

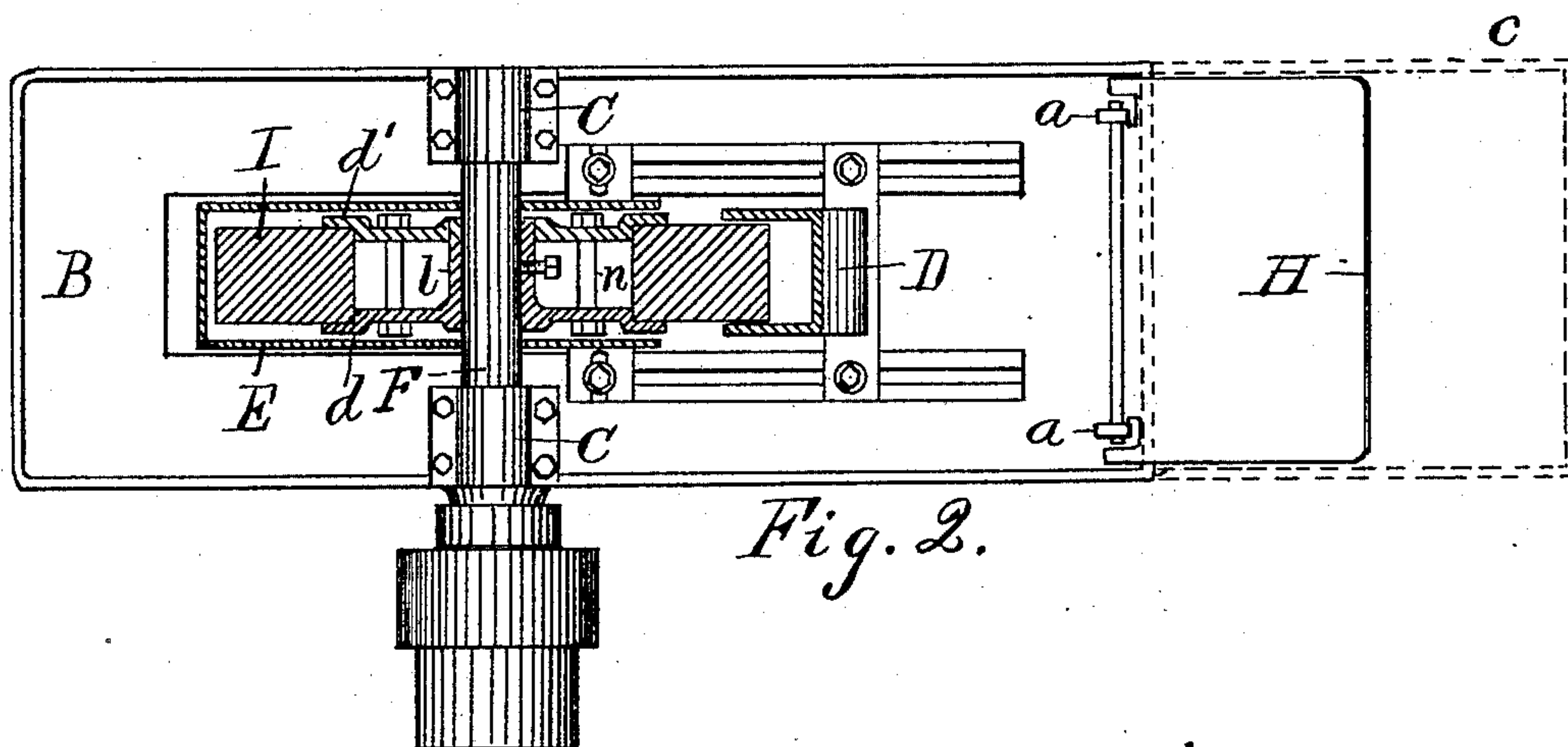
