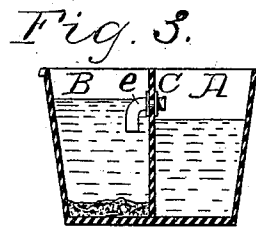
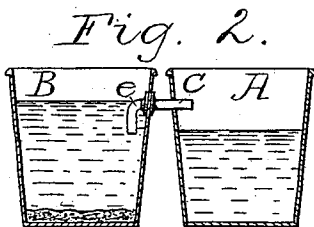
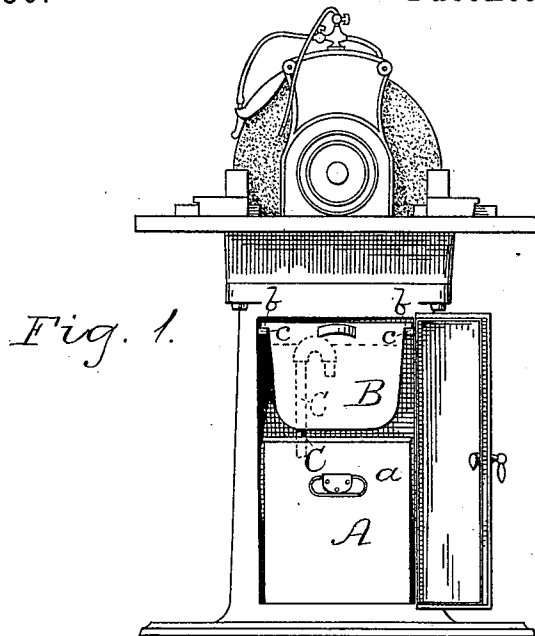


(No Model.)

C. A. BAUER.  
WATER TANK FOR GRINDING MACHINES.

No. 403,030.

Patented May 7, 1889.



WITNESSES:  
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# UNITED STATES PATENT OFFICE.

CHARLES A. BAUER, OF SPRINGFIELD, OHIO.

## WATER-TANK OF GRINDING-MACHINES.

SPECIFICATION forming part of Letters Patent No. 403,030, dated May 7, 1889.

Application filed January 29, 1887. Serial No. 225,836 (No model.)

*To all whom it may concern:*

Be it known that I, CHARLES A. BAUER, of Springfield, in the county of Clark and State of Ohio, have invented certain new and useful Improvements in Water-Tanks of Grinding-Machines; and I do hereby declare that the following is a full, clear, and exact description of the invention, which will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to letters of reference marked thereon, which form a part of this specification.

The object of my invention is to provide new and improved means for clarifying the water drained from the grinding-stones of tool-grinding machines, so that when the water is pumped up from the water-reservoir and redistributed over the grinding-stone it will be free from grit and grease, thus, by keeping said stone cleaner, increasing its efficacy, and by reason of freedom of grit and grease preserving the water-pumping devices.

In the drawings, Figure 1 is a side elevation of a tool-grinding machine showing my improvements therein. Figs. 2 and 3 are transverse vertical sections of modifications of my invention; and Fig. 4 is a transverse vertical section of my invention shown in Fig. 1.

Reference being had to the drawings, A represents a water-reservoir placed in the base of a grinding-machine and having the pulls or bails *a*, with which to handle it.

B represents a water-tank suspended in the base of the grinding-machine, immediately over the reservoir A, by means of the flanges *b b*, projecting laterally from its upper side edges and resting upon and sustained by the cleats *c c*, projecting inward from the side walls of the base, as shown in Fig. 1.

C represents a pipe secured in a vertical position in and extending down through the bottom of tank B. To its upper end, which preferably is nearer the upper edge of said tank, is secured a return-bend, *d*, and in the free end, if desired, of bend *d* may be secured a short section of pipe.

The water which is first supplied to tank A is pumped therefrom by devices located on the side of the machine opposite that shown

in Fig. 1 up into and through the pipes illustrated at the top of said figure, by which it is suitably distributed over the emery-wheel or grinding-stone. The water thus distributed drains off from said wheel or stone into tank B. Here the water rises until its surface is on a plane with the bore in the uppermost curvature of bend *d*, when the water in tank B begins to drain through said pipe into reservoir A, immediately below it.

It is apparent that the grit or dirt washed from the grinding-stone into the tank gravitates to the bottom thereof, whereas the greasy, oily residuum floats on the top. When the water, therefore, begins to drain from the tank into the reservoir below, the mouth of pipe C, being below the surface and above the bottom of said tank, drains only the comparatively clean water therefrom.

It is immaterial how tank B is suspended above the reservoir. A shelf for its support, adapted to permit the downward extension of pipe C, could be used just as well as the devices heretofore described—*i. e.*, lugs *b b* and cleats *c c*.

While the arrangements hereinbefore described might be preferable for machines constructed like that shown in Fig. 1, yet in differently-constructed machines it might be advisable to change the relative positions of the tank and reservoir. To provide for such emergencies I have devised the modifications shown in Figs. 2 and 3.

In Fig. 2 I place the reservoir A and tank B side by side on the same plane and connect them by a horizontal pipe, C. Secured to or made integrant with the end of this pipe in tank B is an elbow, *e*, the mouth of which is below the bore of the horizontal pipe C. Here, as in the tank shown in Figs. 1 and 4, the water must rise to the plane of the bore of pipe C before the water will begin to drain therefrom into the reservoir. The same principle governs in both constructions, as also in that shown in Fig. 3.

The only difference in the constructions shown in Figs. 2 and 3 is that whereas in Fig. 2 the tank B and reservoir A are entirely separate, in Fig. 3 a single receptacle is used, having a transverse partition therein which divides into a tank, B, and reservoir, respect-

ively. A pipe, C, and elbow, *e*, connect these compartments in the same manner as their equivalents are connected in Fig. 2.

The mechanical construction of the respective parts of my invention may be materially changed; but all such changes as contemplate a receptacle for receiving the water drained from the grinding-stone and a pipe for draining the water therefrom from a point below the surface of the water and above the bottom of said receptacle into any kind of a reservoir, preparatory to being redistributed, infringes my invention.

What I claim as new is—

1. The combination, with a grinding-machine, grinding-stone, and means for supplying water thereto, of tank B, into which the impure water from the grinding devices drains, and pipe C, having its upper end bent, as described, so as to drain the water from said tank between the surface and bottom of the water therein, substantially as set forth.

2. The combination, with a grinding-machine, grinding-stone, and means for supplying water thereto, of tank B, into which the impure water from the grinding-stone is drained, pipe C, having its upper end bent, as described, so that its mouth is below the plane of the bore in its bend, so as to drain the water in said tank from below its surface and above its bottom, of a reservoir, A, into which the water from pipe C drips and from which the water is taken to moisten the grinding-stone, as set forth.

In testimony that I claim the foregoing as my own I hereunto affix my signature in presence of two witnesses.

CHAS. A. BAUER.

Witnesses:

FRANK D. THOMASON,  
AL. H. KUNKLE.