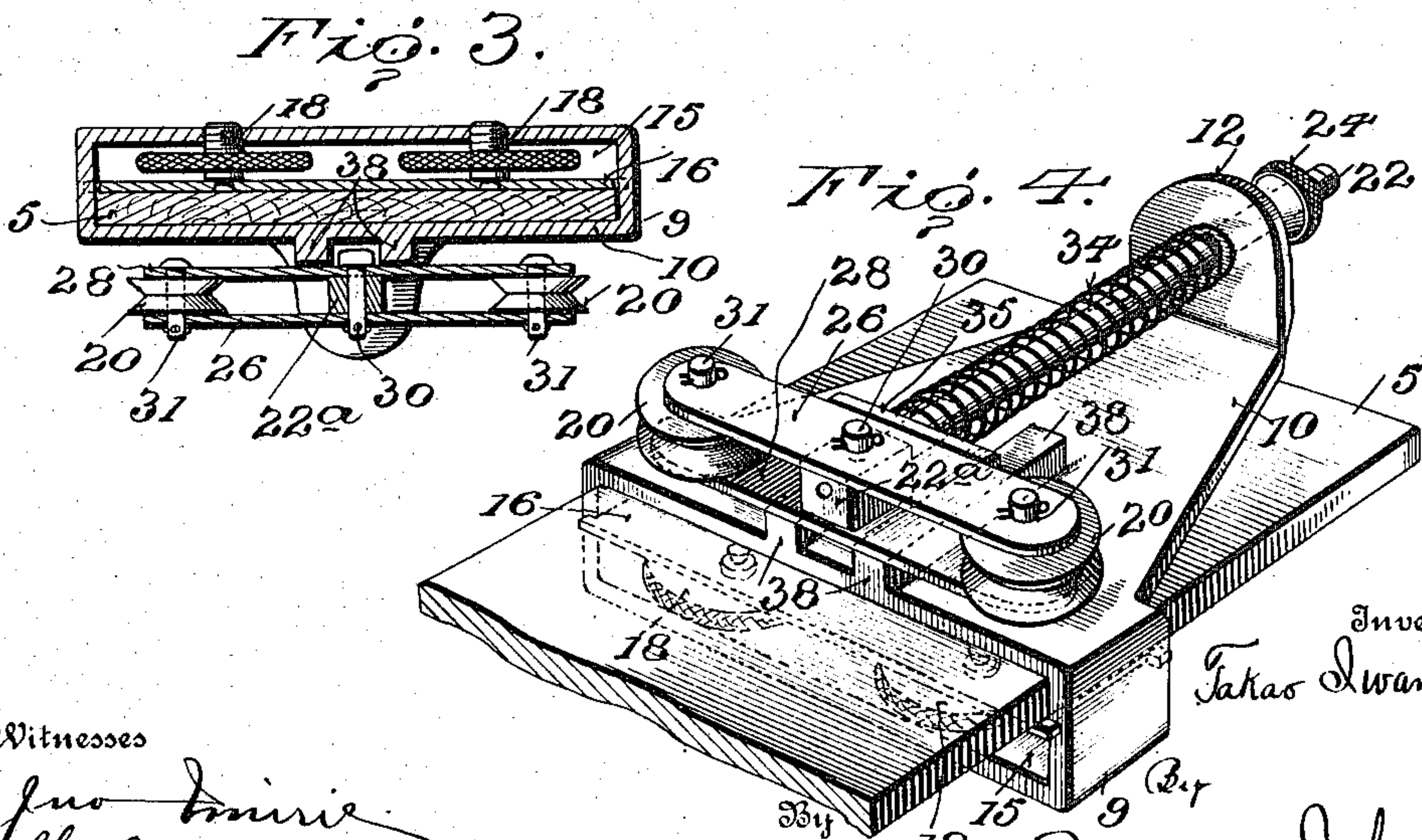
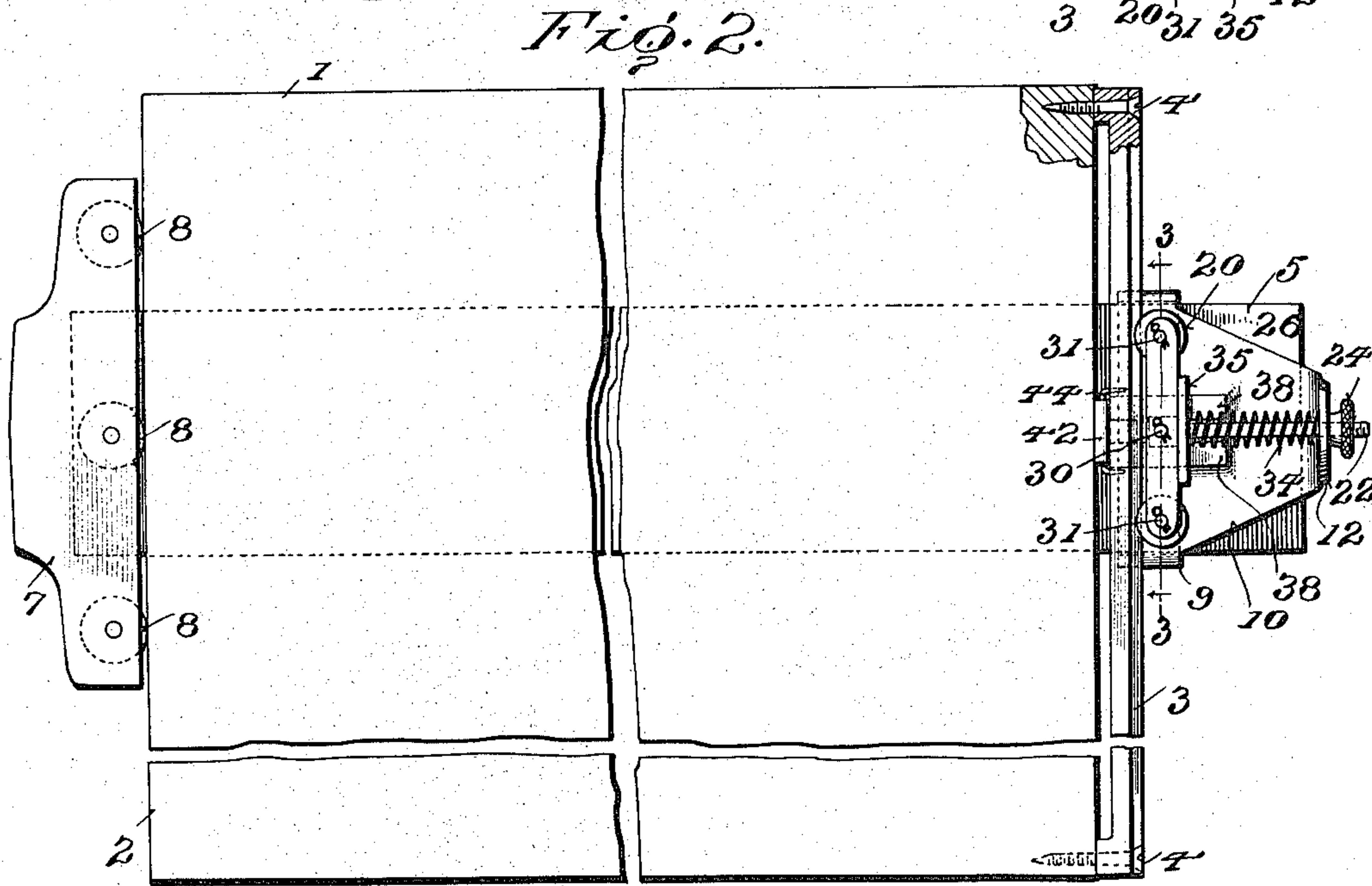
