No. 704,307. Patented July 8, 1902.

O. EICHENBERGER.

PERSPECTOGRAPH.

(Application filed Oct. 22, 1901.)

(No Model.)

3 Sheets—Sheet 1.

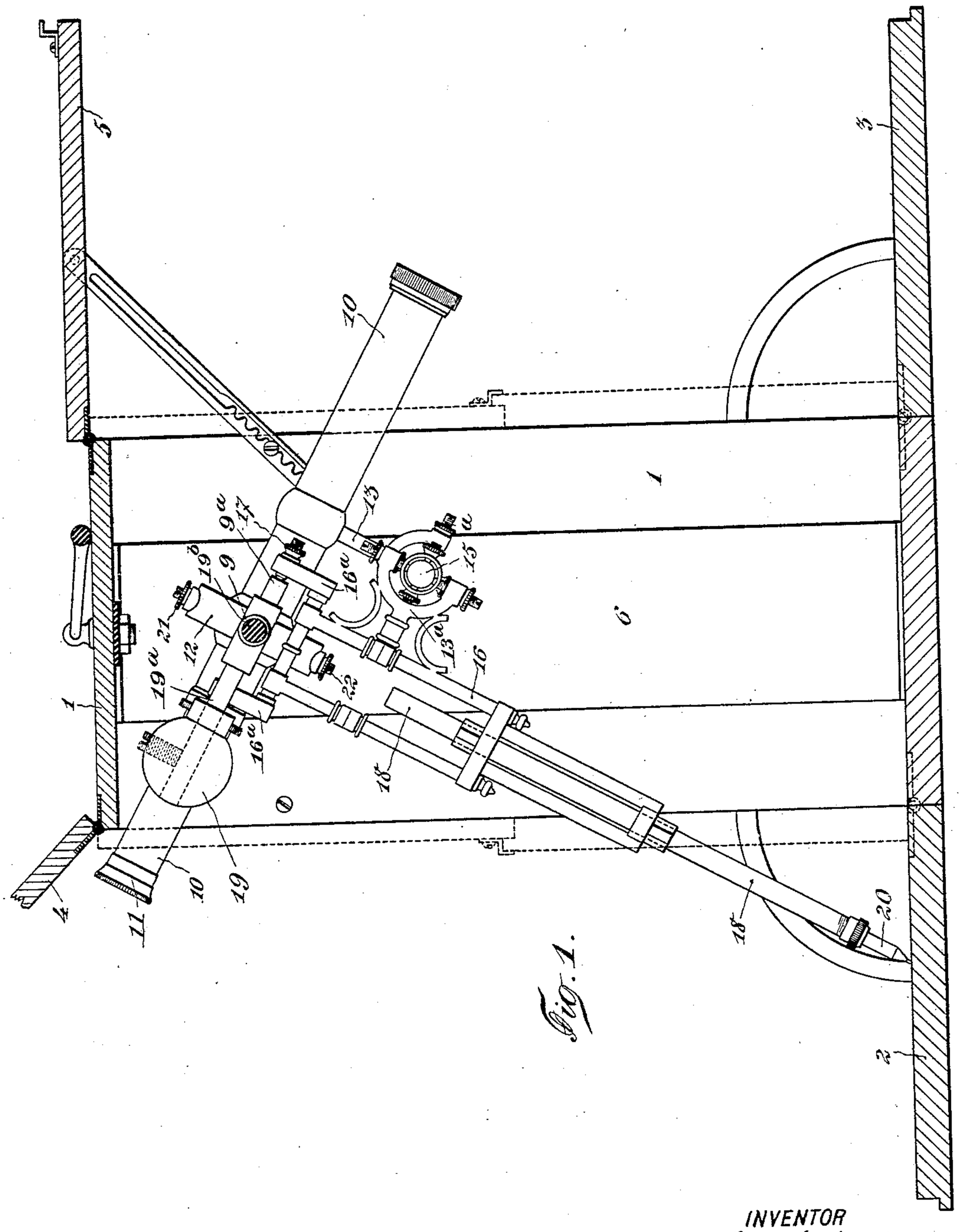

Fig. 1.

