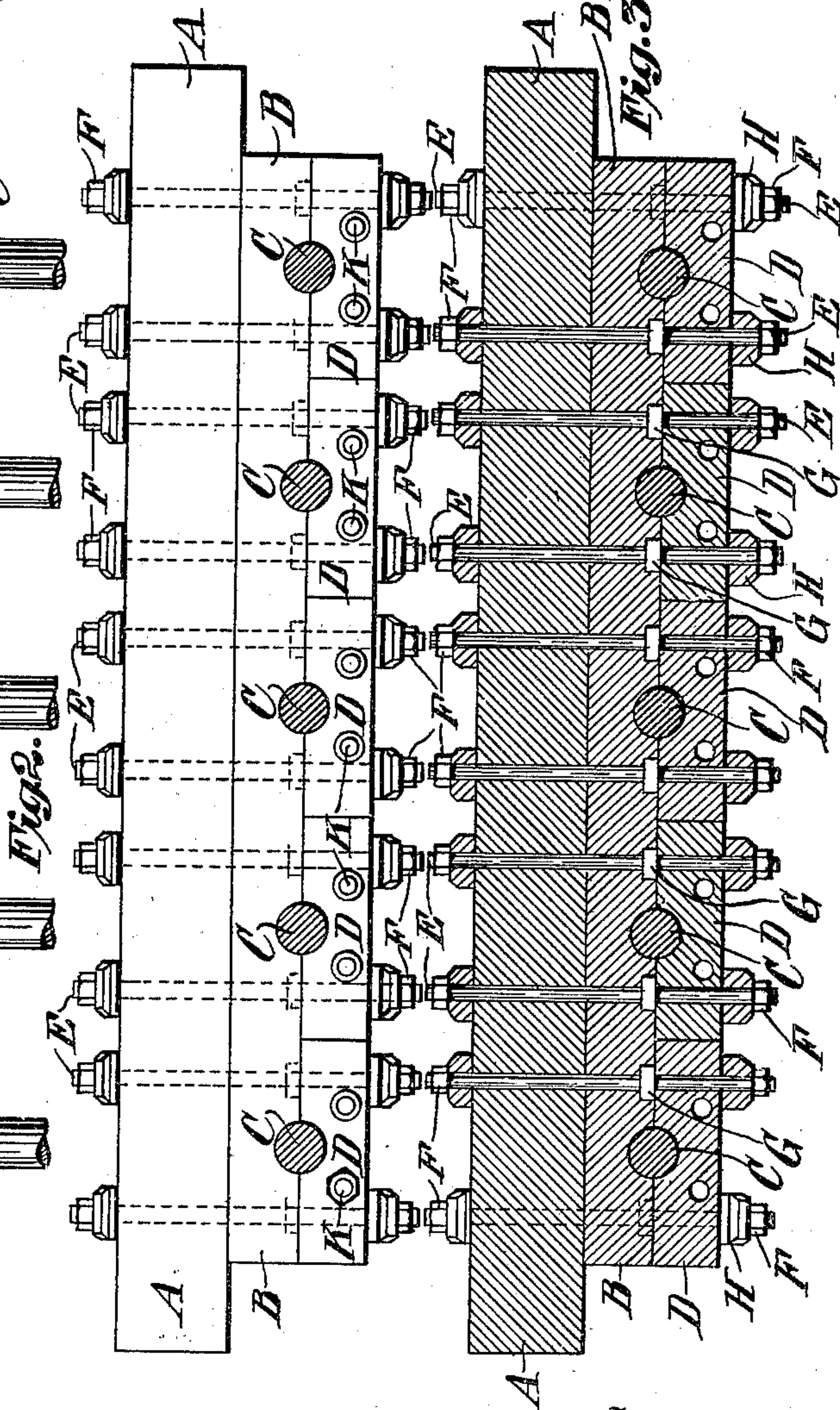
