

No. 615,621.

Patented Dec. 6, 1898.

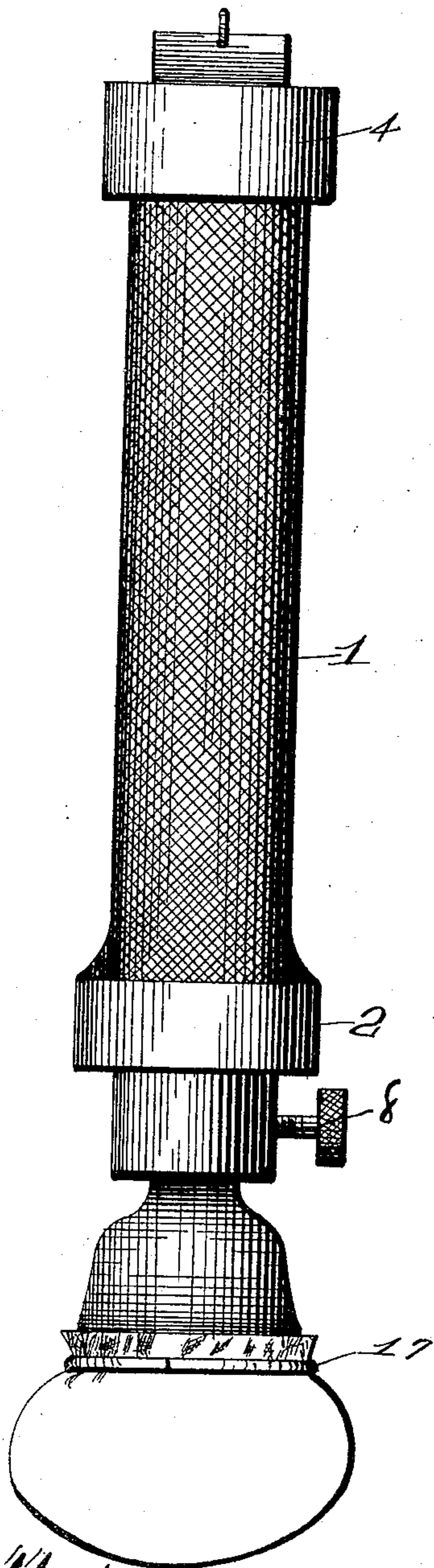
J. A. JOHNSTON & O. SOWERS.
RUBBING OR POLISHING MACHINE.

(Application filed Jan. 24, 1898.)

(No Model.)

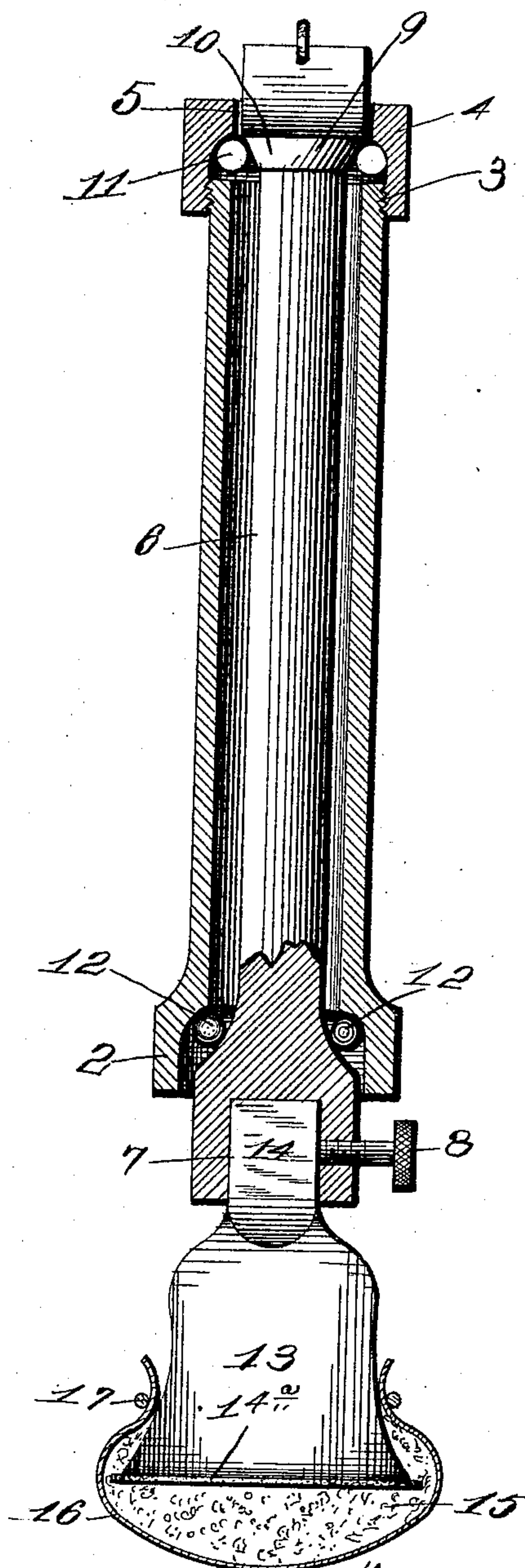
2 Sheets—Sheet 1.

