2 Sheets—Sheet 1.

W. RAUP.

Guide for the Stems of Stamp-Mills.

No. 221,473. **Patented Nov. 11, 1879.**

Fig. 1.

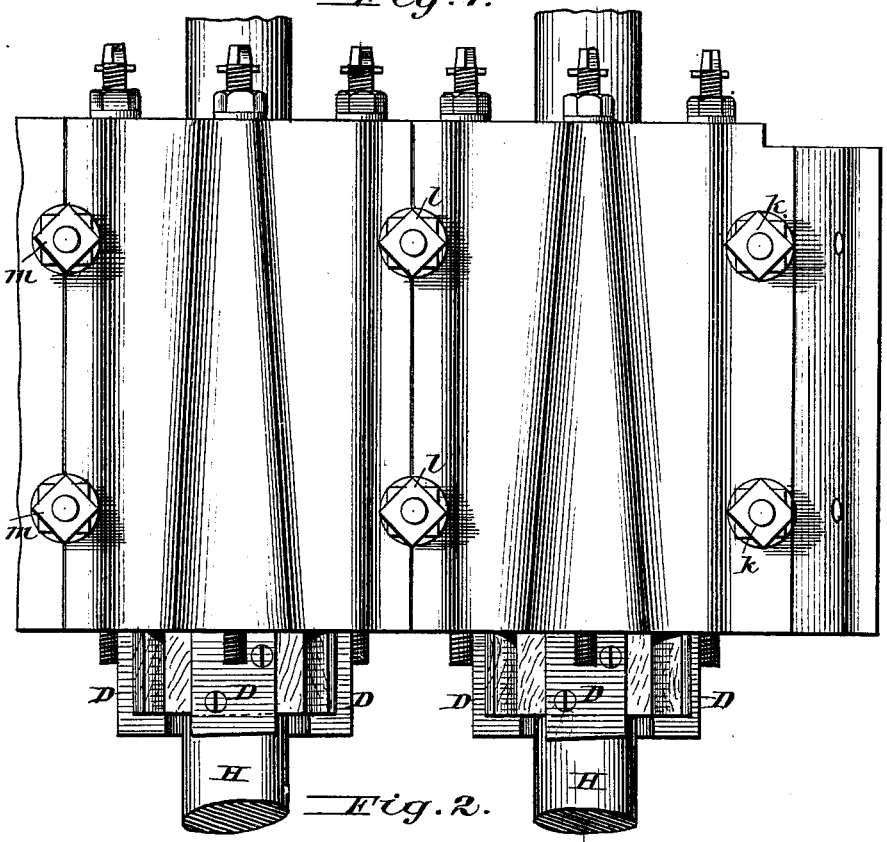
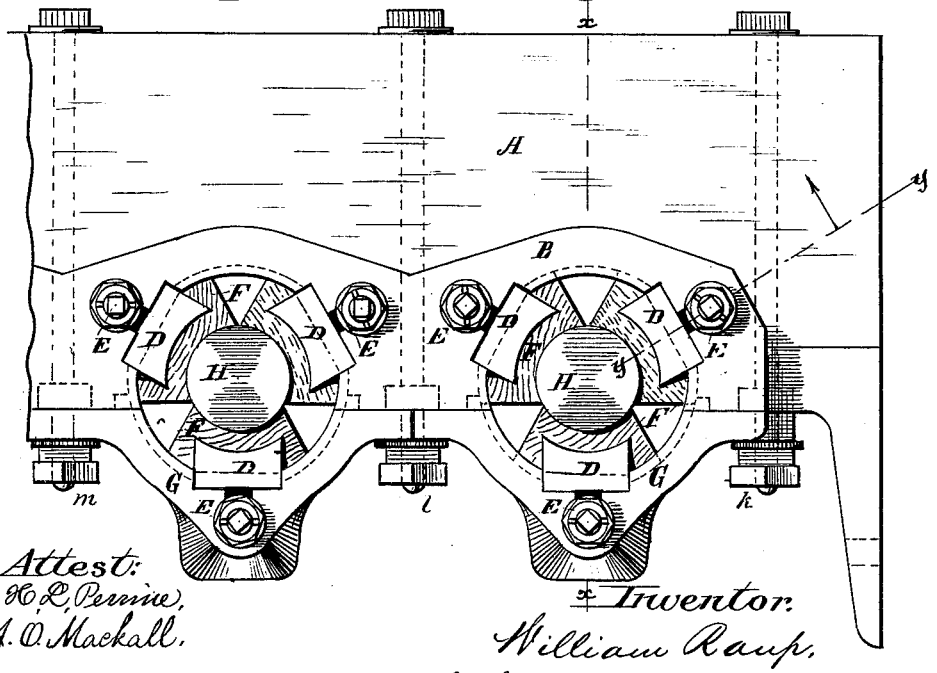


