

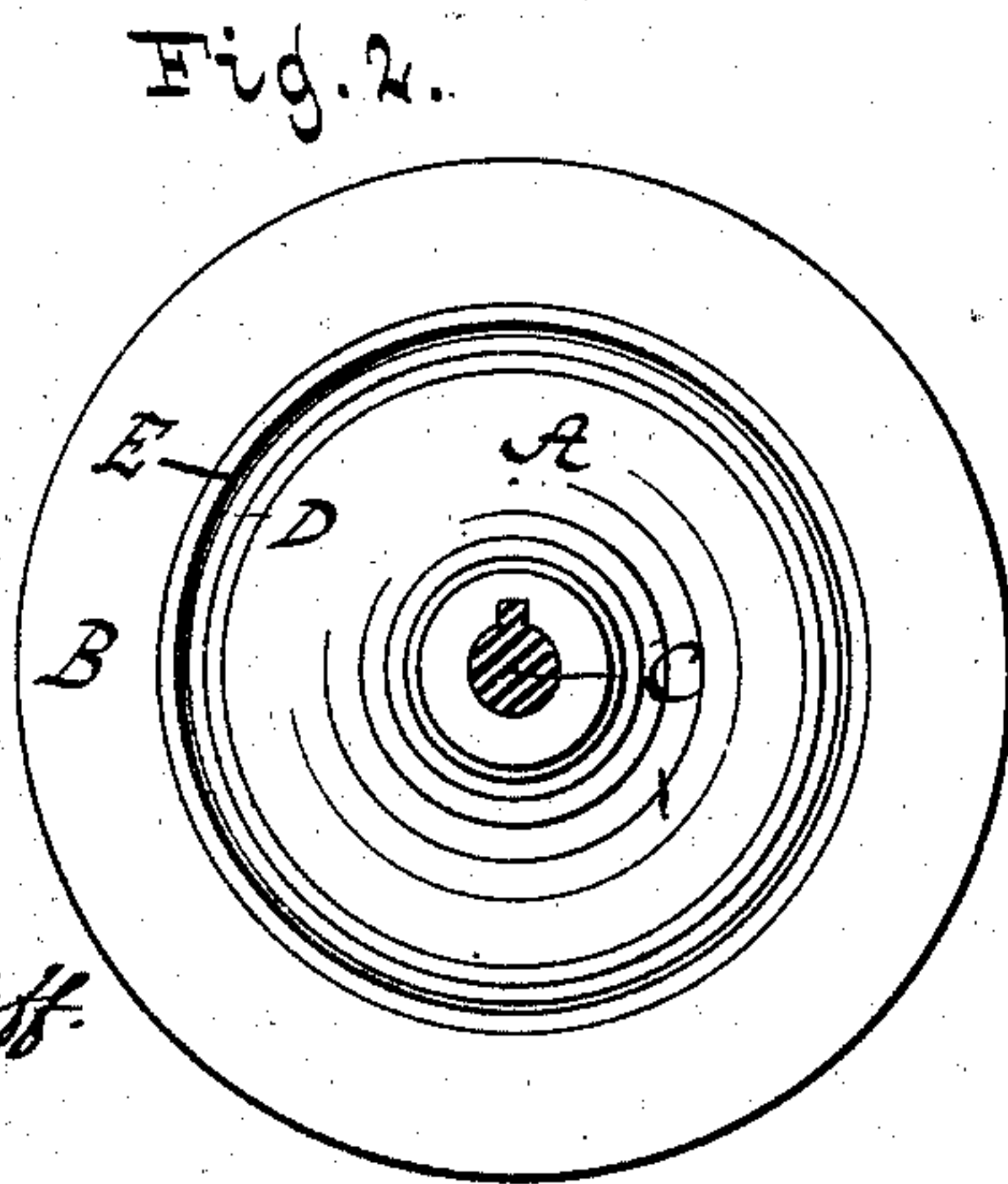
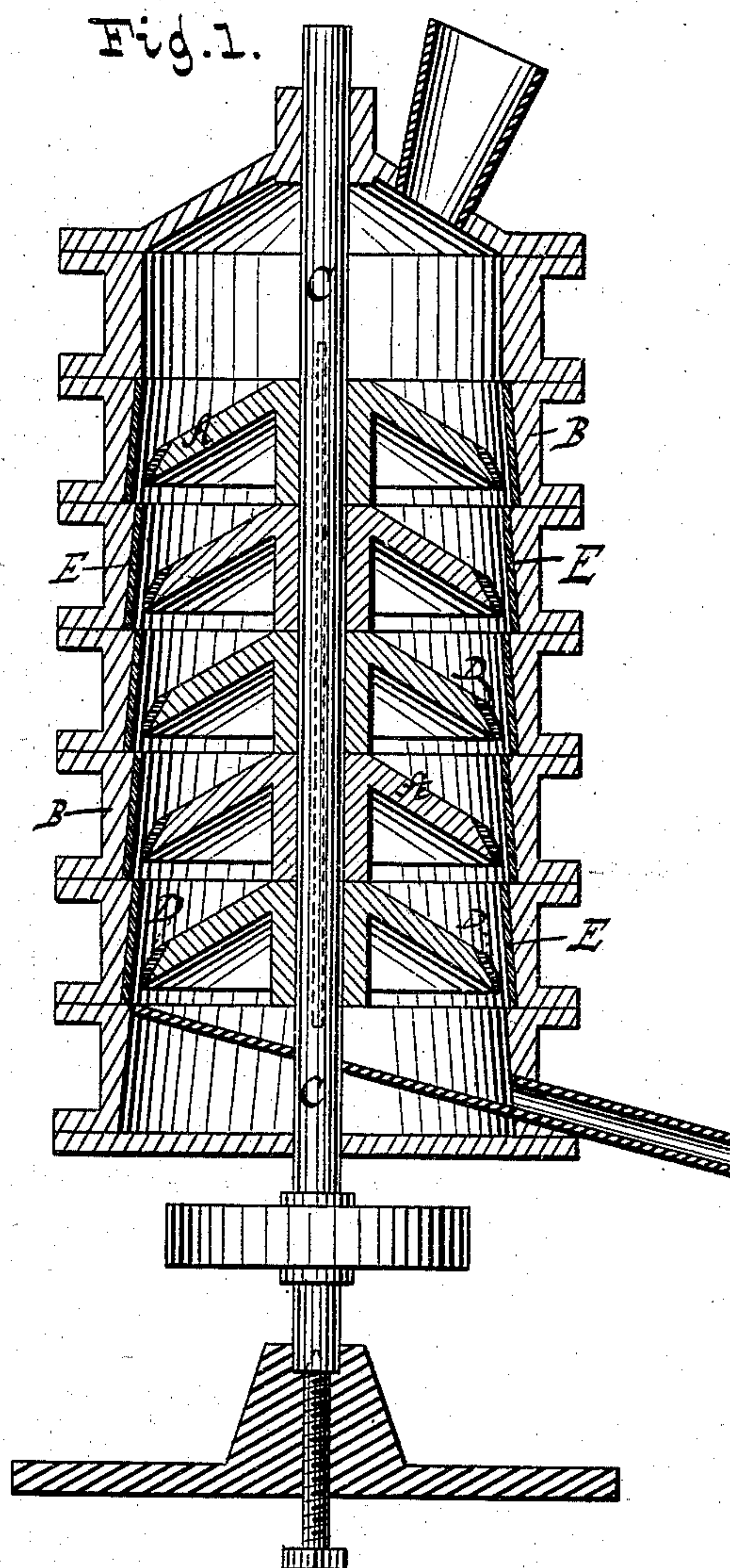
(No Model.)