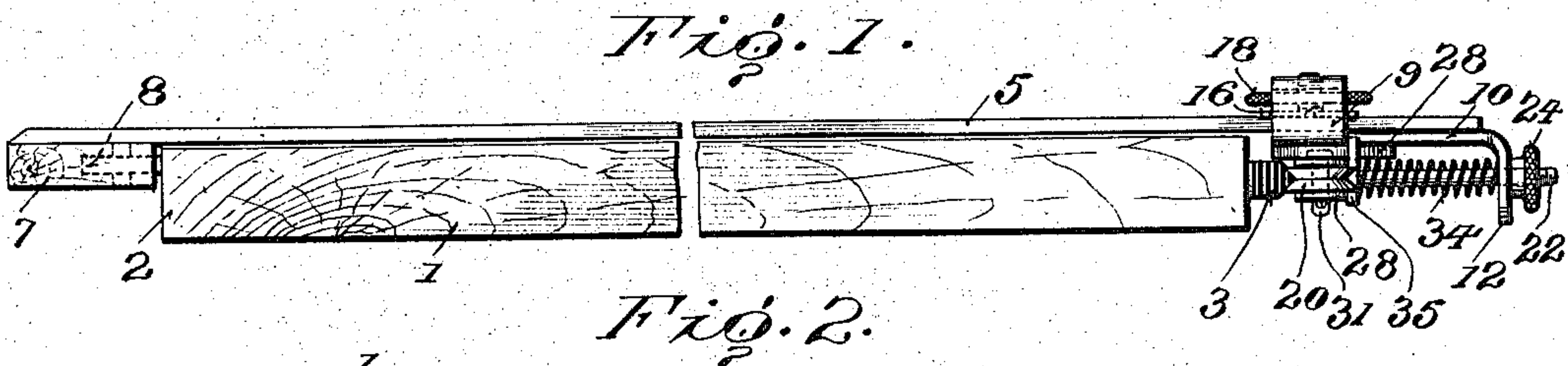


