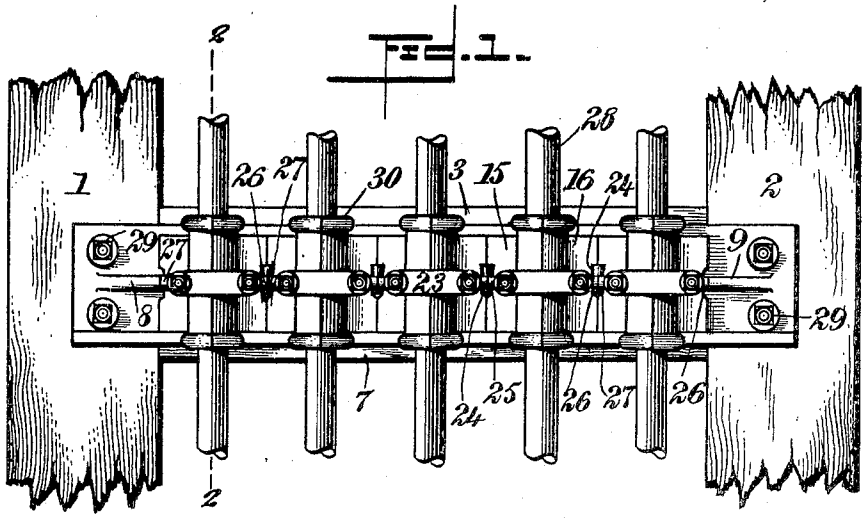
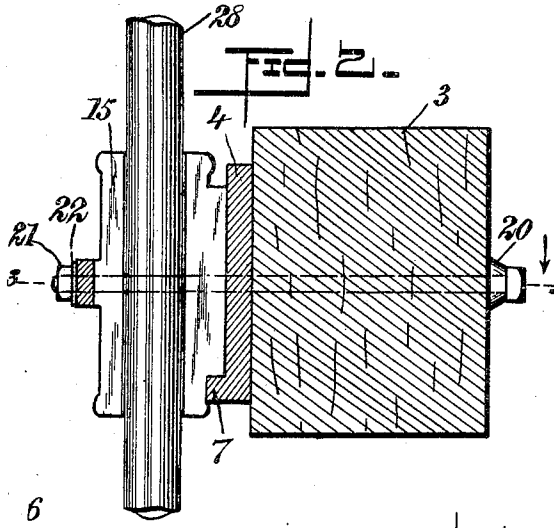
No. 792,916. PATENTED JUNE 20, 1905.

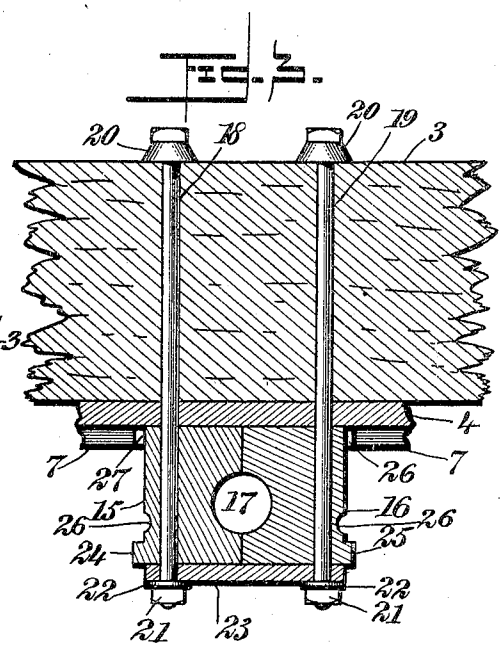
W. N. NOLAN.

