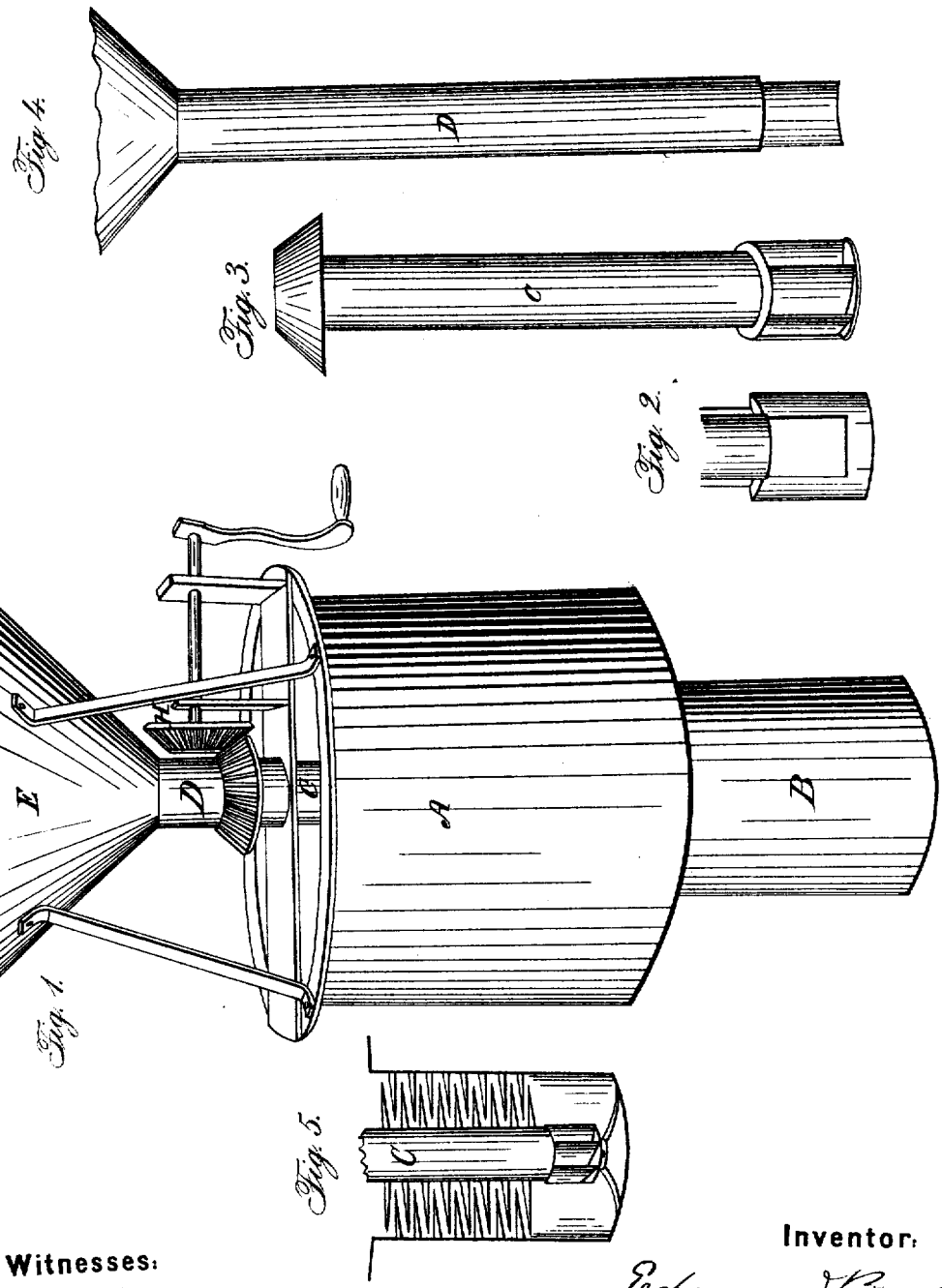
E. BROWN.

Ore Amalgamator.

No. 58,981. Patented Oct 23, 1866.



Witnesses:

Alex J. Stevenson

Daniel Shepard

Inventor:

Edmund Brown

By J. Shattuck Smith

Attorney

AM. PHOTO-LITHO. CO. N.Y. (OSBORNE'S PROCESS.)

UNITED STATES PATENT OFFICE.

EDMUND BROWN, OF CHICAGO, ILLINOIS.

IMPROVED AMALGAMATOR.

Specification forming part of Letters Patent No. **58,981**, dated October 23, 1866.

To all whom it may concern:

Be it known that I, EDMUND BROWN, of the city of Chicago, county of Cook, and State of Illinois, have invented a new and useful Machine for Separating Gold and Silver from Quartz; and I hereby declare the following to be a clear and exact description of the same, reference being had to the accompanying drawings, which form a part of this specification.

A is a kettle, of convenient depth and diameter, with a smaller continuation, B. C is a revolving shaft, extending down to the lower extremity of the kettle A B. D is a stationary shaft, joined to the hopper E, placed within and extending to the lower extremity of the shaft C.

Figure 5 shows a series of teeth or combs, revolving within each other, one series being attached to the sides of the kettle and the other to the revolving shaft C. Fig. 3 shows the revolving shaft, at the lower extremity of which are four or more apertures, through which the quartz is forced out into the lead. Fig. 4 shows the stationary shaft, at the lower extremity of which is attached a flange or flat section, for preventing the quartz from turning round with the revolving shaft. Fig. 2 shows the position of the flange within the revolving shaft.

The method of operating this machine is substantially as follows: The machine is first placed in a properly-constructed furnace, the kettle filled with lead, and heated sufficiently for amalgamating. The quartz is placed in the hopper E, and the shaft C set in motion by means of the gearing H. In consequence of the flange set in the revolving shaft, the quartz and lead contained therein is prevented from turning round, and is constantly being crowded out into the lead through the apertures in the lower extremity of the revolving shaft C, when it immediately rises into the series of revolving combs, as shown in Fig. 5, where every grain is separated and allowed to come in contact with the lead.

What I claim, and desire to secure by Letters Patent, is—

1. The revolving and stationary shafts, with apertures and flange, for crowding the quartz out into the lead.

2. The series of combs attached to the revolving shaft and sides of the kettle, the whole combined and arranged for the purpose specified.

EDMUND BROWN.

Witnesses:

ALEX. F. STEPHENSON,

DANIEL SHEPARD.