a'*.

The spacing distance between the drum *D* and the sieve-cone *b* may be changed, according to the size of the grains to be polished, by raising or lowering the conical drum *D* in the cone *b*. This raising or lowering of the drum *D* may be effected by means of the movable bearing *e* of the driving-shaft *c*, which bearing *e* may be adjusted in height by means of a hand-wheel *n*, as will be clearly understood from Fig. 1.

When the polishing-strips *i* are worn off, the drum *D* is taken out of the polishing apparatus and the firm joining or connection of the staves *f* is ceased by loosening the hoops *h h'*, so that the strips *f* may somewhat be drawn out and adjusted in such a position that the polishing edges of the said strips project again the proper distance beyond the circumference of the drum, whereupon the hoops *h h'* are securely fastened.

It is obvious that by the above-described means for adjusting the polishing-strips a considerable amount of time, labor, and polishing material is saved which otherwise would be wasted, as is the case in such polishing-machines where the polishing material is attached to the outer surface of a solid drum and where it must be renewed wholly when it is but partly worn away.

Having fully described my invention, what I desire to claim and secure by Letters Patent is—

1. In a grain-polishing machine, a polishing-drum composed of two heads, the upper head provided on its under face with a circular groove the inner wall of which is higher



than the outer wall and forms a bearing, the lower head provided with a stepped peripheral seat and with a downwardly-projecting peripheral flange, staves stepped in said seat and having bearing on the inner flange of the peripheral groove in the upper head, a polishing fabric clamped between said staves, and clamping hoops or bands detachably secured to the outer peripheral flanges of the heads, for the purpose set forth.

2. In a grain-polishing machine a polishing-drum composed of two heads, staves having bearing on said heads, and clamping devices for clamping the staves removably to the heads; in combination with a flexible strip of

polishing material between each two staves of such a width relatively to the thickness of said staves as to project from opposite faces thereof, whereby said strips can be drawn out from between the staves, for the purpose set forth.

In testimony that I claim the foregoing as my invention I have signed my name, in presence of two witnesses, this 30th day of January, 1897.

FRIEDRICH HERMANN SCHULE.

Witnesses:

MAX LEMCKE,  
MAX KAEMPFF.