(No Model.)

G. McM. ROSS.

STAMP MILL.

No. 588,806. Patented Aug. 24, 1897.

Fig. 1.

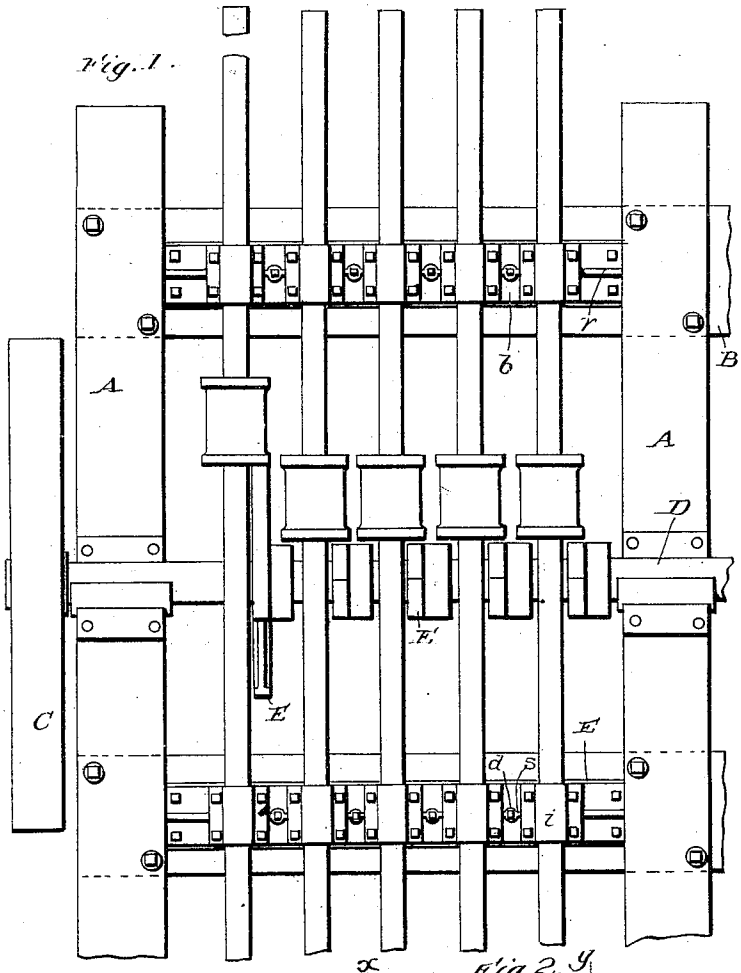


Fig. 4.

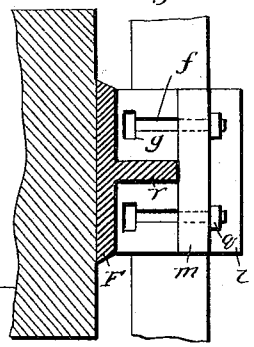


Fig. 5.

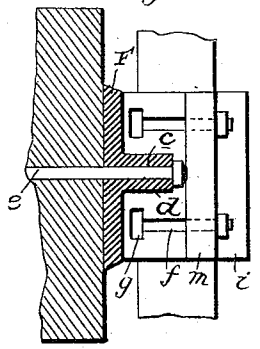


Fig. 2.

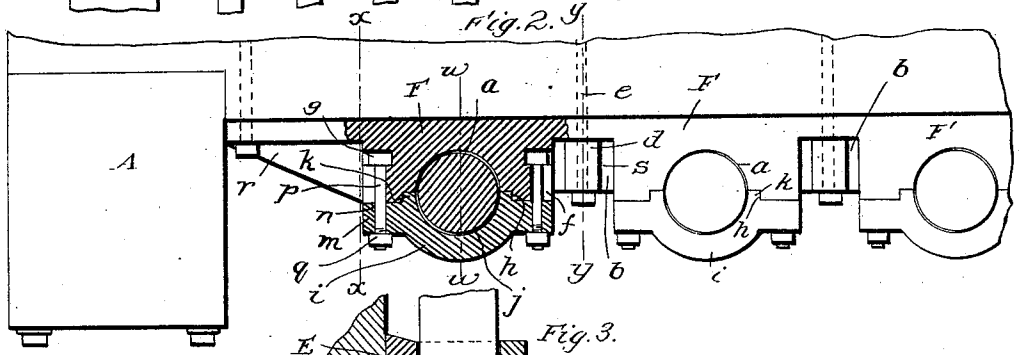
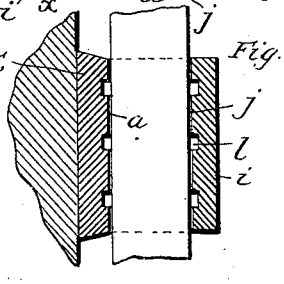


Fig. 3.



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UNITED STATES PATENT OFFICE.

GILBERT MCMILLAN ROSS, OF SAN ANDREAS, CALIFORNIA, ASSIGNOR TO THE GLOBE IRON WORKS, OF STOCKTON, CALIFORNIA.

STAMP-MILL.

SPECIFICATION forming part of Letters Patent No. 588,806, dated August 24, 1897.

Application filed March 1, 1897. Serial No. 625,628. (No model.)

To all whom it may concern:

Be it known that I, GILBERT MCMILLAN ROSS, a citizen of the United States, residing at San Andreas, in the county of Calaveras and State of California, have invented certain new and useful Improvements in Stamp-Mills; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to improvements in stamp-mills; and it has for its object to improve the efficiency of the stamp-guides by so constructing the same that they may be readily repaired and the worn parts replaced without entailing any great loss.