T. IWANAMI.
STRAIGHT EDGE AND HOLDER.
APPLICATION FILED NOV. 4, 1907.

975,956.

Patented Nov. 15, 1910.



Witnesses

Jno. Emire.
H. S. Emire.

Inventor
Takao Iwanami.

Robertson & Johnson
Attorneys.

UNITED STATES PATENT OFFICE.

TAKAO IWANAMI, OF WASHINGTON, DISTRICT OF COLUMBIA.

STRAIGHT-EDGE AND HOLDER.

975,956.

Specification of Letters Patent.

Patented Nov. 15, 1910.

Application filed November 4, 1907. Serial No. 400,632.

To all whom it may concern:

Be it known that I, TAKAO IWANAMI, a subject of the Emperor of Japan, and resident of Washington, in the District of Columbia, have invented certain new and useful Improvements in Straight-Edges and Holders, of which the following is a specification.

This invention relates to an improvement in straight edge and holder for use in connection with drawing boards and the object of the invention is to produce a ruling device capable of use on large boards and yet permit of easy adjustment and at the same time be sustained on opposite sides of the board so as to relieve the draftsman of all care in connection with the support of the device.

In its preferable embodiment the straight edge is formed in the shape of a T-square with anti-friction rollers arranged at the head of the square adapted to contact with a straight edge on the drawing board while, at the other end of the blade there is a movable or shiftable carriage provided with rollers which are adapted to cooperate with a track formed on or connected to the board.

With this general statement my invention may be said to consist of the device as illustrated in the form in which I now prefer to make it in the accompanying drawings and as hereinafter described and claimed.

In the drawings accompanying and forming part hereof: Figure 1 is an end view of a drawing board having my invention supported thereon. Fig. 2 is a bottom plan of a drawing board having my device supported thereon. Fig. 3 is a cross-section through the line 3, 3 of Fig. 2. Fig. 4 is an inverted view.