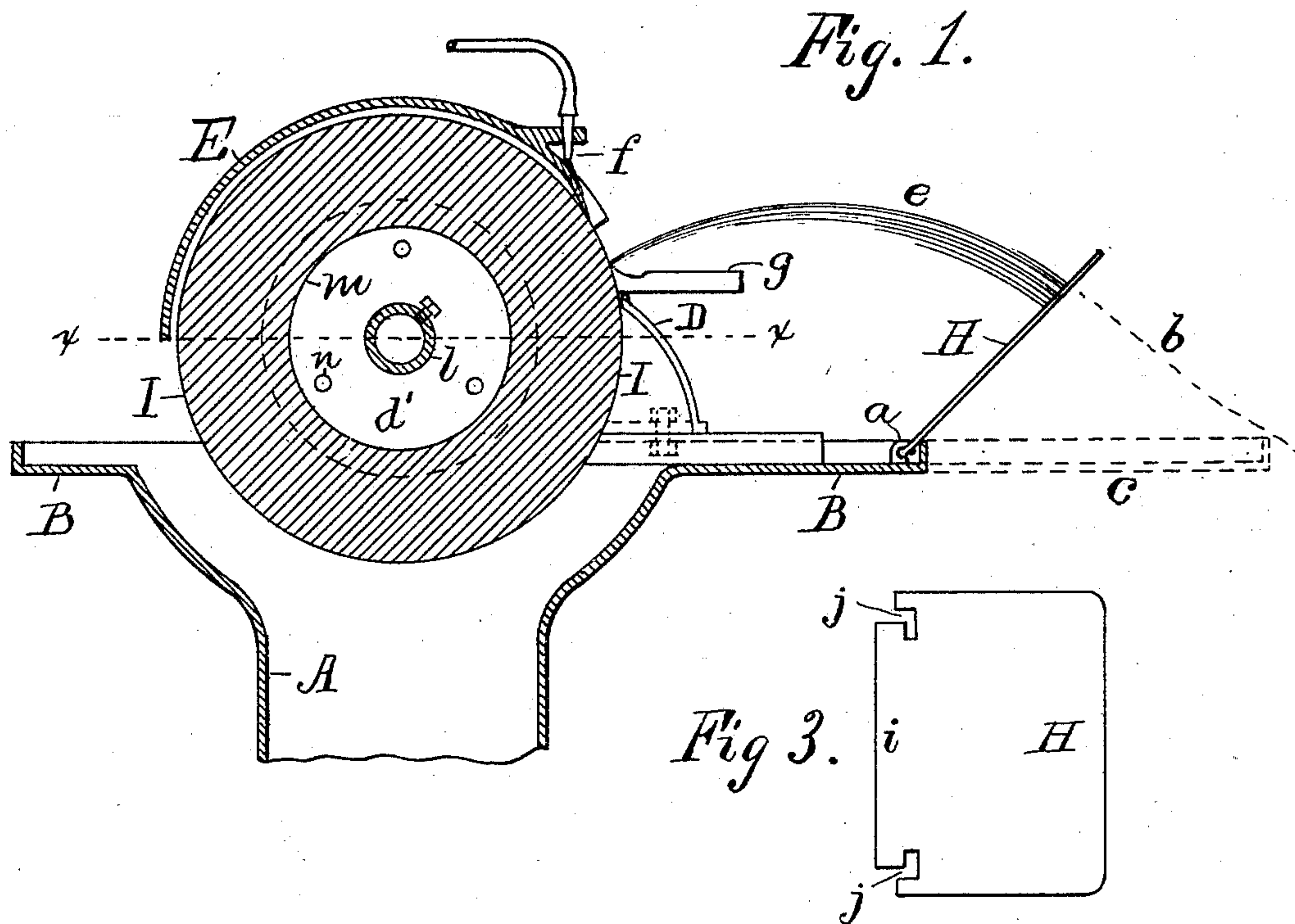
(No Model.)