Fig. 1.



Attest:
A. J. McCauley.
M. Smith—

Fig. 2.



Inventors:
J. A. Johnston
and O. Sowers,
by Higdon, Longan & Higdon,
Attys.

No. 615,621.

Patented Dec. 6, 1898.

J. A. JOHNSTON & O. SOWERS.
RUBBING OR POLISHING MACHINE.

(Application filed Jan. 24, 1898.)

(No Model.)

2 Sheets—Sheet 2.

Fig. 3.

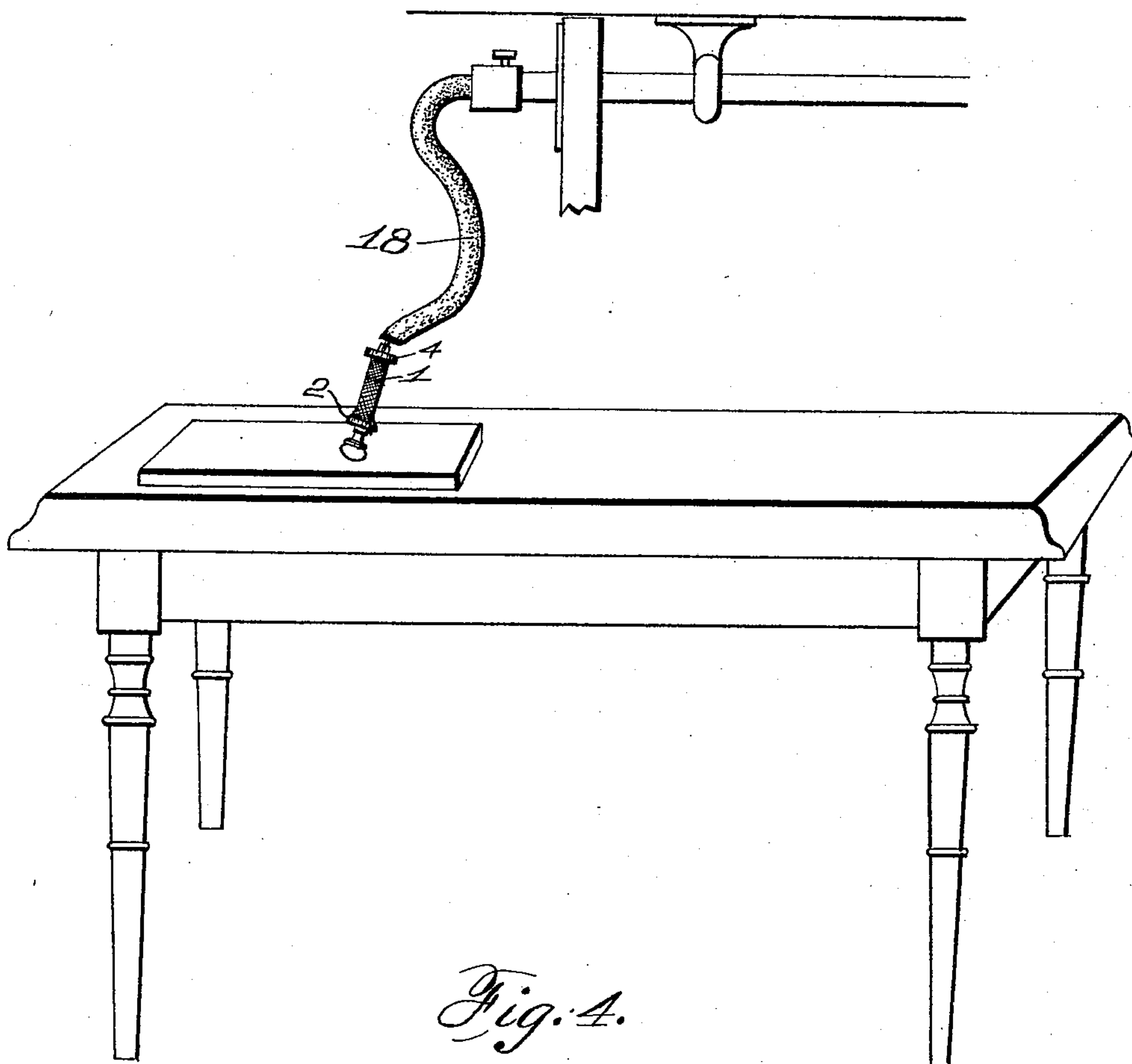
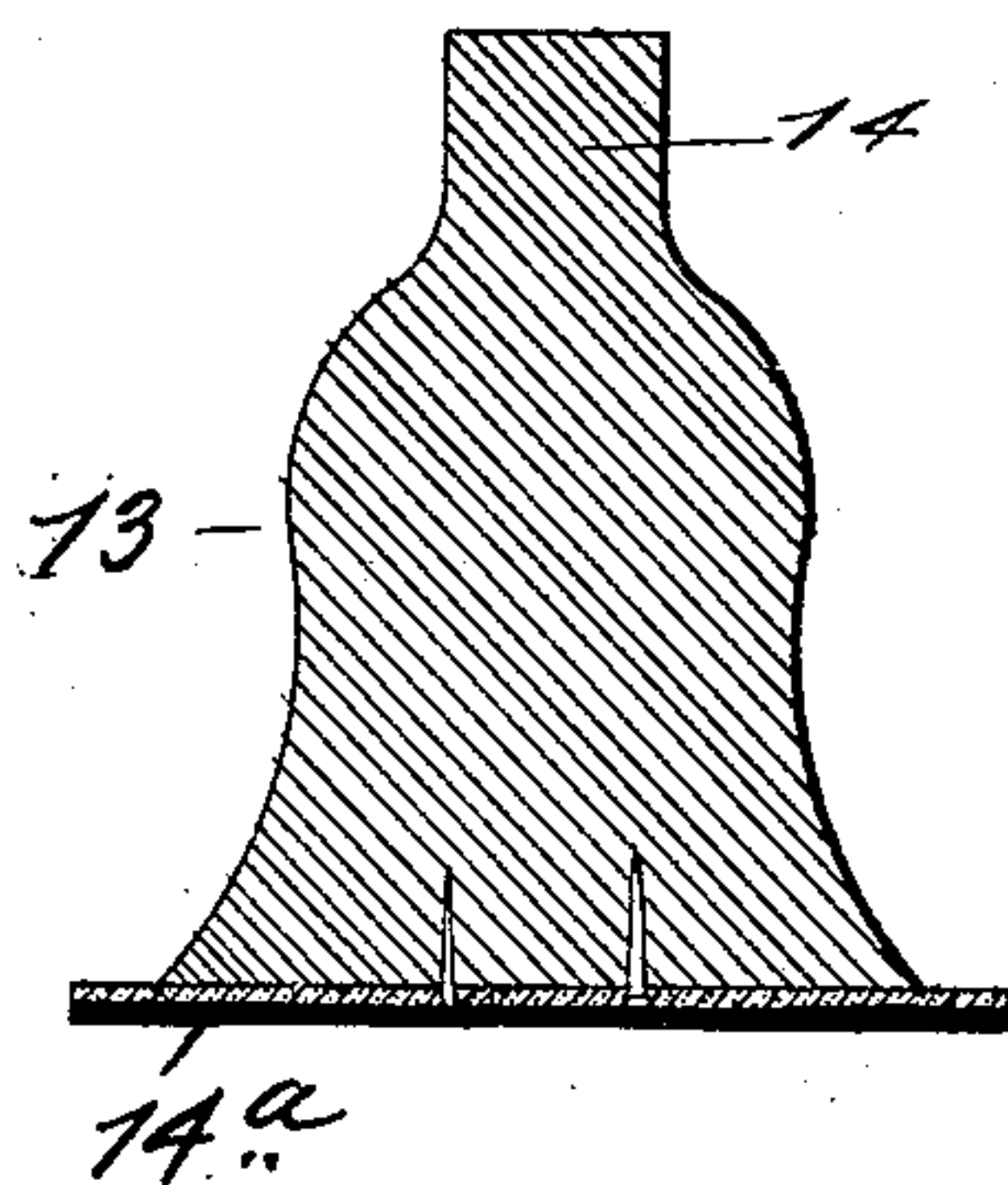


Fig. 4.



Attest,
A. J. McAuley.
W. P. Smith

Inventors:
J. A. Johnston
and O. Sowers,
by Higdon, Longan & Higdon
Attys.

UNITED STATES PATENT OFFICE.

JOHN A. JOHNSTON AND OSSA SOWERS, OF ST. LOUIS, MISSOURI.

RUBBING OR POLISHING MACHINE.

SPECIFICATION forming part of Letters Patent No. 615,621, dated December 6, 1898.

Application filed January 24, 1898. Serial No. 667,753. (No model.)

To all whom it may concern:

Be it known that we, JOHN A. JOHNSTON and OSSA SOWERS, of the city of St. Louis, State of Missouri, have invented certain new and useful Improvements in Rubbing or Polishing Machines, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming a part thereof.