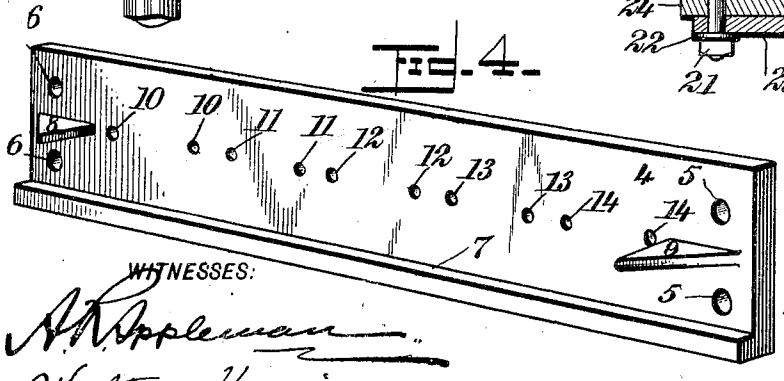
SPLIT GUIDE BOX FOR STAMP MILLS.

APPLICATION FILED MAY 23, 1904.









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No. 792,916. Patented June 20, 1905.

UNITED STATES PATENT OFFICE.

WALTER N. NOLAN, OF EL ORO, MEXICO.

SPLIT GUIDE-BOX FOR STAMP-MILLS.

SPECIFICATION forming part of Letters Patent No. 792,916, dated June 20, 1905.

Application filed May 23, 1904. Serial No. 209,262.

To all whom it may concern:

Be it known that I, WALTER N. NOLAN, a subject of the King of Great Britain, and a resident of El Oro, Estado de Mexico, Mexico, have invented a new and Improved Split Guide-Box for Stamp-Mills, of which the following is a full, clear, and exact description.

My invention relates to guide-boxes and admits of general use, but is particularly applicable to guide-boxes employed in stamp-mills for guiding the vertical stems of the ore-stamps.

My invention relates more particularly to a type of guide-boxes made in two parts and presenting certain advantages hereinafter described, and pointed out in the accompanying claims.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar characters of reference indicate corresponding parts in all the figures.

Figure 1 is a fragmentary front elevation showing a number of my split guide-boxes in use. Fig. 2 is an enlarged vertical section upon the line 2 2 of Fig. 1. Fig. 3 is a horizontal section upon the line 3 3 of Fig. 2, looking in the direction of the arrow; and Fig. 4 is a perspective detail showing the bed-plate.

Upon the battery-frame 1 2 is mounted a cross-beam 3, which may be of the usual construction. A bed-plate 4, made, preferably, of iron, is secured upon this cross-beam by aid of bolts passing through apertures 5 6 in the plate. This bed-plate is provided with a ledge 7, integral therewith, and also with stays 8 9, also preferably integral with the body of the bed-plate. A number of apertures 10, 11, 12, 13, and 14 are arranged in pairs, as indicated in Fig. 4, and are employed for securing the guide-boxes in oppositely-disposed halves 15 16, which when placed together leave a central cylindrical aperture 17, through which the stem 28 is free to slide. Bolts 18 19, each provided with a head 20, pass through the cross-beam 3 and bed-plate 4 and also through the two halves 15 16, constituting the members of the split guide-box. The outer ends of these bolts are engaged by revoluble nuts 21, each provided with a suitable washer 22, as indicated more particularly in Fig. 3. A bridge-plate 23 extends across the face of each guide-box, as indicated more particularly in Figs. 1 and 3. Integrally mounted upon the halves 15 16 of the guide-box are lugs 24 25, these lugs being disposed at the outer edges of said halves 15 16, as indicated in Fig. 3. Each of said halves is provided with semicylindrical grooves 26, the several successive pairs of grooves being engaged by wedges 27, as shown. Each wedge is slightly rounded and slightly tapered. The wedges upon each side of a box prevent the box from opening when subjected to severe strains due to the motions of the stem 28, so that the abutting edges above and below the grooves 26 fit neatly against each other, as indicated more particularly in Fig. 1.

