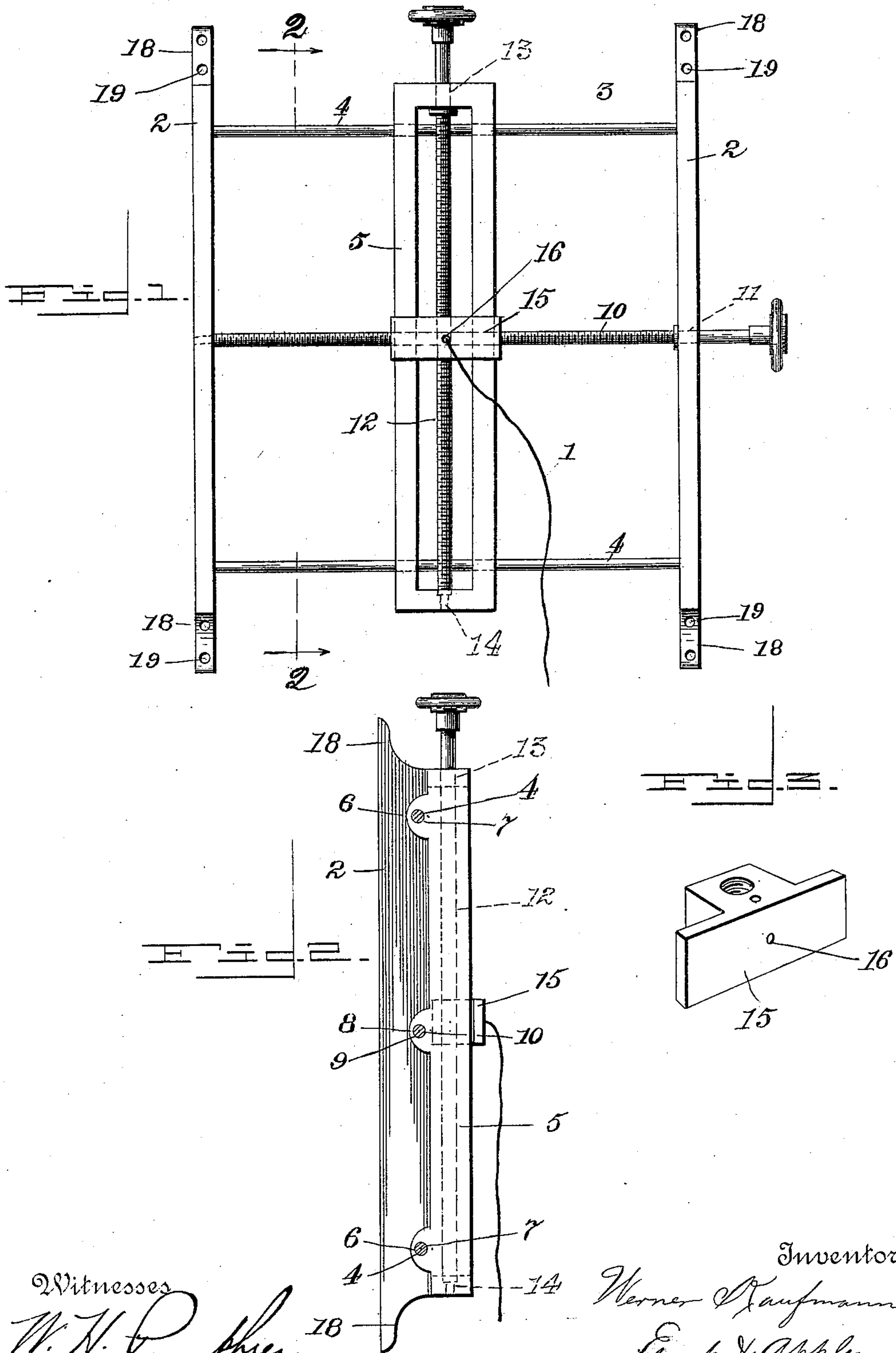


(No Model.)

W. KAUFMANN.
LINE ADJUSTER.

No. 552,184.

Patented Dec. 31, 1895.



Witnesses
W. H. Humphrey
Rogers Whitcomb

Inventor
Werner Kaufmann
Ewert & Appleman
Attorneys,

UNITED STATES PATENT OFFICE.

WERNER KAUFMANN, OF PITTSBURG, PENNSYLVANIA.

LINE-ADJUSTER.

SPECIFICATION forming part of Letters Patent No. 552,184, dated December 31, 1895.