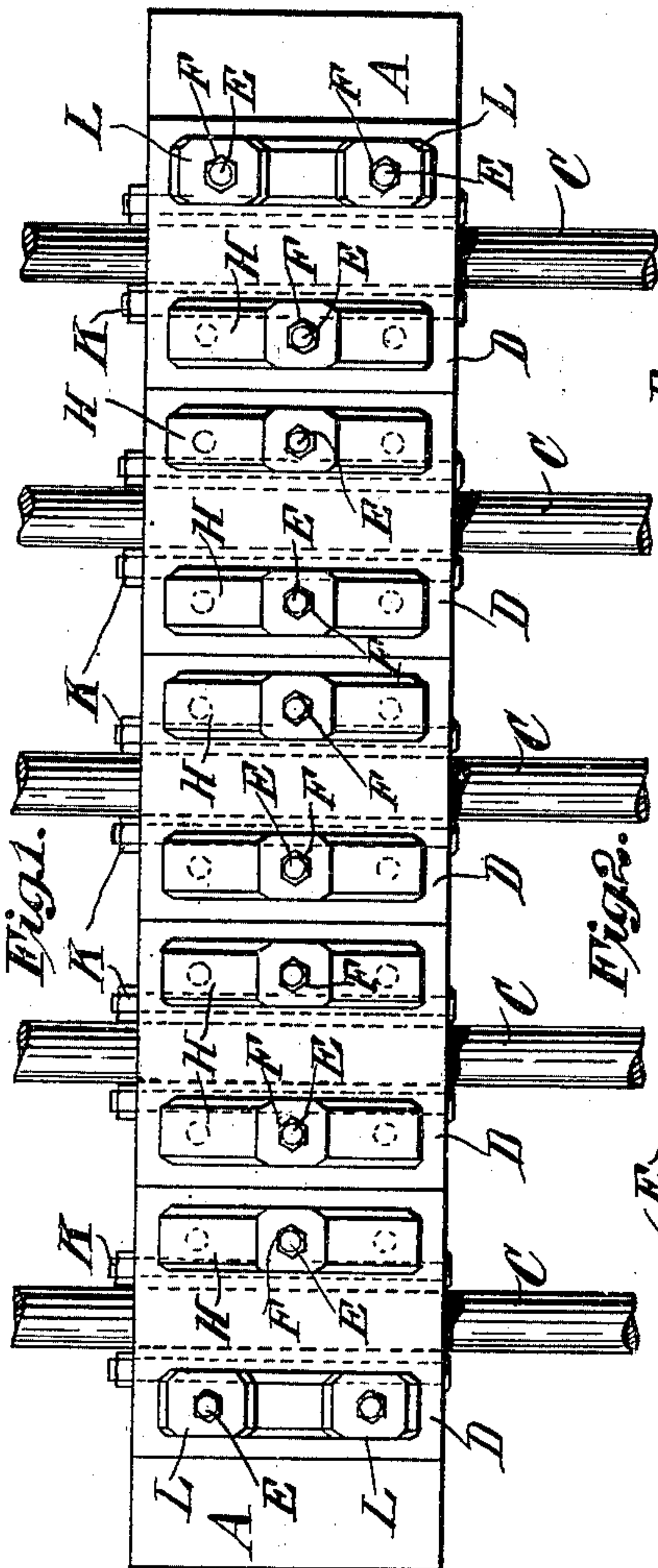
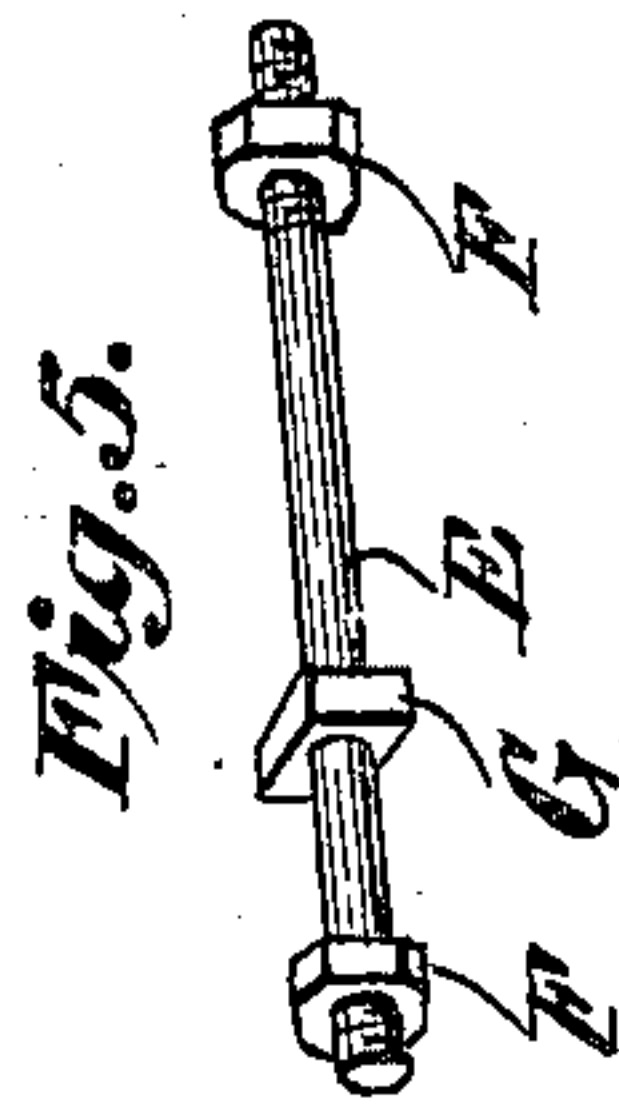