A further object of the invention is to dispense with the use of Babbitt metal or the like in the guides and to improve the efficiency of the same by reducing the friction and more thoroughly lubricating the bearing parts, the guides being so constructed that any one or more of them may be adjusted without in any manner interfering with the others.

In the accompanying drawings, in which similar letters of reference indicate corresponding parts in the several views, Figure 1 is a front view of a part of stamp-mill with parts broken away and with my improvements applied. Fig. 2 is a plan view of the same, partly in section. Fig. 3 is a sectional view taken in the plane indicated by the dotted line *w w* of Fig. 2. Fig. 4 is a sectional view taken in the plane indicated by the dotted line *x x* of Fig. 2, and Fig. 5 is a sectional view taken in the plane indicated by the dotted line *y y* of the same figure.

Referring by letters to the said drawings, A indicates the uprights, B the guide-beams, C the drive-wheel, D the cam-shaft, and E the cams, of a stamp-mill, and such parts may be of the form and construction usually employed.

F indicates blocks of metal or other suitable material, there being two employed and disposed transversely in horizontal planes, one above the other. These blocks are of the length corresponding with the width of the frame and are provided at predetermined points with transverse curvilinear recesses *a*, which when secured to the guide-beams are vertically disposed. Such blocks are also provided intermediate of the recesses with angular recesses *b*, and in these recessed parts are transverse holes *c*, which have bosses *d* on their outer sides, and through which holes bolts or rods *e* are inserted which take through alined holes in the guide-beams, and are suitably secured by nuts or the like, so as to firmly fasten the bars to said beams. On each side of the recesses *a* and opening in the angular recesses are transverse slots *f*, which terminate at their inner ends in cross-slots *g*, forming T's, as shown. The bars are also rabbeted, as shown at *h*, for a purpose which will presently appear.

I provide a cap for each curvilinear recess in the bars, so as to permit access to the stem of each stamp separately and thereby render it possible to adjust, remove, or replace any one of the stamps without in any manner interfering with the others. These caps *i* are provided centrally in their inner sides with curvilinear recesses *j*, and they are also flanged or shouldered, as shown at *k*, to seat in the rabbeted portions of the blocks F. These caps when placed in position form, in conjunction with the recesses *a* of blocks F, guide-eyes for the stems of the stamps, and both the blocks F and the caps are grooved on their inner sides, as shown at *l*, to receive grease or other lubricant. The caps are furthermore provided with flanges *m*, which are pierced, as shown at *n*, to receive headed and threaded bolts *p*. The heads of these bolts are let into the cross-slots *g*, and after taking through the holes in the caps are adjustably secured in position by means of nuts *q* or the like. The blocks F are materially strengthened by means of centrally-longitudinal flanges *r* at their ends and flanges *s* on opposite sides of the bosses.

By the construction illustrated I am able to give sufficient play in the guides, which is very desirable, the friction and wear at such points being reduced to a minimum, and when parts of the boxes become worn or injured they can be quickly removed and replaced by others at a small expense.

My improvements will be found to outwear the mill to which such devices are applied,

and by reason of the perfect wear of the dies the crushing capacity of the mill will be greatly increased.

I also attach importance to the fact that friction in the guides is reduced to a minimum, as by this I am enabled to save a great amount of power heretofore required to operate the mill.

Having thus described my invention, what I claim is—

1. In a stamp-mill, the combination of a frame comprising uprights and a guide-beam connecting the uprights, a block F, arranged on the face of the guide-beam and formed in one piece and having the semicircular recesses *a*, in its face at intervals in its length, the recesses *b*, between the recesses *h*, the horizontal slots *f*, in the side walls of the recesses *b*, the seats *g*, disposed at right angles to and communicating with the inner ends of the slots *f*, the transverse apertures communicating with the recesses *b*, the bosses *d*, surrounding said apertures and arranged in said recesses *b*, the flanges *s*, joining the bosses *d*, and the side walls of recesses *b*, and the longitudinal central end flanges *r*, the caps *i*, having semicircular recesses *j*, in their inner sides and also having apertured flanges *m*, at their ends, bolts having their heads arranged in the seats *g*, of block F, and their shanks arranged in the slots *f*, thereof and also having said shanks extended through the flanges *m*, of caps *i*, and provided with nuts, connecting-bolts extending through the bosses *d*, and apertures of the block F, and also through the guide-beam, and stamp-stems extending through the guides formed by the recesses *a*, *j*, of the block F, and caps *i*, substantially as specified.

2. In a stamp-mill, the combination of a frame comprising uprights and a guide-beam connecting the uprights, a block F, arranged on the face of the guide-beam and formed in one piece and having the semicircular recesses *a*, in its face at intervals in its length, the recesses *b*, between the recesses *a*, the horizontal slots *f*, in the side walls of the recesses *b*, and the slots *g*, disposed at right angles to and communicating with the inner ends of the slots *f*, a suitable means for connecting the block F, to the guide-beam, the caps *i*, having semicircular recesses *j*, in their inner sides, bolts having their heads arranged in the seats *g*, of block F, and their shanks arranged in the slots *f*, thereof and also having said shanks extended through the caps *i*, and provided with nuts, and stamp-stems extending through the guides formed by the recess *a*, *j*, of the block F, and caps *i*, substantially as specified.

In testimony whereof I affix my signature in presence of two witnesses.

GILBERT McMILLAN ROSS.

Witnesses:

BENJAMIN JOHNSTON,

ALFRED L. WYLLIE.