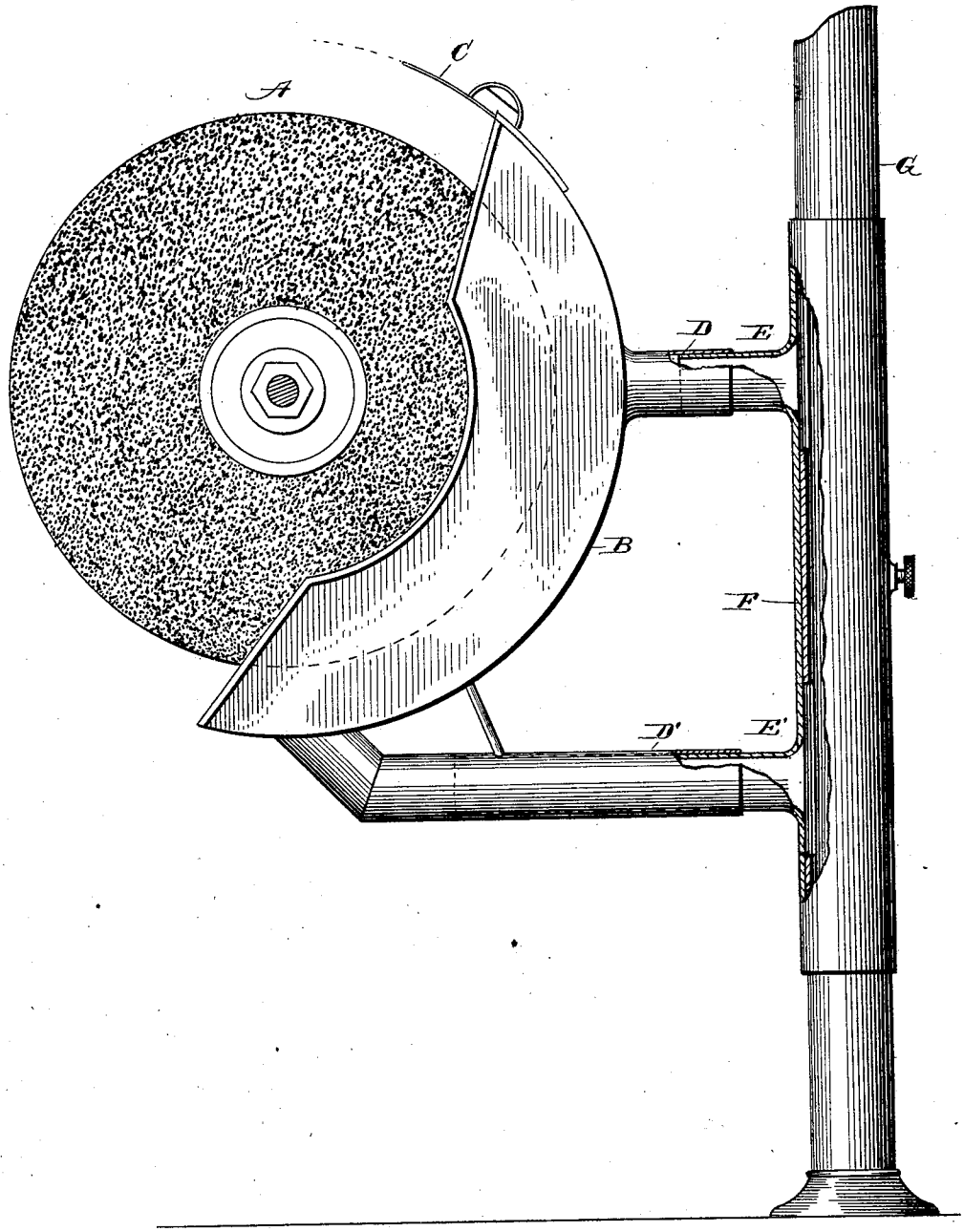
No. 673,047. Patented Apr. 30, 1901.

W. H. DENNIS & F. D. W. PHILLIPS.

GUARD OR HOOD FOR GRINDING OR POLISHING WHEELS.

(Application filed Nov. 17, 1900.)

(No Model.)



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UNITED STATES PATENT OFFICE.

WILLIAM H. DENNIS AND FRANKLIN D. W. PHILLIPS, OF CORTLAND, NEW YORK; SAID DENNIS ASSIGNOR TO DELMER D. HAMMOND, OF SAME PLACE.

