No. 789,741. PATENTED MAY 16, 1905.

F. H. KALTENBACH.

HOOD FOR GRINDING MACHINES.

APPLICATION FILED JAN. 21, 1905.

Fig. 1.

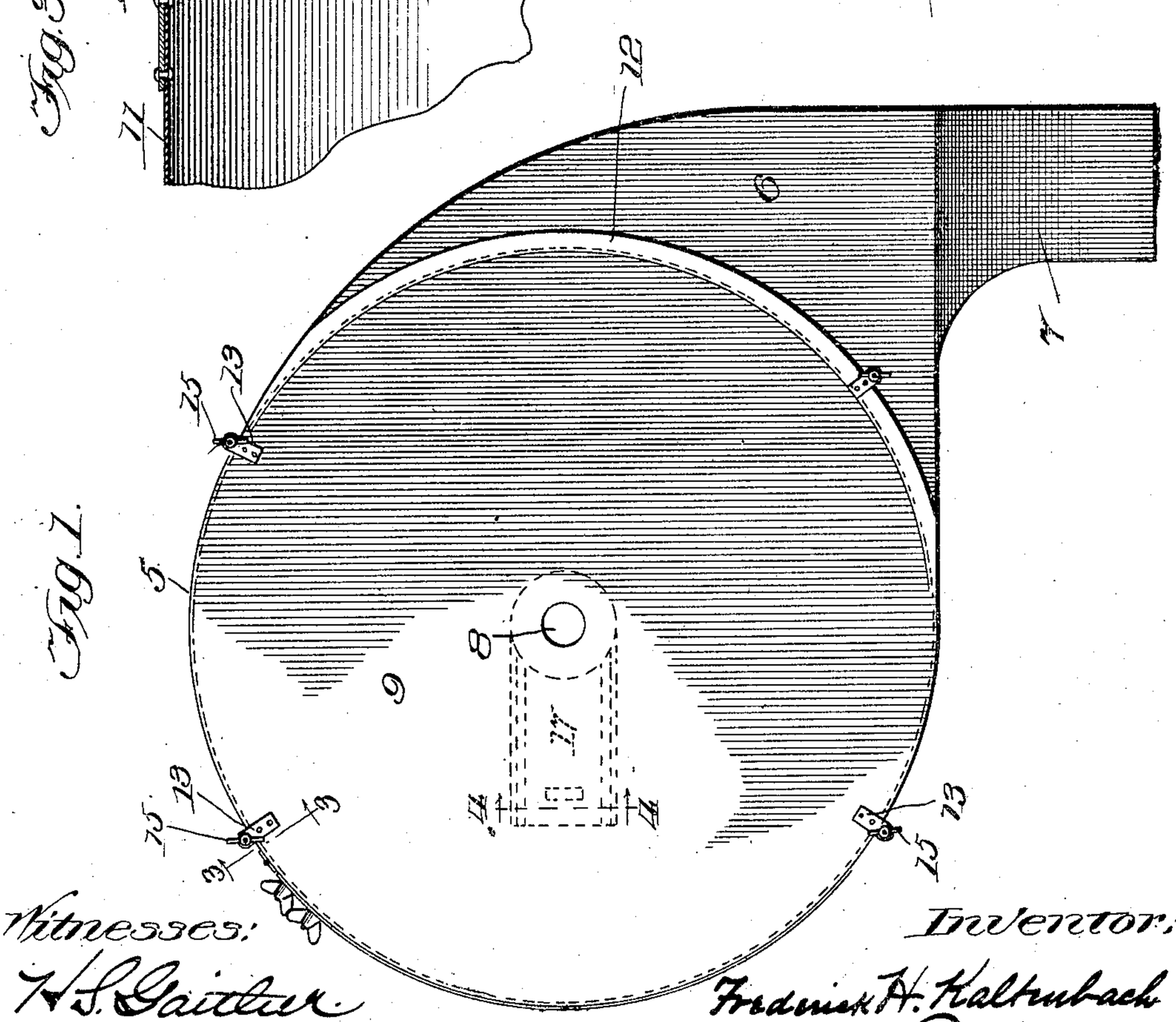


Fig. 2.