Fig. 2.



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Inventor:
William Raup,
by his Atty. Wm. H. Finckel

2 Sheets—Sheet 2.

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Fig 3

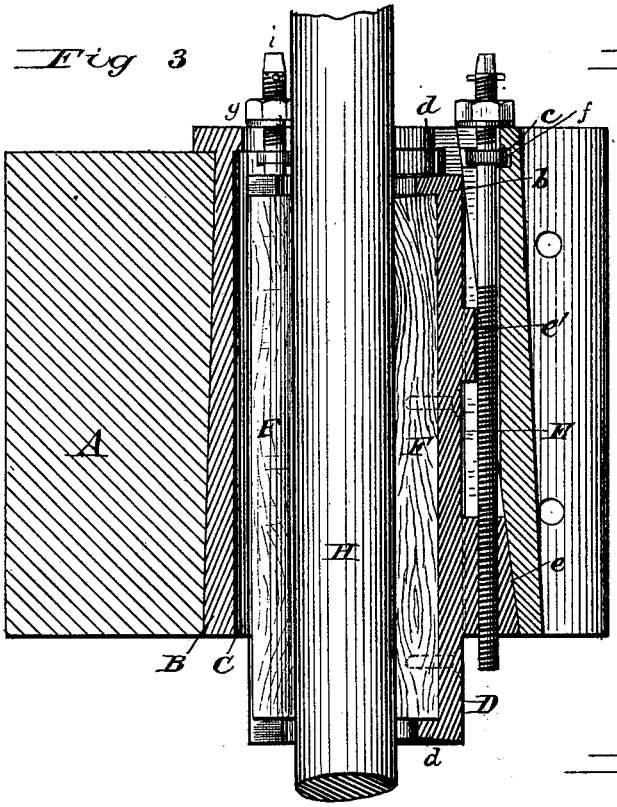


Fig. 5.

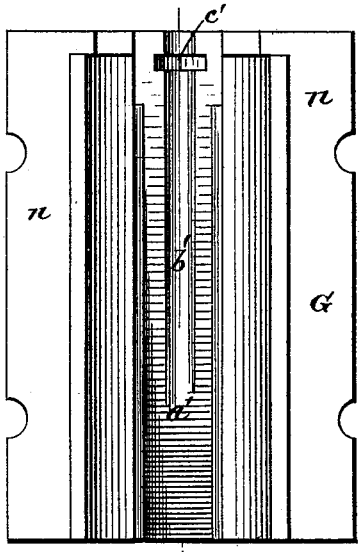


Fig. 4.