Our invention relates to rubbing or polishing machines; and it consists of the novel construction, combination, and arrangement of parts hereinafter shown, described, and claimed.

Figure 1 is a side elevation of one of our improved rubbing and polishing machines. Fig. 2 is a vertical sectional view taken through the center of the machine. Fig. 3 is a view in perspective of our improved rubbing and polishing machine as it appears while in operation. Fig. 4 is a vertical sectional view of a removable tool or head used in connection with our improved polishing-machine.

Referring by numerals to the accompanying drawings, 1 indicates a tubular handle the exterior of which is milled or checkered in order that said handle may be more firmly gripped by the hand, and formed integral with the lower end of said handle is an enlarged annular ring 2. The exterior of the upper end of the handle 1 is screw-threaded, as indicated by 3, and a cap 4, provided with a centrally-arranged aperture 5 in its top, is interiorly screw-threaded in order that it may be located upon the upper end of the handle 1.

A spindle or shaft 6, which is somewhat smaller in diameter than is the interior of the handle 1, is formed to pass through said handle, and the lower end of said shaft or spindle 6 is formed into a socket 7, through one wall of which passes a set-screw 8. The upper end of the spindle or shaft 6 is constructed with an enlarged head 9, and interposed between the inclined shoulder 10, between said head 9 and the body of the shaft or spindle 6, and the inner curved surface of the cap 4 is a series of balls 11, thus forming a ball-bearing at the upper end of the tool. A series of balls 12 is interposed between the inclined surface between the socket 7 and the lower end of the spindle 6 and the inner curved face of the annular ring 2, thus forming a ball-bearing at

the lower end of the tool. A bell-shaped tool or head 13 is provided on its upper end with an integral rectangular projection 14, which is adapted to enter the socket 7, and by manipulating the set-screw 8 this tool or head 13 is rigidly fixed to the lower end of the shaft or spindle 6. A disk 14^a, of rubber or analogous material, is carried by the under side of the head 13.

When our improved machine is used as a polisher, a quantity of cotton 15 or analogous fibrous material is located around the disk 14^a and the lower end of the head 13, and a section of polishing-cloth 16 covers said body of cotton, and said polishing-cloth 16 is clamped onto the head 13 by means of a split ring 17 or in any suitable manner. Thus a polishing-pad is formed which is very similar to the pads now made use of and manually engaged while polishing.

Formed integral with the upper end of the head 9 is a ring 17, which when the machine is in operation is engaged by a hook or like device on the end of the flexible shaft 18, which is necessary in the use of our improved machine. When the machine is properly put together and the flexible shaft 18 is rapidly rotated, the shaft or spindle 6 will be rotated upon its ball-bearings within the handle 1 and the polishing-pad carried by the lower end of the head or tool 13 will be rapidly rotated. The operator manually engages the handle 1 and moves the same over the surface of the work, the pad carried by the machine being in contact with said surface. This very efficiently and rapidly rubs and polishes the surface to which said pad is applied.

In some instances a sheet of sand or emery paper may be applied to the disk 14^a, or a grindstone or emery-wheel may be carried by the lower end of the shaft 6, and thus metal or stone surfaces may be ground.

We contemplate the construction of a reciprocating rubber polisher which is carried and operated by the lower end of the spindle or shaft 6; but this device is not shown here, it being reserved for a subsequent patent application.

Our improved rubbing and polishing machine may be used for a variety of purposes, among which may be mentioned the polishing of marble and other stone surfaces, hard-wood

finishing, rubbing and polishing surfaces of carriages and vehicles for applying French polish, and like operations. A machine so constructed is simple, strong, and durable, 5 will not readily get out of order, and may be quickly transformed or provided with the different materials required in rubbing or polishing the different work.

We claim—

10 1. In a rubbing and polishing machine having a handle, the combination with a shaft rotatably carried by said handle, of a solid bell-shaped head removably carried by the lower end of the shaft, a disk of rubber fixed 15 to the under side of said head, and a polishing-pad removably located upon said head and around said disk, substantially as specified.

20 2. In a rubbing or polishing machine, the combination with a flexible shaft, of the shaft

6, the ring integral with the upper end of said shaft to be engaged by said flexible shaft, a tubular handle 1 inclosing the shaft 6, ball-bearings at each end of said handle for the shaft 6 to rotate upon, a socket 7 in the lower 25 end of said shaft 6, a bell-shaped head 13 removably located in said socket, a disk of rubber 14^a located upon the under side of said head, the edge of which disk projects beyond the edge of said head, a body of fibrous material surrounding said disk, and a section of 30 polishing-cloth inclosing said body of fibrous material, substantially as specified.

In testimony whereof we affix our signatures in presence of two witnesses.

JOHN A. JOHNSTON.

OSSA SOWERS.

Witnesses:

J. A. EMMERTS,

R. E. VERNON.