Application filed October 25, 1893. Serial No. 489,103. (No model.)

To all whom it may concern:

Be it known that I, WERNER KAUFMANN, a citizen of the United States of America, residing at Pittsburg, in the county of Allegheny and State of Pennsylvania, have invented certain new and useful Improvements in Line-Adjusters, of which the following is a specification, reference being had to the accompanying drawings.

10 This invention relates to line-adjusters and lining instruments in general, and is particularly designed and adapted to be employed in connection with all kinds of machinery where it is essential to place them on a straight line
15 in order to operate the same successfully.

The invention has for its object the provision of novel means whereby a string or cord may be accurately adjusted and securely held within any point of a given square; furthermore, to construct a device that will be extremely simple and thoroughly efficient in its operation, a still further object of the invention being to construct a set of instruments of this class that will be strong, durable, and
25 comparatively inexpensive to manufacture.

The invention consists in a suitable frame inclosing a cord-guide capable of an adjustment within a given compass, as will be hereinafter more particularly described, and specifically pointed out in the claims.

30 In describing the invention in detail reference is had to the accompanying drawings, forming a part of this specification, and wherein like numerals of reference indicate corresponding parts throughout the several views, in which—

40 Figure 1 is a front elevation of my line-adjuster. Fig. 2 is a side view of the same, partly in section, on the line 2 2 of Fig. 1. Fig. 3 is a detail view of the cord-guide.

50 In the drawings, 1 indicates the string or cord, 2 2 the duplicate vertical metallic strips forming the sides of the rectangular frame 3, and the horizontal guide-bars 4 4 forming the upper and lower sections of the same. An oblong-shaped carriage 5 is slidingly mounted on the horizontal guides, said carriage having formed on its under side, near its upper and lower extremity, lugs 6 6 containing apertures
7 7, through which the horizontal guide-bars are passed.

The carriage has at or near its center lugs

8 8, having screw-threaded apertures 9 9, through which the horizontal adjusting-screw 10 operates. Said screw also extends through the aperture 11 of the vertical side strip and receives its bearing in the vertical strip at the opposite side. The carriage is further provided with an adjusting-screw 12, operating through an aperture 13 through the top of the carriage and extending downwardly to the seat 14 at the bottom of the carriage. The adjusting-screw 12 carries the cord-guide 15, the path of travel being regulated and governed by the sides of the carriage. This guide is provided with an aperture 16, the bore of which extends downwardly through the guide for the insertion of the cord. At the under side of said guide a V-shaped groove may be formed. The ends of the vertical strips are beveled, as shown at 18, and provided with apertures 19 for the reception of the securing-screws.

Operation: It will be apparent that by turning the horizontal adjusting-screw the carriage will be moved from side to side. When it is desired to obtain a vertical adjustment, the vertical screw is operated in the desired direction. For the purpose of illustrating the practical application of the instrument let us assume that a steam-engine is to be set in proper position. The instruments are secured to suitable standards or walls, the line drawn through the center of the cylinder and slide, thence toward the fly-wheel in alignment with the center of the crank and pin. The measurements are then made with the calipers in the well-known manner and the instruments adjusted at either end until the alignment is perfectly true. The cord or line may be drawn at either instrument and placed in the V-shaped groove in order to retain the cord taut.

The above is only one of the many purposes for which the instrument may be used. It will be obvious the instrument may be employed when rails are set in position or when locomotives are built to adjust the different parts in proper alignment.

It will be particularly noted that various changes may be made in the details of construction without departing from the general idea involved.

Having fully described my invention, what I claim as new, and desire to obtain by Letters Patent, is—

1. A line adjuster consisting of a base frame, the upper and lower sections of which form guide bars, a carriage mounted on the guide bars, a screw journaled in the side of the frame and working in screw threaded apertures of the carriage, a cord guide slidable
5 on the carriage, and a screw-threaded adjusting rod journaled in the ends of the carriage and connecting with the cord guide whereby
10 it is adjusted, substantially as described.

2. A line adjuster consisting of a base frame, the upper and lower sections of the same being designed as guide bars, a cord carriage mount-

ed on the guide bars, and provided with a screw to adjust the carriage, a cord guide slidable 15 on the carriage and a screw-threaded adjusting rod journaled in the ends of the carriage and connected with the cord guide as and for the purpose specified.

In testimony whereof I affix my signature 20 in presence of two witnesses.

WERNER KAUFMANN.

Witnesses:

H. C. EVERT,

H. E. SEIBERT.