(No Model.)

S. P. WALLING.

GRINDING MILL FRAME.

No. 265,192. Patented Sept. 26, 1882.

Fig. 1.

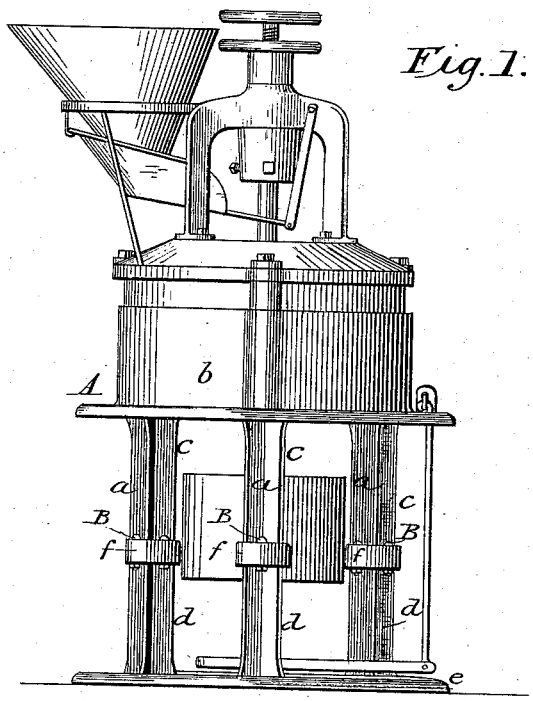
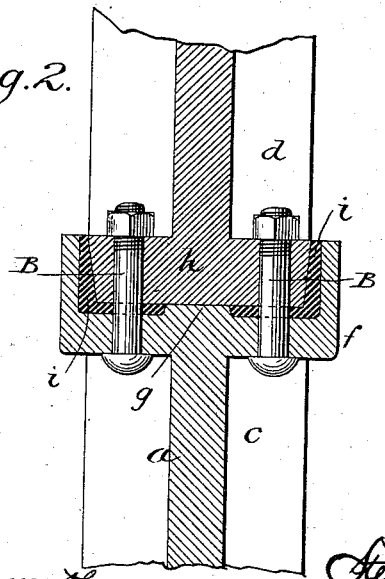


Fig. 2.



Attest.

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UNITED STATES PATENT OFFICE.

STEPHEN P. WALLING, OF SOUTH EDMESTON, NEW YORK.

GRINDING-MILL FRAME.

SPECIFICATION forming part of Letters Patent No. 265,192, dated September 26, 1882.

Application filed April 20, 1882. (No model.)

To all whom it may concern:

Be it known that I, STEPHEN P. WALLING, of South Edmeston, in the county of Otsego and State of New York, have invented certain Improvements in Grinding-Mill Frames, of which the following is a specification.

My invention consists in a mill-frame made in two parts, one comprising the curb and upper half of the supporting-columns, the other comprising the base and lower half of said columns.

The invention further consists in a novel manner of joining the two parts of the frame, as hereinafter set forth.

In the accompanying drawings, Figure 1 represents an elevation of a mill provided with my improved frame, and Fig. 2 a sectional view illustrating the manner of forming the joint.

Hitherto mill-frames have been either cast complete in one casting or formed of several distinct parts, requiring numerous bolts and braces to render the completed frame rigid and strong. The first of these plans, which I have practically employed, is objectionable because of the difficulty of producing the casting in a perfect condition, uninjured by warping or shrinking, and the second is objectionable because of the amount of work required in finishing and fitting the parts. By my present plan I avoid the objectionable features of both of the plans above mentioned.

Referring to the drawings, A represents the frame complete, consisting of the upper section, *a*, composed of the curb *b* and upper half of columns *c*, and the lower section, *d*, consisting of base *e* and lower half of columns *c*. At the point where the upper and lower parts of the columns meet a joint is formed, as indicated in Fig. 1 and as shown in detail in Fig. 2, by which a rigid connection between and a firm bearing of the upper portions of the columns upon the lower portions are provided and a neat finished appearance is produced. For this purpose the lower ends of the upper sections of the columns are formed with cup-shaped enlargements *f*, having a raised or projecting center, *g*, and the upper ends of the lower sections are formed with flanges or heads *h*, somewhat smaller than the interior of the cups, both the cups and the heads being perforated to receive bolts B, by which the parts *a* and *d* are united.

In setting up my improved frame the upper section, *a*, is turned upside down upon the floor of the shop or foundry, and the lower section, also upside down, is placed upon it, the heads or flanges *h* being seated in the cups or enlargements *f*, as shown in Fig. 2, and resting upon the raised central portions, *g*, thereby causing a space, *i*, to be left between the faces of the cup and head or enlargement and between the sides or walls of the same, as shown. Bolts are then passed vertically through the cups and head from below, so that when the frame is turned right side up the finished heads of the bolts shall be at the upper side. The bolts serve to center the heads or enlargements *h* in the cups *f* and to unite them firmly one to the other. After the parts are thus bolted together, lead or other soft metal or alloy is poured into the space *i* and caused to fill the same, thereby forming a broad and firm bearing for the heads or enlargements *h* when in position, and making the joint exceedingly solid and firm, so that there can be no possible movement of one part of the frame upon the other.

The details of the joint may be modified without departing from the limits of my invention; but I prefer the construction described.

Having thus described my invention, what I claim is—

1. A frame for grinding-mills, consisting of the two parts or castings *a* and *d*, the first comprising the curb and upper parts of the supporting-columns and the latter comprising the base and lower portions of said columns, the two parts being united, substantially as shown and described.

2. A mill-frame consisting of the casting *a*, having the cup-shaped enlargements *f*, and the casting *d*, having the heads or enlargements *h*, said cups and enlargements being united, substantially as set forth.

3. The combination, in a mill-frame, of two parts, *a d*, as explained and shown, with a joint for uniting the said parts, the said joint comprising the cup *f*, having raised portion *g*, the head *h*, fastening-bolts B, and interposd soft-metal packing, all substantially as shown and described.

STEPHEN P. WALLING.

Witnesses:

ORRIN HOWARD,

A. L. HOOKER,

H. H. MATTERSON.