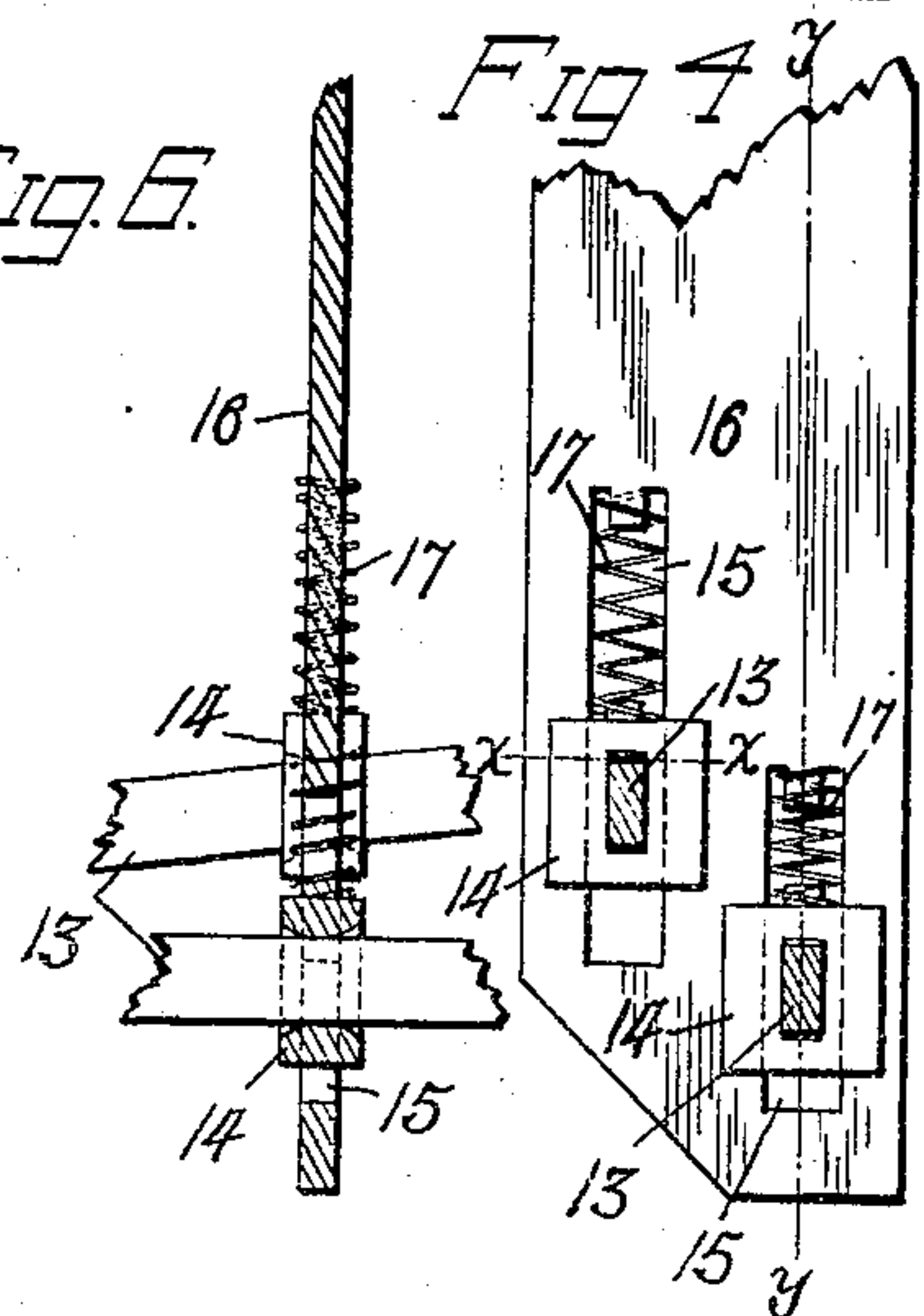