F. J. & W. H. HOYT.

GRINDING SURFACES OF ORE AND OTHER PULVERIZERS.

No. 257,869.

Patented May 16, 1882.



Witnesses.
Sgt. Ludwig Kapff.
G. C. Bennett.

Inventor.
Fred. J. Hoyt &
William H. Hoyt,
by
Francis C. Bowen,
attorney

UNITED STATES PATENT OFFICE.

FREDERICK J. HOYT AND WILLIAM H. HOYT, OF NEW YORK, N. Y.

GRINDING-SURFACE OF ORE AND OTHER PULVERIZERS.

SPECIFICATION forming part of Letters Patent No. 257,869, dated May 16, 1882.

Application filed September 24, 1881. (No model.)

To all whom it may concern:

Be it known that we, FREDERICK J. HOYT and WILLIAM H. HOYT, of New York, in the county of New York and State of New York, have invented certain new and useful Improvements in the Grinding-Surfaces of Ore and other Pulverizers; and we do hereby declare that the following is a full, clear, and exact description of the invention, that 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 the letters of reference marked thereon, which form a part of this specification.

This invention relates especially to that class of ore-pulverizers wherein the ore is ground by means of revolving heads (one or more) co-operating with a shell or concave; and it consists in making the grinding-surfaces of the heads and the shell (either or both) of soft metal having the inherent quality of becoming coated permanently with the ore passing between them, for the purpose of lessening the wear of such surfaces, as hereinafter more fully set forth.

This invention is illustrated in the accompanying drawings, in which Figure 1 represents a vertical central section. Fig. 2 is a horizontal section.

Similar letters of reference indicate corresponding parts.

The letter A designates the heads, and B their shell or concave. In the example shown a series of heads, A, is used, the whole being fixed to a common shaft, C, adapted to receive a revolving motion, and the heads, moreover, are made in the form of frusto-conical disks, having beveled edges, which constitute the grinding-surfaces thereof, while the shell B is made in sections, one to each head. The number and construction of these parts, however, form no part of my present invention, and may be varied in many ways well known to those skilled in the art. D indicates the grinding-surfaces of the heads, and E the like sur-

faces of the shell, (there being a separate grinding-surface to each section of the shell.) These grinding-surfaces D E are composed of soft metal, which is suitably shaped and secured at the appropriate places by rivets or other suitable means, the metal which we have found best adapted to the purpose of our invention being copper. Now, as the ore passes between the two grinding-surfaces D E, its first action is to fill the soft metal full of the sand or powdered ore, so that the metal receives a permanent coating thereof, and the actual grinding-surface is composed of the ore itself, the metal immediately refilling in case any portion is by any action displaced, and it will be readily understood that by this means the wear of the grinding-surfaces is to a great extent lessened or prevented.

It may be remarked that the soft metal may be omitted from either of the grinding-surfaces D E without departure from our invention.

What we claim as new, and desire to secure by Letters Patent, is—

1. The revolving heads (one or more) having their grinding-surfaces composed of soft metal of the character specified, in combination with a shell adapted to such heads, for the purpose set forth.

2. The shell having its grinding surface or surfaces composed of soft metal of the character specified, in combination with revolving heads (one or more) co-operating with such shell, for the purpose set forth.

3. The combination of the revolving heads (one or more) and the shell or concave, both having soft-metal grinding-surfaces of the character specified, for the purpose set forth.

In testimony that we claim the foregoing we have hereunto set our hands this 22d day of September, 1881.

FREDERICK J. HOYT.
WILLIAM H. HOYT.

Witnesses:

FRANCIS CLARE BOWEN,
EDGAR GARRETSON.