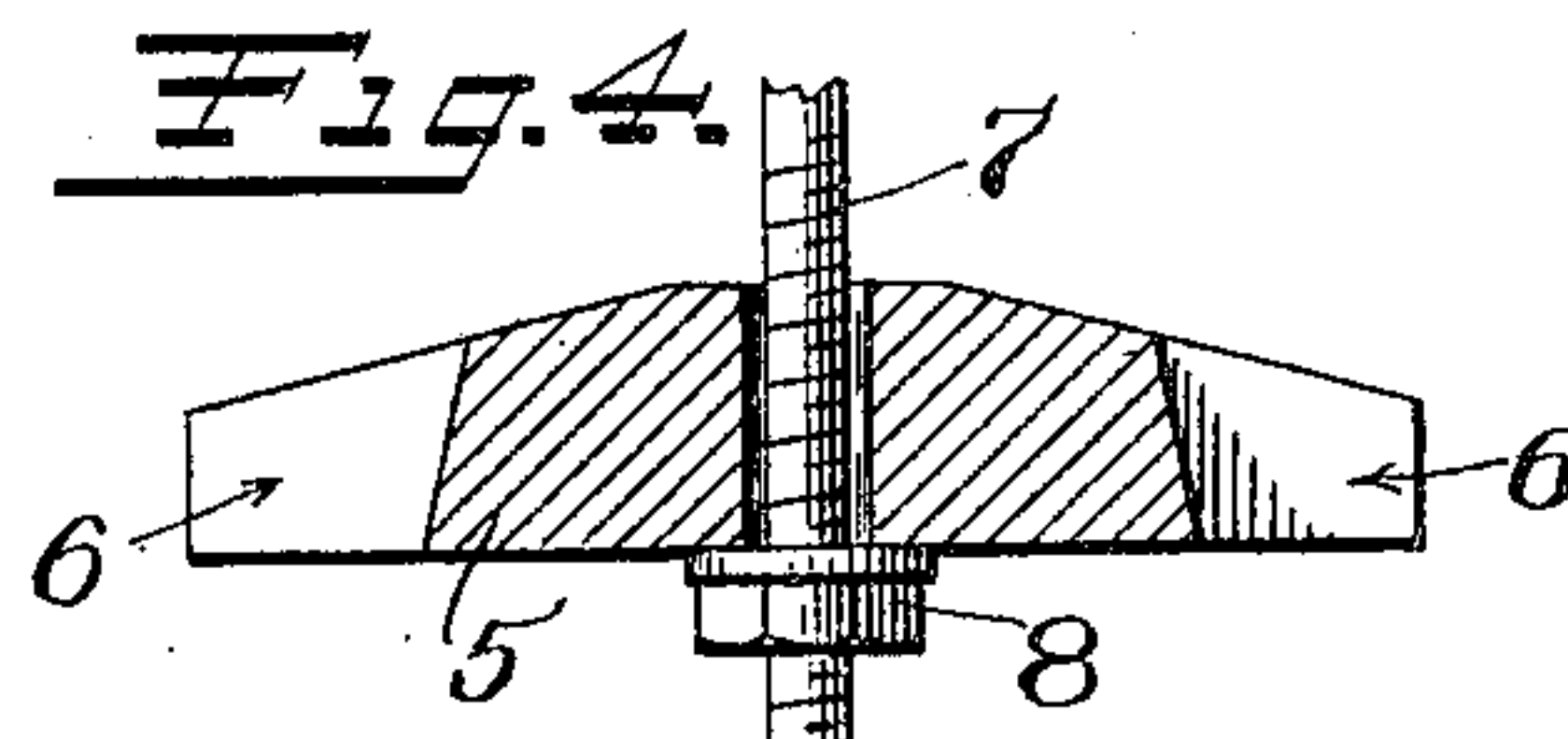