Referring to the details of the drawings by numerals: 1 designates an ordinary drawing board having a true straight edge 2 on one side thereof and at the other side there may be supported any form of track 3. This track, however, is not essential since it may be omitted if desired, or it may be formed directly on the board; but I prefer a track supported on its sides at 4, 4, as shown in Fig. 2, for reasons which will be hereinafter stated.

The straight edge may be, as illustrated in Figs. 1 and 2, a T-square comprising the ordinary blade 5 and the T-head 7, the latter

being provided with anti-friction rollers 8 which are adapted to contact with the straight edge 2 of the board as clearly shown in Figs. 1 and 2. The free end of the blade 5 has connected to it, as illustrated in Figs. 1 and 2, a hanger 9 from which is suspended a support 10, the latter having a downward projection 12. The hanger 9 has a recess or opening 15 clearly seen in Fig. 3 and the blade 5 is adapted to fit within this recess and immediately over it rests a bearing plate 16 and between this bearing plate and the upper member of the hanger 9 are arranged two clamping screws 18; the construction being such that when the clamping screws 18 are turned in one direction they clamp the blade 5 between the plate 16 and the lower member of the hanger 9, whereas when the clamping screws 18 are turned in the opposite direction the plate 16 is released so that the hanger 9 may be moved or adjusted on the blade 5 with respect to the board 1.

The downward extension 12 which has been referred to is for the purpose of supporting the grooved rollers 20 which coast with the rail 3 to support the free end of the blade 5, and to this end a bolt or pin 22 has its end projecting through an opening in the end of the downward extension 12 and the end of this bolt or pin is provided with an adjusting screw 24. At the opposite end the bolt or pin is provided with a perforated, flattened portion 22^a on opposite sides of which are connected plates 26 and 28 by means of a pin 30. These two plates support, at opposite ends thereof, the rollers 20 on journals 31. A spring 34 is located around said pin 30 and acts between the downward extension 12 and a plate 35 and normally tends to press the rollers 20 away from the downward extension 12 and thus keep them in contact with their rail or track 3. The plates 26 and 28 are loosely supported on the flattened end 22^a of the pin 22 and thus are permitted to partake of a slight pivotal movement should there be any irregularities or dents on the rail or track 3, and in order to form a guide, I form two ribs 38 on the bottom of support 10, in which projects the head of the aforesaid pin 30.

The rail or track 3 which has been before described is purposely supported at its ends only by countersunk screws 4, in such a

manner as to leave a space between almost the entire rail and the edge of the board to which it is secured. This space is for the purpose of permitting the paper of large drawings to be slipped down between the edge of the board and the rail 3. To support the rail at its center and yet permit of the paper being slipped down as just described, I connect to the rail 3 a roller 42 which is journaled on a support 44, and it will be understood that while this roller 42 supports the rail 3 at the center, the rail is sufficiently "springy" to permit of its being sprung outward slightly so that the roller 42 will move with it sufficiently to slip the end of the drawing paper down between it and the end of the board.

It will be evident that instead of using an ordinary T-square, an ordinary straight edge may be used, and that it may be supported at each end by means of my support and carriage.

What I claim as my invention is:—

1. In a device of the character described, a holder for a straight edge comprising means for supporting the straight edge and a carriage adapted to contact with an edge of a board, said carriage being pivotally supported with respect to said holder thereby permitting it to take up any inequalities in the edge of the board, substantially as described.

2. In a device of the character described, a holder for a straight edge comprising means for supporting the straight edge, and a carriage coacting therewith and adapted to contact with an edge of a board, said carriage having a spring actuated pivotal connection with the holder permitting it to yield in the event of inequalities in the board, substantially as described.

3. In a device of the character described, a holder for a straight edge comprising means for adjustably connecting it to a straight edge and a spring actuated carriage coacting therewith and having rollers spaced some distance apart and adapted to contact with an edge of a board, said spring and said rollers being in substantially the same plane substantially as described.

