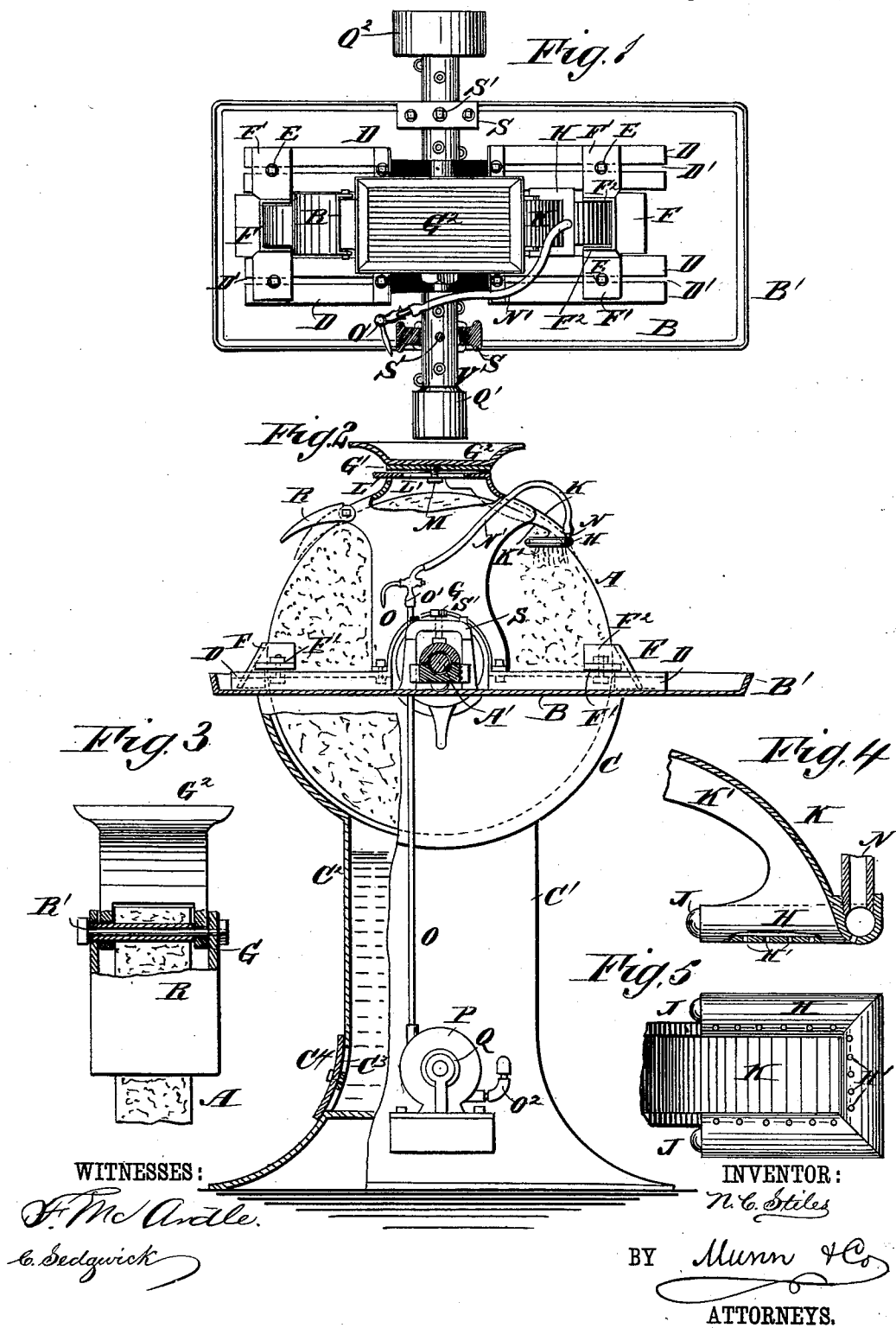


(No Model.)

N. C. STILES.
TOOL GRINDER.

No. 366,897.

Patented July 19, 1887.



UNITED STATES PATENT OFFICE.

NORMAN C. STILES, OF MIDDLETOWN, CONNECTICUT.

TOOL-GRINDER.

SPECIFICATION forming part of Letters Patent No. 366,897, dated July 19, 1887.

Application filed July 23, 1885. Serial No. 172,389. (No model.)

To all whom it may concern:

Be it known that I, NORMAN C. STILES, of Middletown, in the county of Middlesex and State of Connecticut, have invented a new and Improved Tool-Grinder, of which the following is a full, clear, and exact description.

The object of my invention is to improve the construction of machines for grinding tools; and it consists in the construction and combination of the several parts of the same, as will be hereinafter fully set forth, and pointed out in the claims.

