

(No Model.)

J. McCLELLAN.
POLISHING WHEEL.

No. 481,415.

Patented Aug. 23, 1892.

Fig 1.

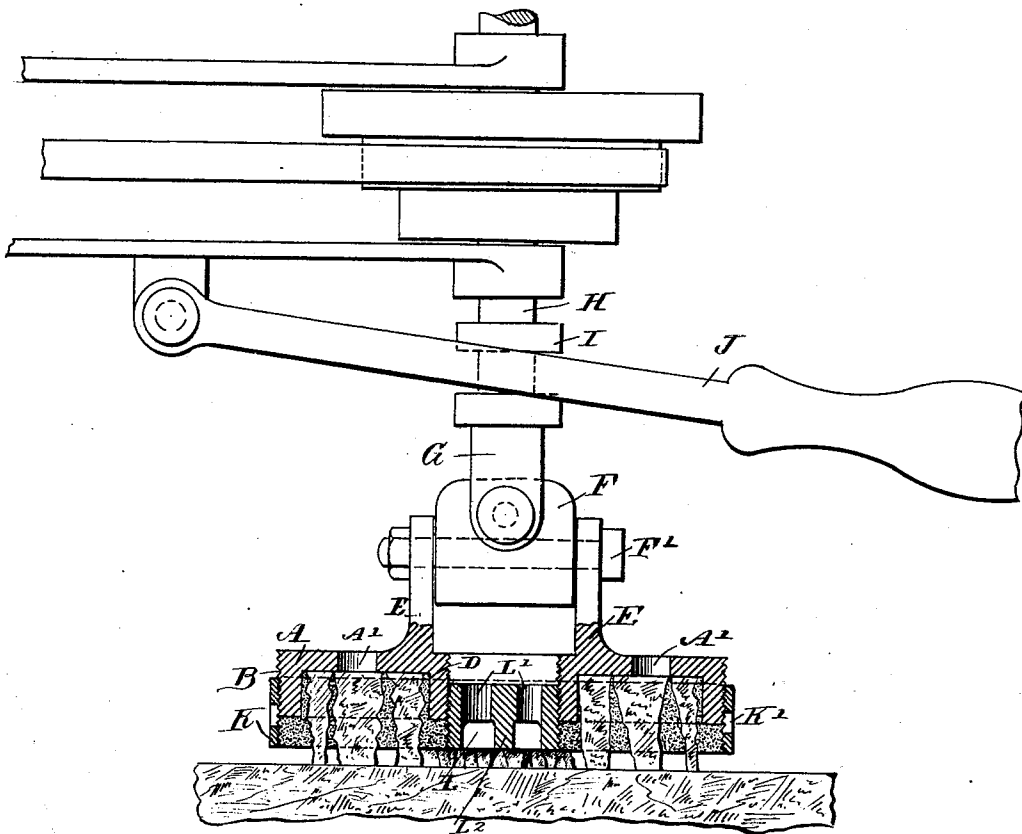
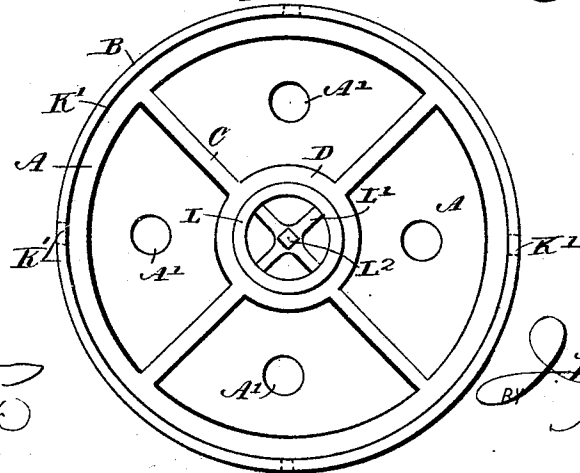


Fig 2.



WITNESSES:

Paul J. Phas
c. Sedgwick

INVENTOR

BY J. M. Clellan
Munn & Co

ATTORNEYS.

UNITED STATES PATENT OFFICE.

JOHN MCCLELLAN, OF GREENBUSH, NEW YORK.

POLISHING-WHEEL.

SPECIFICATION forming part of Letters Patent No. 481,415, dated August 23, 1892.

Application filed September 19, 1891. Serial No. 406,204. (No model.)

To all whom it may concern:

Be it known that I, JOHN MCCLELLAN, of Greenbush, in the county of Rensselaer and State of New York, have invented a new and useful Improvement in Polishing-Wheels, of which the following is a full, clear, and exact description.

The object of the invention is to provide a new and improved polishing-wheel which is simple and durable in construction, very effective in operation, and designed for conveniently polishing marble and other material when attached to an ordinary marble-polishing machine.