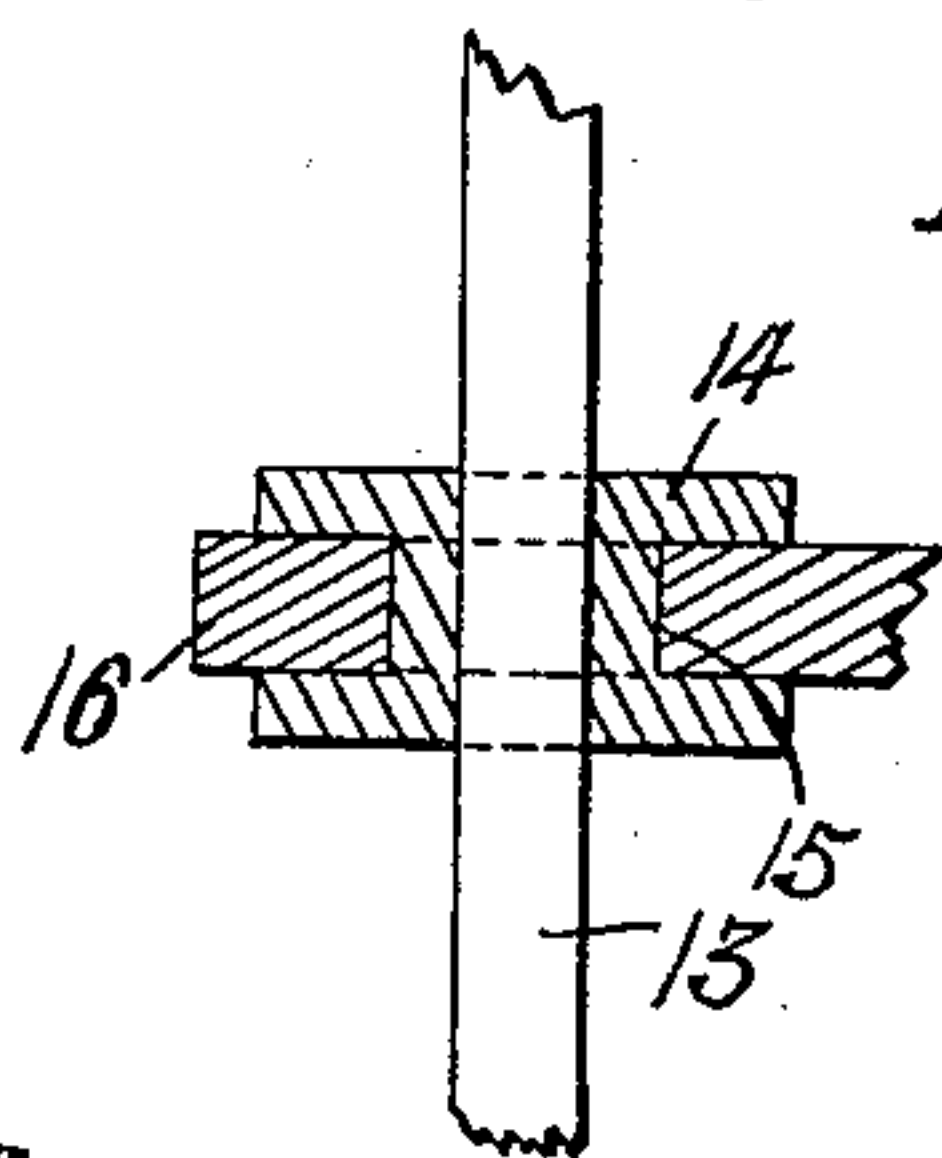
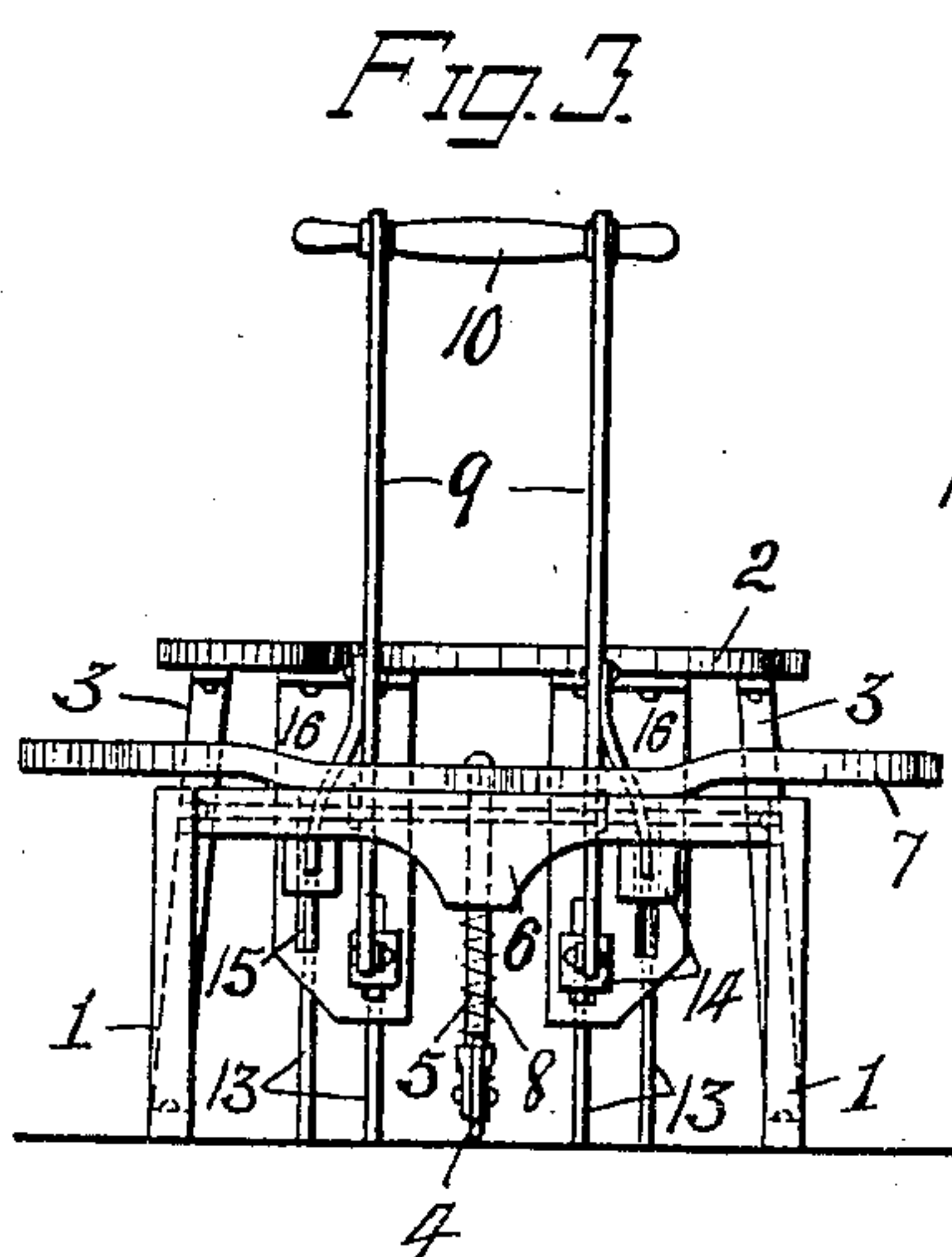