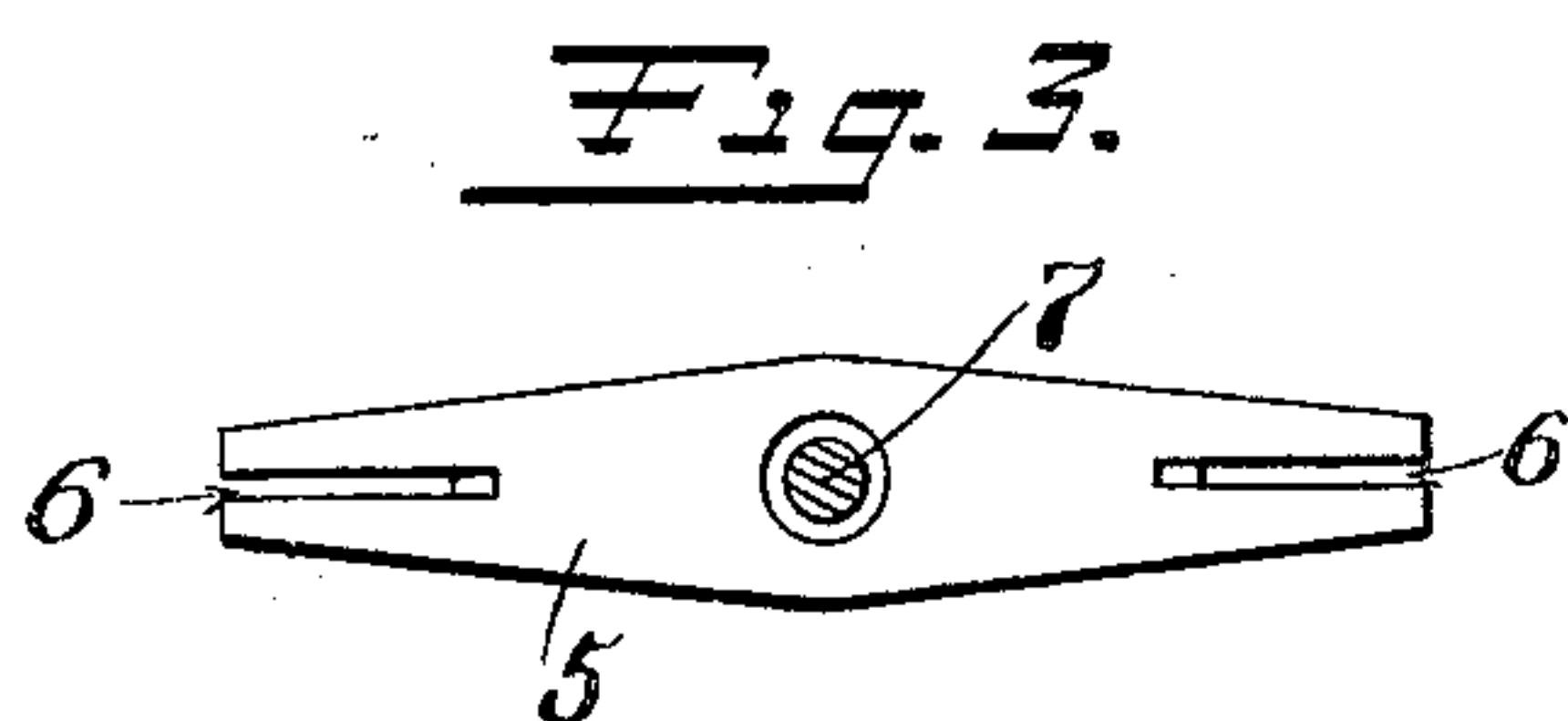
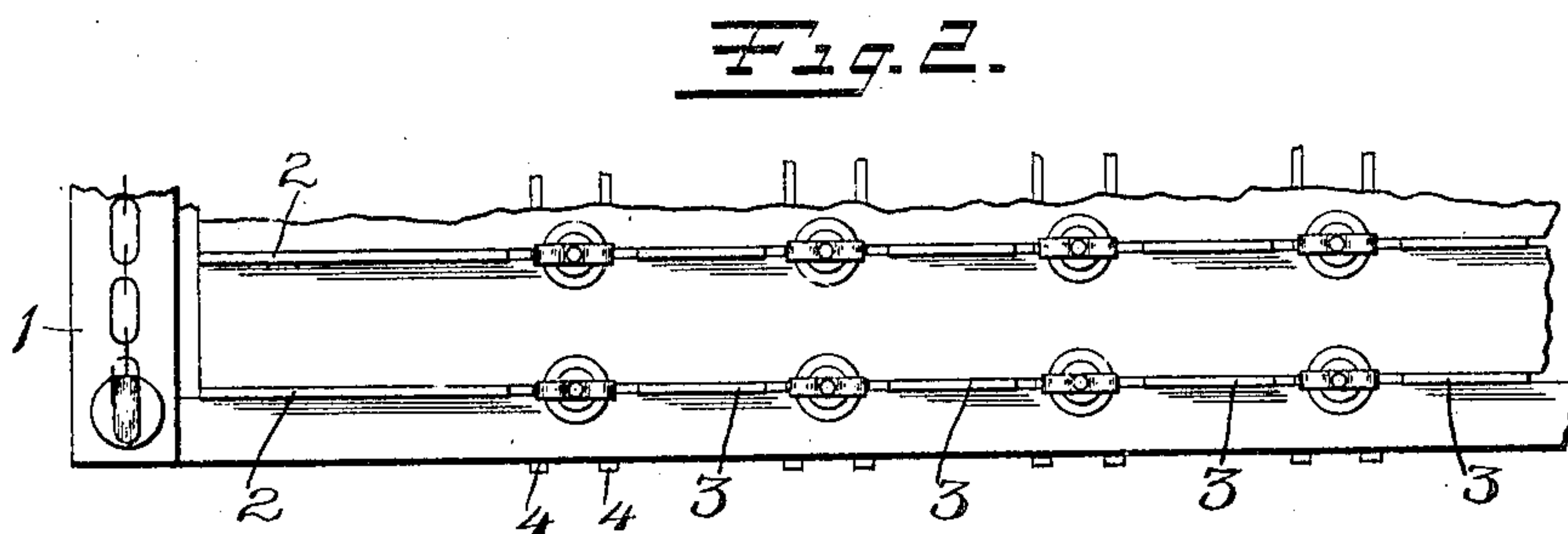