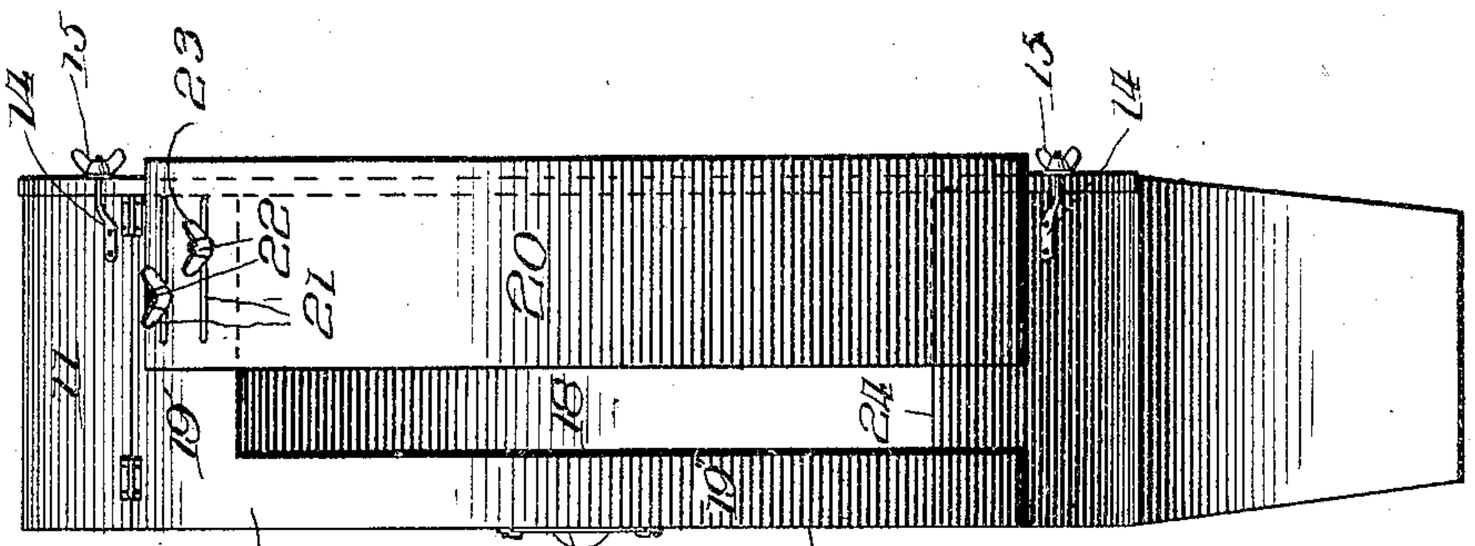


Fig. 3.