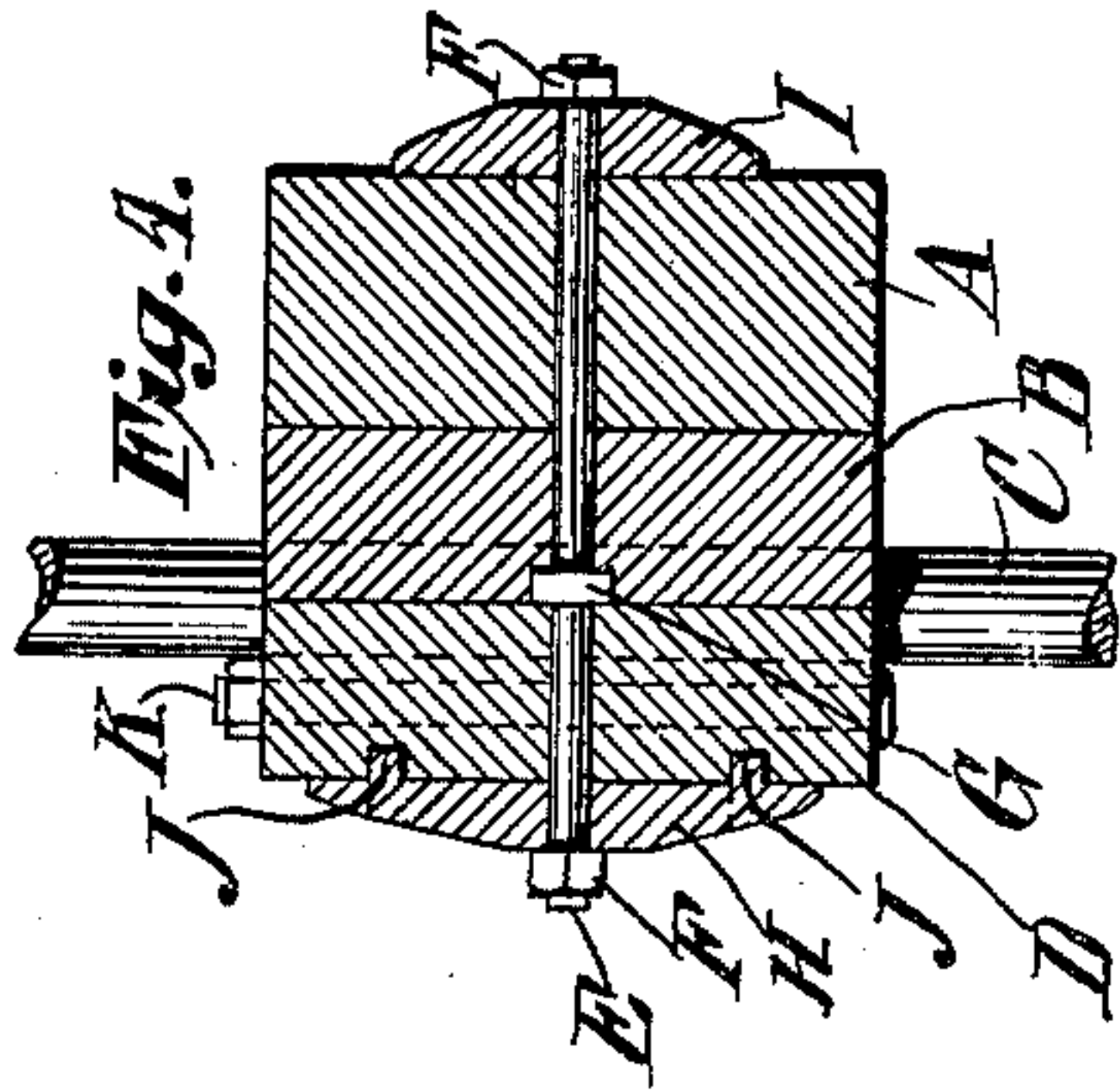


