W. O. PLATT.

GRINDING MACHINE.

APPLICATION FILED NOV. 23, 1914.

Patented Aug. 3, 1915.

2 SHEETS—SHEET 1.

1,148,533.

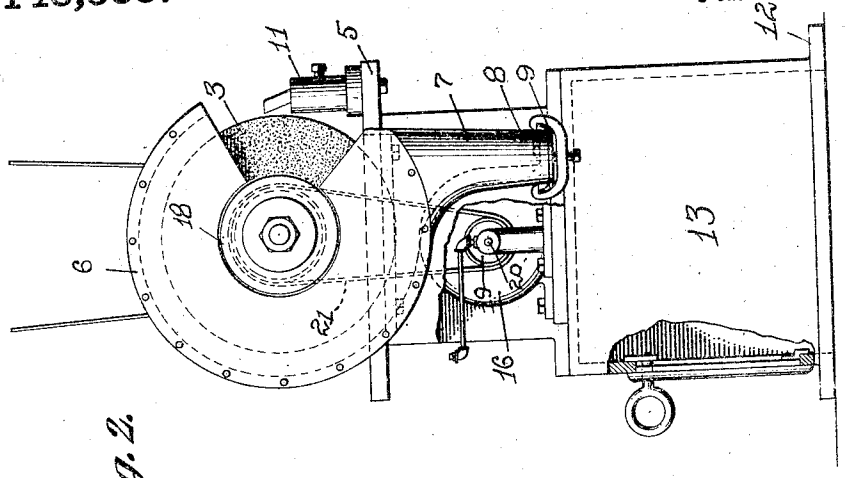

Fig. 2.

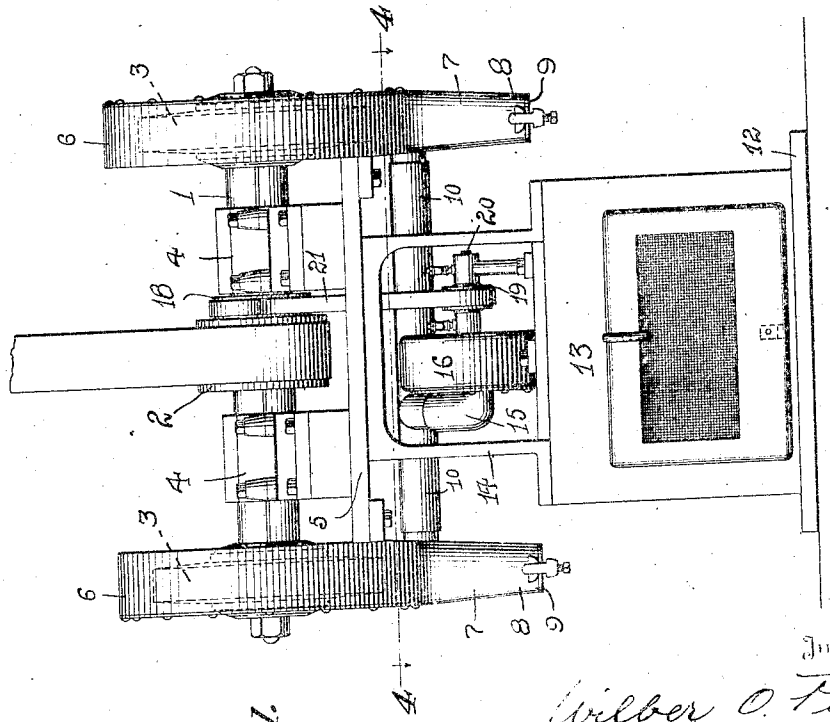

Fig. 1.

Witnesses

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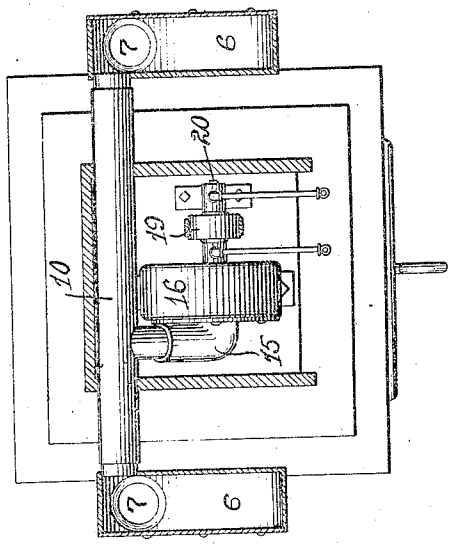
2 SHEETS—SHEET 2.

Fig. 4.



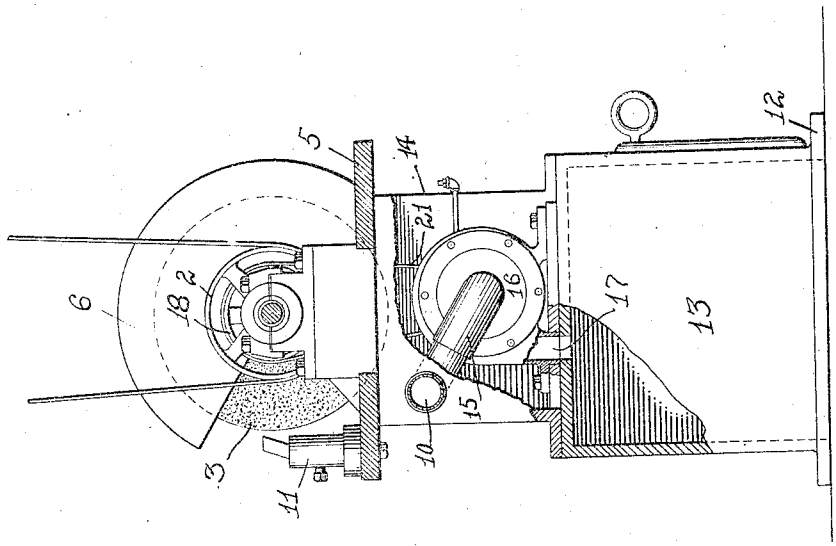


Fig. 3.