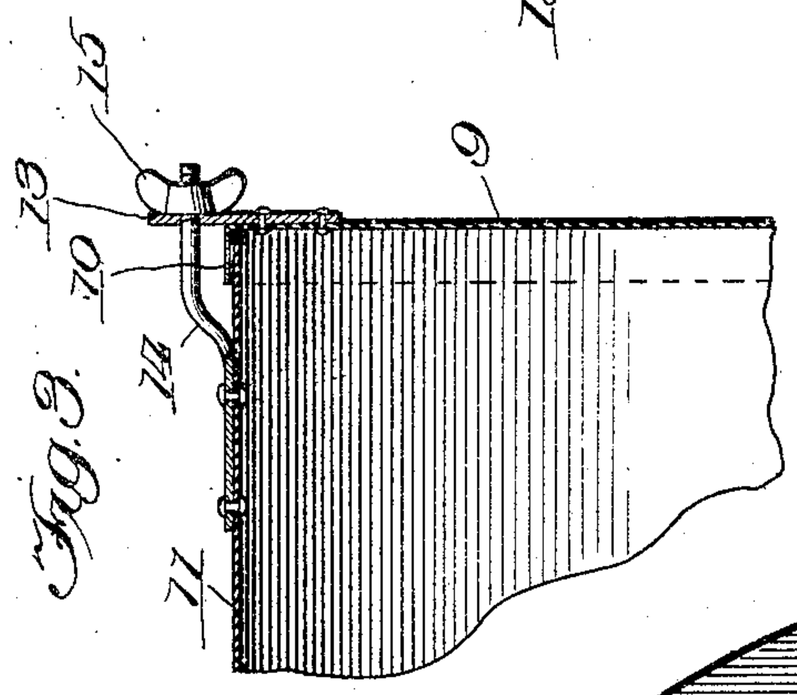
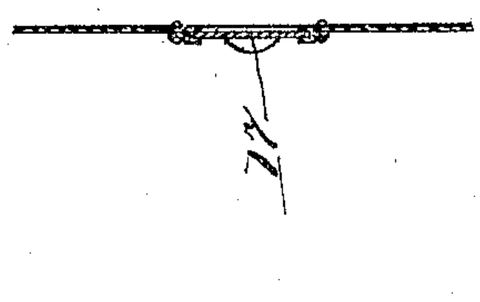


Fig. 4.



Witnesses:

W. S. Gaither

M. A. Riddle

Inventor:

Frederick H. Kaltenbach

by Wm. V. Belknap

Atty.

No. 789,741. Patented May 16, 1905.

UNITED STATES PATENT OFFICE.

FREDERICK H. KALTENBACH, OF CHICAGO, ILLINOIS.

HOOD FOR GRINDING-MACHINES.

SPECIFICATION forming part of Letters Patent No. 789,741, dated May 16, 1905.

Application filed January 21, 1905. Serial No. 242,055.

To all whom it may concern:

Be it known that I, FREDERICK H. KALTENBACH, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented new and useful Improvements in Hoods for Grinding-Machines, of which the following is a specification.

The primary object of this invention is to provide a hood for grinding-machines to protect the operator from the dust ordinarily thrown out by the machine and to confine the dust so that it can be easily drawn off by a fan or otherwise.

Further objects of the invention are to provide an adjustable cover-plate for the opening through which the work is passed to the grinding devices, so that the opening can be made to accommodate work of different sizes and also to provide for the removal of the disks without taking down the hood.

The invention is particularly useful in connection with a double-disk grinding-machine; but it can be used with single-disk grinders as well, and it can be adapted for a great variety of grinding-machines.

In the accompanying drawings I have shown one embodiment of the invention, and referring thereto—

Figure 1 is a side elevation. Fig. 2 is a front elevation. Fig. 3 is an enlarged detail sectional view on the line 3 3 of Fig. 1. Fig. 4 is a sectional view on the line 4 4 of Fig. 1.

The hood comprises a cylindrical part 5, and its periphery 11 merges at the back into a neck 6, which is contracted to form a discharge 7. The discharge may be connected with a pipe in which a suction-fan operates to carry away the dust. The cylindrical part is of sufficient size to inclose the grinding-disks, which are mounted on one or two shafts passing through openings 8 in the sides of the hood.

One side 9 of the hood is preferably made removable, so that one or both of the disks can be detached without necessitating the removal of the entire hood. This removable side is provided with an inwardly-turned flange 10, Fig. 3, to lap over the periphery 11 of the cylindrical part and with an outwardly-projecting flange 12 to lap over the neck of the hood, Fig. 1. The removable side is provided with ears 13, having openings to receive the offset threaded bolts 14 on the periphery and neck of the hood, and said side is secured rigidly in place by thumb-nuts on the ends of said bolts. I provide the other side 16 of the hood with a slide 17, so that access can be had to the interior of the hood therethrough.