No. 755,525.

PATENTED MAR. 22, 1904.

W. S. McDONOUGH.
STAMP BATTERY GUIDE.
APPLICATION FILED MAR. 24, 1903.

NO MODEL.



Witnesses
G. W. Clement.

Inventor
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UNITED STATES PATENT OFFICE.

WILLIAM STUART McDONOUGH, OF OURAY, COLORADO, ASSIGNOR OF
ONE-HALF TO THOMAS H. WOODS, OF OURAY COUNTY, COLORADO.

STAMP-BATTERY GUIDE.

SPECIFICATION forming part of Letters Patent No. 755,525, dated March 22, 1904.

Application filed March 24, 1903. Serial No. 149,383. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM STUART McDONOUGH, a citizen of the United States, and a resident of Ouray, Colorado, have invented
5 certain new and useful Improvements in Stamp-Battery Guides, of which the following is a specification accompanied by drawings.

This invention relates to improvements in the guides for the stems of stamp-mills; and
10 the objects of the invention are to improve upon the construction of such guides and increase their durability and effectiveness with simplicity of parts and cheapness of construction.

15 Other objects of the invention are to facilitate the insertion, adjustment, and removal of the stamps in a stamp-mill and reduce stem breakages to a minimum, thus obtaining the maximum of work and crushing power.

20 Further objects of the invention will hereinafter appear; and to these ends the invention consists of a stamp-battery guide for carrying out the above objects embodying the features of construction, combination of elements,
25 and arrangement of parts having the general mode of operation substantially as hereinafter fully described and claimed in this specification and shown in the accompanying drawings, in which—

30 Figure 1 is a front elevation of a guide embodying the invention. Fig. 2 is a top plan view with the stems in section. Fig. 3 is a horizontal sectional view of the guide. Fig. 4 is a transverse sectional view. Fig. 5 is a
35 perspective view of one of the guide-bolts.

Referring to the drawings, A represents the guide-girth or battery-rail, and the back half of the guide is shown in this instance formed of a single timber or solid beam B, properly
40 grooved to receive the stems C. The front half of the guide is formed in sections, (shown as timber-blocks D,) also grooved to receive the stems and adapted to cooperate with the grooved back half or beam B.

45 The beam B and section-blocks D are suitably secured to the rail A, as by means of the bolts E passing through the beam and blocks and the rail and provided with securing-nuts F. Suitable means are provided for preventing

the bolts E from turning, as shown, each bolt 50 being provided with squared collars G fast thereon and countersunk in this instance in sockets in the back half B of the guide.

The construction of the apparatus is such that the strain is substantially equally distributed 55 along the entire depth of the guide, and to afford provision for such distribution of the strain the bolts are provided with elongated washers H at one end, which may be made of cast-iron and, as shown, extend substantially the depth of the section-blocks D. The washers I may be provided upon the other
60 ends of the bolts. The elongated washers H are held from turning and displacement by suitable means, (shown as lugs J,) in this instance suitably formed upon the washers, as by casting, and adapted to enter holes in the section-blocks D. The splitting of the section-blocks D is precluded by the insertion of the bolts K therethrough vertically.
70

As shown, there are two bolts E for each intermediate block D, although there may be any desired number, and at each end block D three bolts are provided, the two outer bolts at each end in this instance each having a
75 separate washer L. The end blocks are thus securely braced at their outer portions.

According to the construction of guide described and shown it will be seen that the front sectional portion of the guide is easily
80 removable to permit access to the stems without disturbance of the back half or beam B, and any stem may be quickly removed for repairs or adjustment without interference with any of the other stems of the battery or the
85 interruption of their operation.

The action of the stems according to this construction is so true and uniform that breakages are reduced to a minimum and the shoes and dies wear evenly, thus reducing the expense of renewal. The number of parts is greatly reduced, and the construction of the apparatus is greatly simplified. Because of the fewer parts employed than heretofore in battery-guides and the equal distribution of
90 wear and strain the length of time during which the parts may be used is prolonged.

Obviously some features of this invention

may be used without others, and the invention may be embodied in widely-varying forms.

Therefore, without limiting myself to the construction shown and described nor enumerating equivalents, I claim, and desire to secure by Letters Patent, the following:

A guide for stamp-mills, comprising a girth or rail, a continuous solid guide-beam extending longitudinally thereof and having vertically-extending grooves therein, section-blocks arranged in the same, said blocks having squared ends abutting one against the other for rigidity and having vertical grooves adapted to cooperate with the grooves in said continuous beam and form guideways for the stems of the mill, bolts extending through the section-blocks, continuous beam and girth or rail, affording provision for the removal of any block separately, said bolts being pro-

vided with squared collars countersunk in the continuous beam, to prevent the bolts from turning, and elongated washers upon the bolts outside of the section-blocks and extending vertically along the blocks substantially the depth of said blocks, thereby affording provision for substantially equal distribution of the strain along the depth of the section-blocks, and lugs on the washers for preventing said washers from turning, for substantially the purposes set forth.

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

WILLIAM STUART McDONOUGH.

Witnesses:

WM. STORY,

WM. STORY, Jr.