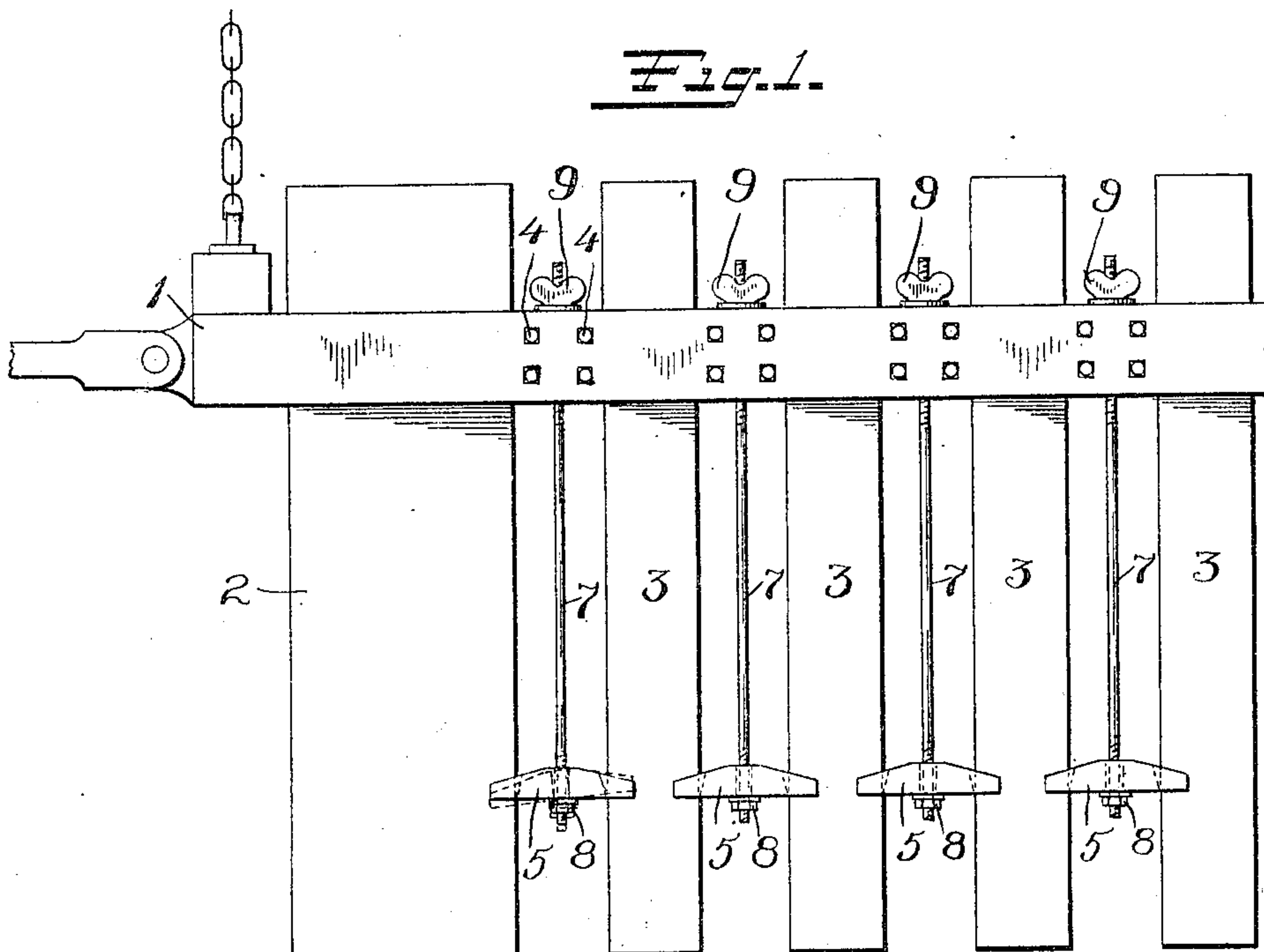