Reference is to be had to the accompanying drawings, forming part of this specification, in which similar letters of reference indicate corresponding parts in all the figures.

Figure 1 is a plan view of my improved tool-grinder, parts being in section. Fig. 2 is a side view of the same, parts being in section. Fig. 3 is a detail end view of the upper part of the machine, parts being broken out and parts in section. Fig. 4 is an enlarged longitudinal elevation of the water-feeder. Fig. 5 is a plan view of the under side of the same.

A corundum or emery-wheel, A, is rigidly mounted on a shaft, A', journaled in suitable journal-boxes on the table B, having an upwardly-projecting flange, B', on its rim and formed around a semicircular receptacle, C, in which the lower part of the wheel runs, the said receptacle being formed on a hollow stand, C', in which the water-reservoir C² is formed, said reservoir being provided at its lower end with a hand-hole, C³, which is closed by a gate, C⁴, held in place by bolts. The hand-hole is provided to facilitate the removal of sediment from the lower part of the reservoir.

At the upper edge of the receptacle C grooved cleats D, each provided with a longitudinal slot, D', are formed, and into the said grooved cleats heads of bolts E are passed, the said bolts being passed through side wings, F', of inclined tool-rests F between the cleats, said wings F' resting on the cleats. Nuts are then screwed on the upper ends of the bolts E, to hold the wings F' down on the cleats and to hold the inclined plates F at the edge of the wheel. The tool-rests F are inclined from the wheel downward and outward, and serve also to prevent the water which is carried up by the wheel from being splashed upon the table.

The rests F also have flanges F², which are close to the sides of the wheel. On the inner ends of the cleats D standards G are secured, the upper ends of which are united by a cross-piece, G', to form the hood, carrying a bowl or receptacle, G², for holding the tools to be ground. A U-shaped tube, H, having apertures H' in its bottom, has its ends closed by screws J, and the said U-shaped tube is held on the lower end of an apron, K, having flanges K', and curved on a line having about the same radius as the wheel A. At the top of the apron K a plate, L, is formed, which is held against the under side of the cross-piece G', uniting the standards G by a screw, M, passed through a longitudinal slot, L', in the said plate L, thus permitting of shifting the plate L in the direction of its length, whereby the U-shaped tube H is moved a greater or less distance from the rim of the wheel. A short tube or neck, N, projects upward from the U-shaped tube H, and is connected by a flexible tube, N', with the upper end of a tube, O, projecting upward from a rotary force-pump, P, held on the side of the frame C', near the bottom of the same. The tube O has a cock, O'.

The rotary pump P is operated by a belt passed over a pulley, Q, on the shaft of the rotary pump and over a pulley, Q', on the end of the shaft A'. The pump P is connected by a pipe, O², with the reservoir. An apron or water-protector, R, is pivoted by a bolt, R', to the standards G at the upper parts of the side edges opposite those at which the U-shaped tube H is located, and the said apron R serves to prevent the water from being splashed into the face of the operator.

The operation is as follows: The wheel is revolved, and from the shaft of the wheel the pump P is operated and pumps the water from the reservoir C² through the pipes O and N' into the U-shaped tube H, through the apertures H' of which the water is forced under pressure upon the wheel, flows from the same into the receptacle C and back into the reservoir C², and so on. The sprinkling-tube H can be adjusted a greater or less distance from the rim of the wheel, all that is necessary being to pull said tube outward or push it inward, as its top plate, L, is mounted to slide on the cross-piece G', uniting the standards G.

The supply of water delivered upon the

wheel can be regulated by means of the cock O'.
Having thus described my invention, what I
claim as new, and desire to secure by Letters
Patent, is—

5 1. The combination, with a grinding-wheel
stand having a hood, of an apron mounted to
slide on said hood, a perforated U-shaped
tube on the lower edge of the apron, and screws
for closing the ends of the U-shaped tube, sub-
10 stantially as herein shown and described.

2. The combination, with a grinding-wheel
stand having a hood, of an apron mounted to
slide on said hood, a perforated U-shaped
tube held on the lower end of the apron, the
15 tube N, projecting upward from said U-shaped

tube, and a flexible tube connecting said tube
N with a pump, substantially as herein shown
and described.

3. The combination, with a grinding-wheel
stand having a hood formed of the uprights G, 20
united by the top plate, G', of the apron K,
provided with a top plate, L, having a slot,
L', and of the screw M, passed through said
slot L' into the cross-piece G', substantially as
herein shown and described.

NORMAN C. STILES.

Witnesses:

OSCAR F. GUNZ,
EDGAR TATE.