U. EBERHARDT.

GUARD FOR TOOL GRINDING WHEELS.

No. 354,543.

Patented Dec. 21, 1886.



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UNITED STATES PATENT OFFICE.

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GUARD FOR TOOL-GRINDING WHEELS.

SPECIFICATION forming part of Letters Patent No. 354,543, dated December 21, 1886.

Application filed May 19, 1886. Serial No. 202,628. (No model.)

To all whom it may concern:

Be it known that I, ULRICH EBERHARDT, a citizen of the United States, residing at Newark, Essex county, New Jersey, have invented certain new and useful Improvements in Guards for Tool-Grinding Wheels, fully described and represented in the following specification and the accompanying drawings, forming a part of the same.

The object of this invention is to intercept the splash which flies from the tool-rest of a wet grinding-wheel without obstructing the access of the operator to the tool-rest. My invention thus enables a quick-running emery wheel to be used for sharpening machinists' tools without wetting the floor to a great distance and rendering it slippery and rotten.

My construction consists in a table formed about the grinding-face of the wheel, a border around the table to divert the water which falls thereon into a receptacle, a guard sloped upwardly and outwardly from the table within the border, and a tool-rest applied to the edge of the wheel within the border and guard to support the tools when grinding.

In my invention I insert a guard in an inclined position at a sufficient distance from the tool-rest for the insertion of the operator's hands, and close enough for him to stand in the usual position adjacent to the wheel.

The operator may stand at the side of the wheel, as in grinding the sides of tools, or in front, outside of the guard, when the form of the tool requires. The inclined position of the guard is such as to elevate its outer end, and thus make it intercept the water splash or jet as effectively as if the frame were extended much farther than the guard into a position where it would seriously interfere with the operator. This construction will be understood by reference to the drawings, in which—

Figure 1 is a vertical section of an emery wheel and its frame, and Fig. 2 is a transverse section of the wheel and upper part of the frame on line *xx* in Fig. 1. The lower part of the frame would be provided with a foot to stand upon the floor; but as such part is well known, it is not shown herein. Fig. 3 is a detached view of the blank for a sheet-metal guard.

The wheel-frame is formed as a hollow col-

umn, A, having a table, B, at the top to receive the arbor-bearings C, and to carry the tool-rest D and arched wheel-cover E.

The table is provided, as usual, with a raised border, to prevent the water which falls thereon from running down to the floor. A water-pipe, *f*, is shown applied to the cover over the tool-rest, and a tool, *g*, is shown held upon the rest, as by the hands of the operator, who usually holds his hands a little at one side of the tool, to prevent the splash *e* from wetting them.

H is the inclined guard, shown hinged at the outer edge of the table beyond the tool-rest and sloped upward outside of the operator's hands to intercept the splash and lead the water back to the table, where it falls into the column, as is usual in such constructions.

The guard is preferably hinged to pivots *a* upon the table, so as to yield when pressed by the person of the operator to avoid interference with his access to the tool-rest in any desired degree, such yielding merely throwing the free end of the guard a little higher, and thus operating to intercept the water splash more perfectly. The splash, but for the guard, would fly out in the direction of the dotted line *b*, and would require to arrest it an extension of the table far beyond the guard I employ, as is shown by the dotted extension of the table at *c*.

If desired, the guard may be cast integral with or be fastened to the table, provided the inclined position is preserved, which intercepts the splash at a high level.

In the drawings, the pivots *a* are made of open hooks, and the pintles of the guard are formed by making a wide border, *i*, between two notches, *j*, at its inner edge, as in Fig. 3, and bending such border into a round bead, as in Figs. 1 and 3; but any other form of hinge or pivot may be used.

By the use of open hooks, as at *a*, the entire guard may be removed by tipping its outer or free edge inward, and the guard may thus be readily detached and replaced when desired, as for the temporary grinding of long tools.

I am aware that a guard is commonly used when grinding at the top of a wheel to intercept the splash and to protect the person of the operator, who then sits or stands at the edge of the wheel, as in United States Patent No. 313,877; but the object of my invention is

wholly different and requires a special construction for the table and tool-rest to perform its functions, which is not the case with such guards as I refer to.

5 I am also aware that a tool-rest is old, and do not claim the same as my invention; but I am not aware of any tool-rest and guard arranged upon a table so as to afford access to the edge of the wheel at its vertical face and
10 surrounded with a border to retain the water that is intercepted by the guard. By this construction my guard is enabled to prevent the water from flying upon the floor, while the operator is not prevented from applying the tool
15 between the guard and the wheel in the required manner.

Having thus set forth my invention, what I claim is—

20 1. The combination, with a grinding-wheel frame having a table provided with a border adapted to retain the water and direct it into a receptacle, of a tool-rest mounted within said border and an upwardly-inclined guard

attached to the table within the border and adapted to arrest the splash from the tool-rest 25 and lead it within said border, as and for the purpose set forth.

2. The combination, with a grinding-wheel, a frame having a table with a border adapted to retain the water, a tool-rest, and a water- 30 supply, of an upwardly-inclined guard pivoted to the table within the border, as and for the purpose set forth.

3. The combination, with a grinding-wheel, a frame having a table with a border adapted 35 to retain the water, a tool-rest, and a water-supply, of an upwardly-inclined guard pivoted removably to the table within the border, as and for the purpose set forth.

In testimony whereof I have hereunto set my 40 hand in the presence of two subscribing witnesses.

ULRICH EBERHARDT.

Witnesses:

JOS. B. PIERSON,

CHARLES HILSER.