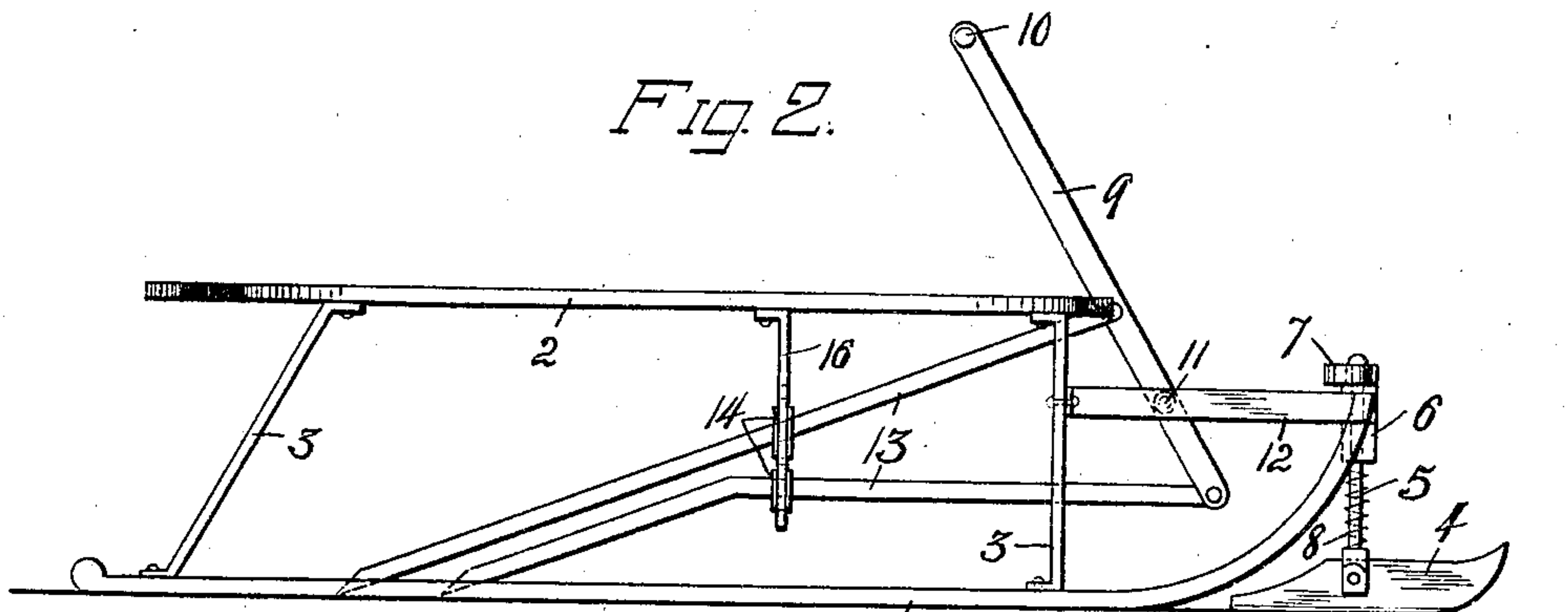