The invention consists of an inverted revolvable cup adapted to contain the grinding or polishing material, and a ring held adjustably on the rim of the said cup to hold the polishing material in place and to prevent the cup from striking the marble.

The invention also consists of certain parts and details and combinations of the same, as will be described hereinafter, and then pointed out in the claims.

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

Figure 1 is a sectional side elevation of the improvement as applied, and Fig. 2 is an inverted plan view of the same.

The improved polishing-wheel is provided with an inverted cup A, formed on the outside of its rim B with a thread, and provided on the inside with a series of ribs or spokes C, extending from the rim to the hub D, formed on the inside with a thread. On the top of the inverted cup A are formed two lugs E, between which is held a block F, supported on a bolt F', extending through the lugs E. On the block F is pivoted at right angles to the bolt F' the fork G, formed on the lower end of a shaft H, mounted to turn in suitable bearings in the polishing-machine and carrying suitable pulleys connected with other machinery for imparting a rotary motion to the said shaft. On the latter is held a sleeve I, engaged by a lever J, pivoted at one end to the polishing-machine and under the control of the operator, and serving to raise or lower the shaft H and the polishing-wheel, or to move it sidewise, as the case may require.

On the threaded rim B of the cup A screws a threaded ring K, and in the thread of the hub D screws a threaded plug L, formed with vertical apertures L', through which water can pass from the top of the polishing-wheel to the marble under treatment. In the middle of the plug L is arranged a square offset L², adapted to be engaged by a key or wrench for adjusting the plug L in the hub D.

In order to secure the polishing material—such as stones, &c.—in the cup A, the latter is placed in a reversed position, and then blocks of stone or polishing material are placed in the cup, after which plaster-of-paris or other binding substance in a plastic state is poured into the cup between the polishing stones or blocks, so that the latter, when the plaster-of-paris sets, fastens the polishing material in place in the cup A.

It will be understood that the ring K is screwed into its lowermost position on the rim B of the cup A, and in a like manner the plug L is screwed outward, so that the lower ends of the ring and plug project beyond the lower faces of the rim B and hub D to hold the plaster-of-paris, cement, or other binding substance firmly in place. The polishing material is left to project beyond the plaster-of-paris, cement, &c., to form a grinding or polishing surface to act on the marble when the polishing-wheel is revolved.

When the polishing material is fastened in the wheel, the latter is attached to the shaft H by the block F in the manner above described, and when the shaft H is then revolved the wheel revolves with it and the projecting lower ends of the polishing material are brought in contact with the article under treatment, the pressure being regulated by the operator controlling the lever J. As the polishing material wears off, the operator turns the ring K, so that the latter moves upward, and in a like manner the hub L is screwed upward by inserting a wrench or other tool on the square projection L². In order to conveniently turn the ring K, the latter is provided with apertures K' for the insertion of the wrench or other tool. It will be understood that the threaded faces of the ring K and plug L form their own threads in the plaster-of-paris or cement when screwed upward, as above described. The ring K

and the plug L are screwed upward as the polishing stones or material wears off, until the lower edges of the said ring K and plug L are flush with the lower faces of the rim B and hub D. The polishing-wheel is then removed from the shaft H, and the remaining polishing material and cement or plaster-of-paris is removed from the cup A by a suitable tool passed through apertures A' in the top of the cup A against the material and cement to knock both out of the cup. New polishing material is then placed in the reversed cup and secured therein by plaster-of-paris in the manner above described, it being understood that the ring K, as well as the plug L is again screwed into an outermost position before the plaster-of-paris or cement is poured in.

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

1. A polishing-wheel comprising an inverted cup adapted to contain the polishing material held therein by a binding substance and an adjustable ring on the cup and adapted to engage the binding substance, substantially as and for the purpose set forth.

2. A polishing-wheel comprising an inverted revoluble cup adapted to support the

polishing material, and a ring made adjustable on the said cup to hold the polishing material in place and to prevent the cup from striking the marble under treatment, and a plug held adjustably on the hub of the said cup and formed with apertures for the passage of water, substantially as shown and described.

3. A polishing-wheel comprising an inverted cup having a threaded rim and a hub with an interior thread, a ring screwing on the threaded rim of the said hub, and an apertured plug screwing in the said hub, substantially as shown and described.

4. In a polishing-wheel, the combination, with an inverted cup formed with a threaded rim, ribs, and a central threaded hub, of a ring screwing on the said rim, substantially as shown and described.

5. In a polishing-wheel, the combination, with an inverted cup formed with a threaded rim, ribs, and a central threaded hub, of a ring screwing on the said rim and an apertured plug screwing in the said hub, substantially as shown and described.

JOHN MCCLELLAN.

Witnesses:

JOHN HALL,

JOHN W. ASHLEY.