The stems of the ore-stamps are shown at 28 and are free to play through the apertures 17, as indicated in Figs. 2 and 3. When a number of the composite boxes above described are assembled upon the bed-plate 4, as indicated in Fig. 1, the several grooves 26 are of course in alinement with each other, and the lugs or shoulders 24 25 abut each other and are also in alinement. The bridge-plates 23 extend directly across the face of each of the bearing-boxes and are engaged by the washers 22, held in place by the nuts 21 on the bolts 18 19. The bolts 29 (shown in Fig. 1) pass through the apertures 5 6 and are for the purpose of securing the bed-plate 4 upon the frame members or the posts 1 2.

When a number of the composite boxes above described are assembled as above indicated, there is a certain rigidity extending entirely across from one of the posts 1 to one of the posts 2—that is to say, each of the guide-boxes abuts squarely against the guide-boxes immediately adjacent thereto, the stays 8 9 at the respective ends of the bed-plate 4 ultimately receiving a considerable portion of any strain due to crowding of the boxes. The stay 8 is in alinement with the lugs 24 25 of the first half of the box immediately adjacent to the post. The second half of the box of course abuts the first half and is also provided with the lug 24, which abuts the oppositely-disposed lug 25 of the next half, and so on throughout the series, the last lug 24 at the

extreme right of Fig. 1 being in direct engagement with the stay 9.

I find that the arrangement above described is exceedingly desirable. The several boxes being thus neatly fitted together and bracing each other throughout the entire series from one of the stays 9 to the opposite stay 9 give the boxes a sufficient degree of rigidity and strength, and yet any one of the boxes or any half of a box may be removed at pleasure without in the least disturbing any of the others. In fact, it is practicable to remove the boxes one at a time while the ore-stamp is running, and to do this I merely remove the bridge-plate 23 and take out one of the bolts 18 or 19, thus removing one of the halves, and then replace this half with a new one before disturbing the companion half. The several contact-faces of each of the halves are planed, so as to insure a close fit. For most purposes, therefore, the entire group of guide-boxes may be regarded as a practically integral structure, and yet this structure is composite to the extent that any single piece may be removed independently of the other pieces. In other words, the mechanism combines practically all the advantages of an integral structure and a composite structure.

Persons familiar with stamping machinery know the great inconvenience and loss of time which frequently results from broken guide-boxes. Nothing will demoralize a mill so quickly or so effectively as one or two guide-boxes broken under conditions not permitting of their ready replacement by other guide-boxes. These conditions being well known, I deem no further description thereof necessary. Moreover, half-boxes are cheaper than complete boxes would be, so that if it is only necessary to remove a half-box at a particular time the expense is much less than would be the case where solid boxes are employed, and consequently where the entire box should be removed.

Having thus described my invention, I claim as new and desire to secure by Letters Patent—

1. In a structure of the character specified, the combination with the battery-posts and cross-beam, of a vertically-divided guide-box secured to the cross-beam and each half of which is provided with an integral lateral lug for abutting against a corresponding lug on a similar half of an adjacent guide-box, and each half of the box being also provided with a vertical groove adapted to match with a corresponding groove in said similar half of an adjacent guide-box, to form an opening for a wedge.

2. In a structure of the character specified, the combination with the battery-posts and cross-beam, of a series of vertically-divided guide-boxes secured to the cross-beam, with each half of each box provided with an integral lug abutting the corresponding lug of the half of the box adjacent thereto, each half of adjoining boxes being also grooved to form an opening, and wedges inserted in said openings.

3. In a structure of the character specified, the combination with the battery-posts and bed-plate secured thereto, of a series of vertically-divided guide-boxes secured to the bed-plate with each half of each box provided with an integral lug abutting the lug of the half of the box adjacent thereto, each half of adjacent boxes being also grooved to form an opening, and wedges inserted in said openings, the said bed-plate being provided with stays against each of which the lug of the half of the box at an end of the series abuts.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

WALTER N. NOLAN.

Witnesses:
J. SANDERSON,
A. W. GOBRECHT.