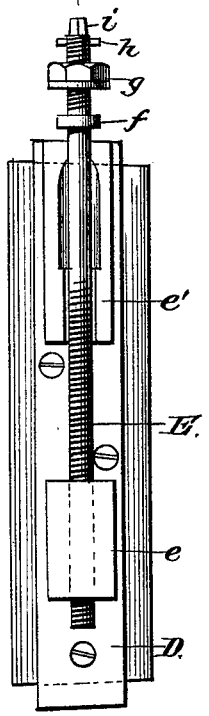
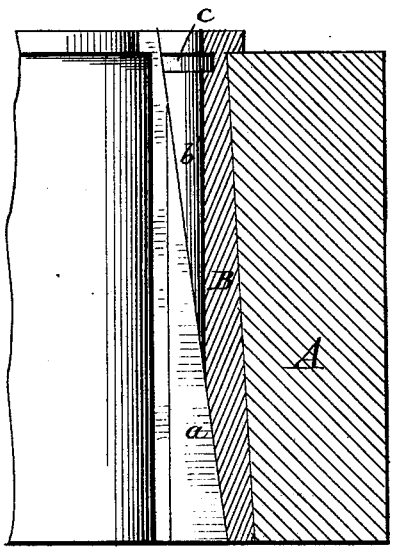


Fig. 6.



Attest:
H. D. Perrine.
J. O. Mackall

Inventor:
William Raup.
by his atty. Wm. F. Finckel.

UNITED STATES PATENT OFFICE.

WILLIAM RAUP, OF PARK CITY, UTAH TERRITORY.

IMPROVEMENT IN GUIDES FOR THE STEMS OF STAMP-MILLS.

Specification forming part of Letters Patent No. **221,473**, dated November 11, 1879; application filed August 9, 1879.

To all whom it may concern:

Be it known that I, WILLIAM RAUP, of Park City, in the county of Summit, in the Territory of Utah, have invented certain new and useful Improvements in Guides for the Stems of Stamp-Mills, of which the following is a full, clear, and exact description, when taken in connection with the accompanying drawings, forming part hereof.

The invention is in the nature of improvements upon the mechanism shown in United States Letters Patent No. 213,177, granted March 11, 1879, and relates to means for more expeditiously and accurately adjusting the gibs up to the stamp-stems.

The invention consists in securing the gibs in movable frames constructed with inclined backs, and arranged to be adjusted in reversely-inclined sockets in the guide-castings on the principle of the wedge, whereby the gibs may be moved up to the stamp-stems to compensate for wear of the gibs, and to preserve the accuracy or trueness of the guides.

In the drawings referred to, Figure 1 is a front elevation of a section of the battery-rail with two of my improved guides attached. Fig. 2 is a top-plan view. Fig. 3 is a vertical cross-section on the line *x x* of Fig. 2. Fig. 4 is a rear elevation of one of the gibs and gib-holders. Fig. 5 is a view in elevation of the interior of one of the front castings or caps; and Fig. 6 is a longitudinal section of one of the bed-casting's sockets, taken on line *y y*, Fig. 2.

Heretofore, in the use in stamp-mills of wooden gibs or bushings in the guides for the stems, difficulties have been experienced in expeditiously and accurately adjusting such gibs to compensate for their frictional wear. In the patent above referred to these gibs have been effectively but awkwardly adjusted by set-screws and loose bearing-plates, the gibs themselves being placed loosely in the guides. In United States Letters Patent No. 205,573, of 1878, the guides have been made tapering and provided with tapering wooden gibs keyed therein; but in order to adjust such gibs to compensate for wear the battery would have to be stopped, the gibs unkeyed and taken out, and their meeting-edges cut away so as to permit their circular interiors to more closely approach the stem. My present invention, as will appear, removes these difficulties.

In this my invention as illustrated in the drawings, A represents a portion of the rail of a battery or stamp-mill. Upon its face is bolted a bed-casting, B, in which a number (equal to the number of stamps in the battery) of parti-circular cavities, C, are made. In each of these cavities are formed two sockets, *a a*, the backs of which are inclined from the top downwardly and rearwardly, as indicated in Fig. 6. A longitudinal groove, *b*, is made in the inclined portion at its upper half, and a transverse groove, *c*, extends about the upper end of groove *b*, for purposes hereinafter specified. In each of these sockets is placed a metal frame, D, having at each end an inwardly-inclined projection or lip, *d*, extending inwardly toward the center of the cavities, and at the back of the frame inclines *e e'* are provided, which rest upon the inclined beds of the sockets. A screw, E, engages a thread in the incline *e*, and has a circular collar or flange, *f*, adapted to be fitted in the groove *c*, the body of the screw lying in the groove *b*. This screw and the frame D, which it carries, are retained in the socket by a washer and nut, *g*, on the upper end of the screw, which nut and washer to this end are turned down tight against the upper face of the casting B, thereby binding the collar *f* in its groove *c*.