GUARD OR HOOD FOR GRINDING OR POLISHING WHEELS.

SPECIFICATION forming part of Letters Patent No. 673,047, dated April 30, 1901.

Application filed November 17, 1900. Serial No. 36,870. (No model.)

To all whom it may concern:

Be it known that we, WILLIAM H. DENNIS and FRANKLIN D. W. PHILLIPS, citizens of the United States, and residents of Cortland, in the county of Cortland, State of New York, have invented certain new and useful Improvements in Guards or Hoods for Grinding or Polishing Wheels; and we do hereby declare the following to be a full, clear, and exact description of the same, reference being had to the accompanying drawing, forming a part of this specification, and to the letters of reference marked thereon.

This invention relates to improvements in devices designed for catching and carrying off sparks, dust, and debris from the surface of or from in proximity to the surface of grinding and polishing wheels, and particularly such as are used for metal grinding and polishing—as, for instance, emery or carborundum wheels; and the invention consists in providing a hood for surrounding a part of the wheel, which hood is connected with a suction or exhaust pipe and is adjustable both vertically and horizontally, whereby it is adapted for use in connection with different sizes or types of wheels without the necessity of providing a special hood for each size or type.

In the accompanying drawing a hood, with its connections and supports, is shown in side elevation, with the concealing portion of the piping in dotted lines and a conventional grinding or polishing wheel in its position of adjustment with relation to the hood.

The letter A indicates a grinding or polishing wheel, (shown conventionally as a simple disk,) and B indicates a hood or guard made of substantially segmental shape, with side portions adapted to embrace or surround one section of the periphery of the grinding or polishing wheel.

To adapt the guard for universal use, it is preferably of a size somewhat less than a semicircle and with a radius as large as may be desired to accommodate the largest wheel which it may be found necessary to use, and at its upper end it is provided with an adjustable or sliding extension C, which may be drawn out more or less, depending upon the size of the wheel and the character of work being done, the object being to so extend the upper end of the guard or hood that it will always catch the sparks and debris.

The hood or guard B is formed with two tubular rearward extensions, (lettered D and D′, respectively,) the extensions being adapted to telescope with corresponding extensions E and E′, respectively, mounted on a vertically-arranged sliding tubular section F. The position of the extension D′ is such as to catch the major portion of the debris and sparks entering the lower end of the hood, and the position of the extension D is such as to catch all of said debris and sparks which may pass around to the upper part of the hood, and when a suction or draft is created through the two extensions it causes an indraft at both bottom and top of the wheel or hood, thereby drawing in all of the debris and particles which would otherwise be discharged into the air. The vertical tubular section F constitutes a support for the guard, and it is mounted so as to slide vertically on a vertical suction-pipe G, which may be of any ordinary or preferred construction, it being understood, of course, that the front of said suction-pipe is perforated or slotted to open communication between the guard and said pipe for the passage of air and debris from the wheel.

By mounting the section F so as to be vertically adjustable and telescoping the extensions D E and D′ E′ together a universal adjustment of the guard may be made, adapting it for use in connection with any size, type, or adjustment of wheel which will enter the open side of the guard. By leading off the lower extension D′ at the lowermost point of the guard no accumulation of debris can occur, and consequently the draft is maintained uniformly, and practically all of the sparks are drawn into the guard and the debris prevented from contaminating the surrounding air.

Having thus described our invention, what we claim as new, and desire to secure by Letters Patent, is—

1. The combination with a segmental guard for a grinding-wheel having rearwardly-ex-

tending parallel tubular extensions, of a vertically-adjustable tubular support having tubular extensions telescoping with the rearward extensions on the guard and a suction-pipe on which said vertically-adjustable section is mounted; substantially as described.

2. In a guard for grinding and polishing wheels the combination with the segmental guard having the parallel rearwardly-projecting tubular extensions, one at the top and the other at the bottom of the guard, of the vertically-adjustable tubular section having forwardly-extending tubular projections telescoping with the tubular projections on the guard and a vertically-arranged suction-pipe on which said vertically-adjustable tubular section is mounted; substantially as described.

3. In a guard for grinding or polishing wheels the combination with the segmental guard having the rearwardly-extending tubular extension in communication with a suction-pipe, of an adjustable extension at the upper end of the guard; substantially as described.

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