The hood is supported on the machine in any suitable manner by brackets or otherwise, and the work is presented to the grinding-disks through an opening 18 in the periphery of the hood at the front thereof. The cover for this opening comprises a right-angular hinged section 19, of which one part, 19′, extends transversely across from side to side of the hood and the other part, 19″, extends from said transverse part 19′ to the bottom of the opening 18 and overlaps the periphery at its lower end and the edge of the side 16. The other section, 20, of this cover is carried by and adjustably connected to the hinged section 19, so that the width of the opening between the sections can be varied to suit the particular work, and thereby reduce the opening to the exact size necessary for the insertion and removal of the work. The section 20 is provided with one or more slots 21 to receive threaded bolts 22 on the arm 19′, and this section is securely fastened in adjusted position by thumb-nuts 23 on said bolts. The lower end of the section 20, like the lower end of the section 19, overlaps the edge 24 of the periphery of the hood at the bottom of the opening 18, and the section 20 overlaps the edge of the removable side 9 just as the section 17 overlaps the edge of the stationary side 16.

It will thus be observed that the grinding-disks are almost completely inclosed by my improved hood, the only opening being at the front, where the work is inserted, and this opening can be adjusted in width to accommodate the particular work, and hence can be enlarged or reduced in size, as required. The hood will effectually confine the dust which is produced by the grinding action of the disks and prevent it from flying about. When this dust is not thus confined, it becomes finely

distributed in the atmosphere and is breathed into the lungs by the workmen and sooner or later causes serious illness. My improved hood prevents this danger and confines all the dust, for when the suction-fan is connected with the discharge 7 the current of air drawn in through the opening 18 will prevent the escape of dust through said opening.

My improved hood comprises very few parts, can be manufactured at a low cost, is light in weight, and can be easily applied to a grinding-machine. It will not in any way interfere with the presentation of the work to the grinding-disk, because the opening 18 is long enough to permit the workman to watch the action of the disk. The removable side 9 permits the disk to be removed for resurfacing and other purposes without necessitating the removal of the entire hood. The two sections 19 and 20 of the periphery of the hood are hinged to the periphery and can be raised to permit access to the hood when desired.

Although in the description of my invention I have referred particularly to its use in connection with double-disk grinders, it will be obvious that it can be used with equally satisfactory results and in the same manner in connection with grinding-machines of various kinds employing single disks, emery-wheels, and other grinding-wheels, and I desire to have it understood that my invention contemplates the use of the hood with any grinding-machine for which it is or can be adapted.

Without limiting myself to the exact construction and arrangement of parts herein shown and described, what I claim, and desire to secure by Letters Patent, is—

1. A hood for grinding-machines comprising a cylindrical part to inclose the grinding devices, a neck projecting from the periphery of said part and merging into a contracted discharge, said cylindrical part being provided at the front of its periphery with an opening, and a cover-plate for said opening comprising two sections, one of which is adjustable relative to the other.

2. A hood for grinding-machines comprising a cylindrical part to inclose the grinding devices and having an opening in its periphery at the front of the hood, a cover for said opening comprising two sections, one of which is angular and hinged to the periphery of the hood at the top of said opening and the other of which is carried by and laterally adjustable on the angular section, said angular section comprising a downwardly-extending part which overlaps one side of the hood and the periphery of the hood at the lower end of said opening, and said adjustable section being arranged to overlap the periphery of the hood at the lower end of said opening.

3. A hood for grinding-machines comprising a cylindrical part to inclose the grinding devices and having an opening in its periphery at the front of the hood, a hinged cover for said opening comprising two sections, one of which is adjustable relative to the other, to permit the insertion of the work therebetween into the hood, one side of said cylindrical part being removable, substantially as and for the purpose described.

4. A hood for grinding-machines comprising a cylindrical part having a removable side, offset bolts on the periphery of said cylindrical part projecting beyond one edge thereof, ears on the removable side provided with openings to receive said bolts, and nuts operating on said bolts against said ears.

FREDERICK H. KALTENBACH.

Witnesses:
WM. O. BELT,
M. A. KIDDIE.