The upper end of the screw may be terminated in a squared head, *i*, for the application of a wrench in operating it.

F is a gib, made of wood, with the grain thereof vertical or parallel with the length of the stem or its direction of motion. The gib is a segment or section of a cylinder, and of uniform thickness throughout. It is inserted in the frame D or gib-holder by pressing it in between the lips *d* sidewise or edgewise, and the inclination of these lips serves to bind the gib securely in the frame against accidental displacement, but so as to permit its removal for renewal when worn. The gibs may be further secured in the gib-holders by screws passed into them through the back of the holder, as in Figs. 3 and 4.

A segmental parti-circular face or cap plate or casting, G, having one socket and gib-

holder of precisely the same construction as above described, is bolted down through flanges *n n* over each of the cavities C, and its gib and the two gibs in the cavity C, when thus placed, form a cylindrical bushing, through which the stamp-stem H plays. With regard to this cap-plate, it will suffice to say that *a'* represents its socket, *b'* its longitudinal groove, and *c'* its transverse groove.

The nut on the screw, used to carry the gib-holder in the cap-plate, is screwed down upon the top of such plate to retain the gib-holder firmly in place.

As the gibs wear by the friction of the reciprocating stamp-stems, they may be moved closer to the stems by so turning the screws as to cause them, through their connection with the inclines on the backs of the gib-holders, to rise upon the inclines in the sockets, thus working like wedges, and they may thus be adjusted until worn down to the lips *d*.

In order to adjust the gibs, the nuts *g* must be loosened to permit the turning of the screws.

The pins *h* through the screws prevent the loss of the nuts and washers.

The cap-plates are easily removed by simply unscrewing the nuts *k l m*.

By having the cap for each guide separate, repairs may be made at any guide without affecting the others or stopping the battery. The guides are thus readily accessible for renewal of the gibs or other work.

It will be noticed that the grain of the wood of the gibs is vertical or parallel with the line of motion of the stems; also, that the gibs are straight instead of tapering; also, that they are fixedly held in position, and thus incapable of wabbling; and, also, that they are instantaneously and separately adjustable; and these properties are such that, whereas, heretofore wooden gibs had to be renewed in from four to eight weeks, by this my invention they wear well from ten to twelve months.

It is obvious that two, three, or more gibs and gib-holders may be employed; but usually three will be found sufficient.

What I claim is—

1. A gib or bushing for the guides of stamp-stems, in combination with an adjustable holder or frame in which the gib is firmly secured, substantially as described.

2. A wooden gib or bushing for the guides of stamp-stems, constructed in the shape of a segment or section of a cylinder, and of uniform thickness throughout, and having its grain parallel with the length of the stem, in combination with an adjustable frame or holder to hold such gib firmly in place and admit of ready and accurate compensation for wear, substantially as described.

3. The gib-holder D, having inclined or angular gib-retaining lips *d* at each end to rigidly fix the gib within it, substantially as described.

4. A gib and a gib-holder having inclined or angular lips at each end to receive and firmly retain the gib, in combination with an adjusting-screw carrying such gib and gib-holder, substantially as described.

5. A stamp-mill provided with a bed-casting containing inclined sockets, and also provided with cap-plates containing similar sockets, in combination with the gibs and gib-holders, the latter having reversely-inclined backs and adjusting-screws, substantially as described.

6. A gib-holder and its socketed receiving bed or plate, having longitudinal and transverse grooves therein, in combination with an adjusting-screw, a circular flange or collar on said screw, and a nut, substantially as and for the purpose described.

To the above specification of my invention I have signed my name this 29th day of July, A. D. 1879.

WILLIAM RAUP.

Witnesses:
CHAS. E. STREET,
B. A. BOWMAN.