4. In a device of the character described, a holder for a straight edge comprising means for supporting the straight edge and a spring actuated carriage coacting therewith and having rollers adapted to contact with an edge of a board, said rollers and their carriage having a yielding and pivotal movement to take up any inequalities in the board, substantially as described.

5. In a device of the character described, a straight edge, means at one end of the straight edge for coacting with a drawing board, and a holder at the opposite end of the straight edge provided with means for adjustably connecting it with said straight

edge and having a spring actuated carriage provided with rollers adapted to contact with an edge of a board, said spring and said rollers being in substantially the same plane substantially as described.

6. In a device of the character described, a board having a track or rail at one side thereof, a straight edge coacting with said board and having means for coacting with one edge of the board and a holder for coacting with the edge provided with the track, said holder having means for adjustably connecting with the straight edge and a spring actuated carriage coacting with said means and carrying rollers adapted to run on said track, said rollers, said track and said spring all being located underneath said holder and all being substantially in the same plane substantially as described.

7. In a device of the character described, a board having a track or rail at one side thereof, said track being supported at the ends and having a space of the full depth of the track between the track and the board proper for the passage of paper, in combination with a straight edge, means for supporting said straight edge and a spring actuated carriage coacting with said means and having rollers adapted to contact with said track, substantially as described.

8. In a device of the character described, a board having a track or rail at one side thereof, said track being supported at the ends and having a space of the full depth of the track between the track and the board proper for the passage of paper, and said track carrying supporting means near its center, in combination with a straight edge, means for supporting said straight edge and a spring actuated carriage coacting with said means and having rollers adapted to contact with said track, substantially as described.

9. In a device of the character described, an attachment comprising means for clamping it to a straight edge and a spring supported carriage carrying rollers spaced some distance apart and adapted to contact with an edge of a board, said spring and said rollers being in substantially the same plane substantially as described.

10. In a device of the character described, an attachment comprising a holder, means for clamping it to a straight edge, and a spring supported carriage carrying rollers adapted to contact with an edge of a board, said rollers being in substantially the same plane with said spring and free to move to take up inequalities of the board, substantially as described.

11. In a device of the character described, an attachment comprising a holder having a recess for the reception of a blade, means for clamping a straight edge, a support projecting from said means, and a spring sup-

ported carriage carried by said support, said carriage having rollers said spring and said rollers being in substantially the same plane with each other and below the blade supporting means adapted to contact with an edge of a board, substantially as described.

12. In a device of the character described, an attachment comprising a holder, means for clamping it to a straight edge, and a spring supported carriage carrying rollers adapted to contact with an edge of a board, said carriage and its rollers having pivotal movement to take up any inequalities in a board, substantially as described.

13. In a device of the character described, an attachment comprising means for clamping it to a board, and a carriage comprising a spring supported bolt or pin, plates pivotally connected with said bolt or pin and rollers carried by said plates, said pivotal connection permitting the rollers to take up any inequalities, substantially as described.

14. In a device of the character described, an attachment having a recess for receiving a straight edge, means for clamping a straight edge in said recess, a support projecting from said attachment, a bolt or pin carried by said support, plates connected

with said bolt or pin, and rollers carried by said plates, substantially as described.

15. In a device of the character described, an attachment having a recess for receiving a straight edge, means for clamping a straight edge in said recess, a support projecting from said attachment, a bolt or pin carried by said support, plates connected with said bolt or pin, rollers carried by said plates, and a spring coacting with said plates and rollers, the tension of said spring being adjustable substantially as described.

16. In a device of the character described, an attachment comprising a support having a recess adapted to receive a straight edge, a plate in said recess, clamping screws causing said plate to clamp a straight edge, a bolt or pin projecting from said support, plates pivoted to said bolt or pin, rollers carried by said plates, and a spring around said bolt or pin coacting with said plates and rollers, substantially as described.

Signed by me at Washington, D. C., this 2nd day of November 1907.

TAKAO IWANAMI.

Witnesses:

JOHN B. MCCARTHY,
DAISY CROSBY.