969,348.



INVENTOR
Harry Day,
By Owen & Owen,
His attys

UNITED STATES PATENT OFFICE.

HARRY DAY, OF TOLEDO, OHIO.

MECHANICALLY-PROPELLED SLED.

969,348.

Specification of Letters Patent.

Patented Sept. 6, 1910.

Application filed September 2, 1909. Serial No. 515,745.

To all whom it may concern:

Be it known that I, HARRY DAY, a citizen of the United States, residing at Toledo, in the county of Lucas and State of Ohio, have
5 invented a certain new and useful Mechanically-Propelled Sled; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as
10 it appertains to make and use the same, reference being had to the accompanying drawings, and to the figures of reference marked thereon, which form a part of this specification.

15 My invention relates to hand operated sleds; and has for its object the provision, in association with a sled, of simple, improved and efficient means for rapidly propelling the sled over snow or ice, and which
20 at the same time serves as an exercising means for the operator.

The operation, construction and arrangement of the parts of the invention are fully described in the following specification, and
25 a preferred embodiment thereof illustrated in the accompanying drawings, in which,—

Figure 1 is a plan of a sled embodying my invention, with a portion of the seat broken away. Figs. 2 and 3 are side and front end
30 views, respectively, of the same. Fig. 4 is a front view of a portion of one of the push rod guide-brackets, with such rods in section. Figs. 5 and 6 are sections on the lines
xx and yy, respectively, in Fig. 4.

35 Referring to the drawings, 1, 1 designate the runners, 2 the seat, and 3 the seat-supporting legs of a sled of any suitable construction. A steering-runner 4 is carried at the lower end of a fork-head 5, which is
40 mounted for free vertical and turning movements in the center of a cross-piece 6, connecting the forward ends of the runners 1, and which is fixed at its upper end to a cross or foot-bar 7. The runner 4 is main-
45 tained in yielding contact with the surface over which it is passing by means of a coiled expansion spring 8, the upper and lower ends of which bear against the cross-piece 6 and runner 4, respectively.

50 Disposed in advance of the seat 2 is the operating-lever, which is shown in the present instance as comprising the two lever members 9, 9, which are connected at their upper ends by a handle 10 and are fixed near
55 their lower ends to a shaft 11, the ends of

which are suitably journaled in frame-pieces 12, 12, extending from the forward ends of the runners 1 to the forward legs 3 of the sled.

Pivotaly attached at their forward ends 60 to each lever 9 is a pair of push or kicker-rods 13, 13, which are attached to their respective levers at equal distances above and below the shaft 11, as shown. These rods project through guide-blocks or boxes 14, 65 14, which are suitably mounted for vertical movements in vertically-disposed slots 15, 15 provided in brackets 16, which are pendently secured to the bottom of the seat 2, one of such brackets being provided for each 70 set of push-rods, as shown. The rods 13 are each pointed at their rear ends and declined rearwardly or angled as shown to adapt them when the levers 9 are oscillated to dig into the snow or ice over which the 75 sled is passing and thus propel the sled. The pointed or rear ends of the rods are held in yielding contact with the surface of the snow or ice by means of coiled expansion springs 17, one of which is dis- 80 posed between each guide-block 14 and the upper end of the associated slot 15.

It is apparent that to propel the sled it is only necessary for the operator to seat himself on the sled, place his feet on the 85 ends of the foot-bar 7 for the steering of the sled through the medium of the steering-runner 4, and then work the levers 9, 9 back and forth. The oscillatory movements of the levers 9 causes the upper and lower 90 sets of push-rods 13 to alternately kick back with their pointed ends in engagement with the surface over which the sled is running and effect a propelling of the sled.

I wish it understood that my invention is 95 not limited to any specific construction or arrangement of the parts, except in so far as such limitations are specified in the claims.

Having thus described my invention what 100 I claim as new and desire to secure by Letters Patent, is,—

1. The combination with a sled, of a lever fulcrumed thereto, push-rods pivotaly projecting rearwardly from said lever from 105 above and below its fulcrum and having their rear ends pointed, a pendent bracket carried by the sled seat and having vertical slots therein, and guide-blocks mounted in said slots for yielding vertical movements 110

therein and having openings therethrough through which said rods loosely pass.

2. The combination with a sled, of a lever fulcrumed thereto, push-rods pivotally projecting rearwardly from and operated by an oscillation of the lever, blocks through which the push-rods freely work, means guiding the vertical movements of such blocks, and means yieldingly acting on the
5
10 blocks to cause the rear ends of the rods

to be held in yielding contact with the surface over which the sled is passing.

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

HARRY DAY.

Witnesses:

C. W. OWEN,

CORNELL SCHREIBER.