C. L. MIEL.
STONE SAW.

APPLICATION FILED APR. 24, 1905.



Witnesses
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UNITED STATES PATENT OFFICE.

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STONE-SAW.

No. 804,248.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, CHARLES L. MIEL, a citizen of the United States, residing at Sacramento, Sacramento county, California, have
5 invented certain new and useful Improvements in Stone-Saws, of which the following is a full, clear, and exact description.

My invention relates to improvements in stone-saws, and particularly to a construction
10 having an extraordinarily long bearing-blade for cutting through considerable depths of stone. Constructions of this character have usually been provided with short cutting-blades, so that the cutting depth is more or
15 less limited, necessitating in any event the readjustment of the blades during a cutting operation of any considerable depth. I have found, however, that blades even of as great
20 a length as six to eight feet may be provided and operate satisfactorily when of suitable construction and suitably supported.

My invention consists in improvements the principles of which are illustrated in the accompanying single sheet of drawings and com-
25 prises the use of long bearing-blades and the addition in some cases of removable reinforcing or stiffening members to be inserted between the blades during the initial part of the cutting operation.

30 Figure 1 is a view of one end of a stone-saw embodying the improvements of my invention. Fig. 2 is a fragmentary plan view showing two series of blades adapted to operate simultaneously. Fig. 3 is a plan view
35 of one of the reinforcing or stiffening members. Fig. 4 is a vertical section of the same.

1 represents the saw-beam, which is provided with suitable means for effecting longitudinal movement and for raising or lowering
40 the saw when desired.

2 is an end blade.

3 3 3 3 are intermediate blades. These are all vertically disposed and clamped between the two sides of the saw-beam by means of
45 bolts 4 4. The arrangement is such that the blades may be vertically adjusted when desired, the blades, however, being preferably without perforations, the entire adjustment being effected by the clamping action of the
50 bolts 4 4, so that adjustment may be effected to any extent, however slight, desired.

Cutting is effected in the usual manner by the use of loose abrasive material forced

against the rock by means of the ends of the blades as they are carried backward and forward by the movement of the saw-beam. I
55 have found that where the beam is made of sufficient strength and suitably constructed these long blades will not chatter when in operation. In some cases, however, it is desirable that the blades be stiffened during the
60 initial part of the cutting operation.

5 5 are blocks or members adapted to be drawn up between two of the blades, the ends being slotted at 6 6 for the purpose of grasping the edges of the blades.

7 is a reach-rod passing through the member 5.

8 is a nut adjustable on the lower end of the reach-rod.

The block 5 may be inserted between the edges of the blades near their lower ends by tilting it, (see position dotted in Fig. 1,) inserting the reach-rod, and then securing it in place by the nut 8. The nut 9 at the top
70 serves to form a readily-accessible means of adjusting the reach-rod 7 and drawing the block 5 into its proper position, as shown in full line, where it rigidly connects the two adjacent blades and affords additional rigidity
75 thereto, so as to prevent wobbling or chattering of the blades while the saw is in operation. This is essential in any case only during the first part of the cutting operation. As soon as the cut has been started to a slight
80 depth in the rock the blocks 5 may be removed and the cut continued without them. Instead of relying upon the pull of the reach-rod to straighten out the stiffener-block between the blades from the position shown dotted to the
85 position in full lines in Fig. 1 I may taper the bearing-blades very slightly—for instance, a taper of one inch on an edge in a length of from six to eight feet. By this construction the stiffener may be inserted at the lower portion and
90 then drawn up to the narrower portion, where it will press upon the opposite edges of the blades and rigidly unite the same.

The advantages of this construction will be apparent to those who are skilled in this art.

What I claim is—

1. In a stone-saw, the combination of a saw-beam, a series of long bearing-blades carried thereby and removable means for reinforcing the lower ends of the blades during the initial
105 part of a cutting operation.

2. In a stone-saw, a saw-beam, a series of
vertically - disposed bearing - blades carried
thereby, stiffening-blocks insertible between
adjacent blades, and means for drawing said
5 blocks into position to rigidly connect and re-
inforce the lower ends of the blades.

3. In a stone-saw, a saw-beam, two or more
blades carried thereby, a stiffening - block

adapted to be inserted between two of the
blades, and a reach-rod with clamping means to
for coacting with said block, for the purpose
specified.

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