Witnesses

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UNITED STATES PATENT OFFICE.

WILBER O. PLATT, OF OIL CITY, PENNSYLVANIA, ASSIGNOR TO JOSEPH REID GAS ENGINE COMPANY, OF OIL CITY, PENNSYLVANIA.

GRINDING-MACHINE.

1,148,533. Specification of Letters Patent. Patented Aug. 3, 1915.

Application filed November 23, 1914. Serial No. 873,604.

To all whom it may concern:

Be it known that I, WILBER O. PLATT, a citizen of the United States, residing at Oil City, in the county of Venango and State of Pennsylvania, have invented certain new and useful Improvements in Grinding-Machines, of which the following is a specification.

This invention relates to grinding machines and particularly to that class of grinding machines having twin grinding wheels.

The primary object of the invention is to provide an exhaust attachment for machines embodying the features above outlined in which a single unit exhausting device will serve two or more grinding wheels in an efficient and advantageous manner.

Another object of the invention is to provide a mounting for the machine having the settling chamber below and the fan chamber above, with the grinding table surmounting the whole organization.

Another object of the invention is to provide an accelerated drive for the exhausting means independent of the grinding means.

With these and minor objects in view the invention resides in an arrangement embodying the essential features of construction and coöperative relationship exemplified by the illustrative embodiment shown on the accompanying drawings, and particularly pointed out in the subjoined claims.

In said drawings, Figure 1 is a front elevation of the machine; Fig. 2 is a side elevation of the same; Fig. 3 is a vertical section of the machine, and Fig. 4 is a horizontal section on the lines 4—4, Fig. 1, looking in the direction of the arrows.

Referring to the drawings in detail, 1 represents a shaft having fixed thereon at an intermediate point, a pulley 2, driven from any suitable source of power, and at its ends, a pair of grinding wheels 3. The shaft mountings 4 are located on either side of the intermediate pulley 2, and between said pulley and the respective wheels 3. The table 5 supports the shaft mountings, but terminates short of the grinding wheels and independent hoods 6 envelop the grinding wheels, said hoods having an opening in grinding position to the wheels and constructed with dust legs 7 below the table 5 terminating in settling traps 8 with removable closures 9 and communicating laterally with an air trunk 10 extending across the entire machine. Two rests 11 project upwardly from the table in position to support work pieces in grinding position before the wheels. A base 12 contains a settling chamber 13 and has mounted upon it a frame 14 which spaces the table above the base and provides a fan space between the table and the settling chamber. An air conduit 15 leads from the air trunk 10 to the eye of the fan 16 and the fan discharges into the settling chamber 13 through the discharge pipe 17. An accelerated drive between the grinder shaft and the fan is provided by the large pulley 18 on the grinder shaft 1 and the smaller pulley 19 on the fan shaft 20 connected by the belt 21.

From the foregoing description it will be readily seen that the arrangement and disposition of the parts are particularly ingenious in an organization involving a single unit exhausting means serving a twin grinding machine.

Another advantageous result obtained by the embodiment outlined above is by having the fan separate from the grinder shaft. The shaft does not necessarily have to be lengthened as the pulley 18 which drives the fan 16, can be made in one piece with the pulley 2 which drives the grinder shaft 1.

By means of the accelerated drive for the fan 16 the suction produced in the air trunk 10 is such as will take care of all the dust, regardless of the speed of the grinder wheels. In other words, the fan 16 is at all times revolving at a greater rate of speed than the grinder wheels 13.

I claim:—

1. In combination, a grinding machine having a base, a frame supported thereon, a grinding table supported on said frame, suitable shaft mountings supported on said table, a shaft journaled in said mountings, a driving pulley on said shaft located intermediate said shaft mountings, grinder wheels mounted on the respective ends of said shaft; independent hoods partly enveloping the grinder wheels having dust legs terminating in settling traps, removable closures for said traps, a settling chamber contained in said base, a fan supported thereon and communicating therewith, an air trunk extending across the entire machine and communicating with said dust legs and the

fan, and an accelerated drive provided between the grinder shaft and said fan.

2. In combination, a grinding machine having a base, a frame supported thereon, a grinding table supported on said frame, suitable shaft mountings supported on said table, a shaft journaled in said mountings, a driving pulley on said shaft located intermediate said shaft mountings, grinder wheels mounted on the respective ends of said shaft; independent hoods partly enveloping the grinder wheels having dust legs terminating in settling traps, removable closures for said traps, a settling chamber contained in said base, a fan supported thereon, an air trunk extending across the entire machine and communicating with said dust legs, an air space connecting the air trunk and the eye of the fan, a discharge pipe on the periphery of the fan leading into the settling chamber, and an accelerated drive provided between the grinder shaft and said fan.

The foregoing specification signed at Oil City, Pa., this 17th day of November, 1914.

WILBER O. PLATT.

In presence of—
J. D. Trax,
A. S. Turner.