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George B. Gubel
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(No Model.) 3 Sheets—Sheet 2.

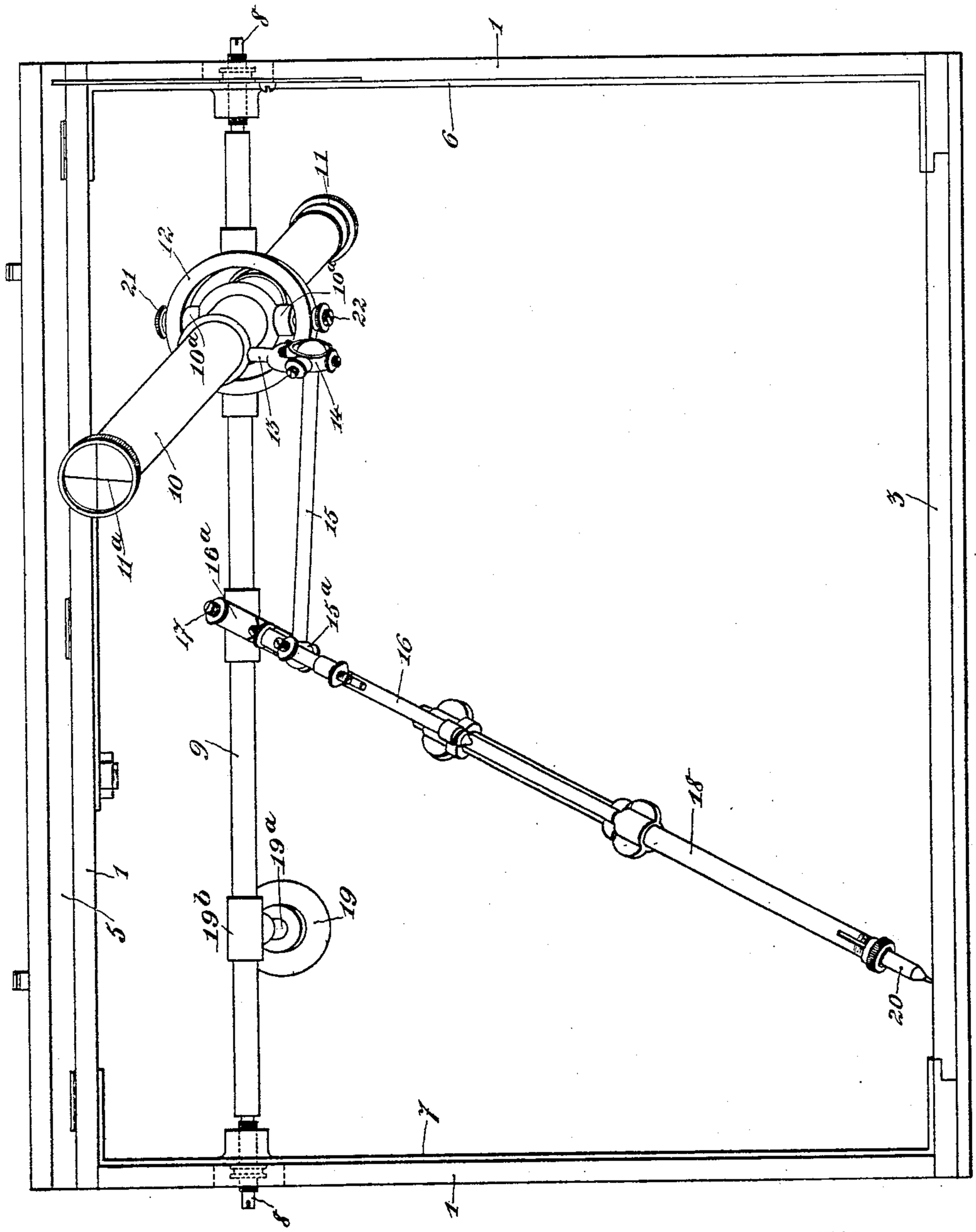

Fig. 2.

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PERSPECTOGRAPH.

(Application filed Oct. 22, 1901.)

(No Model.) 3 Sheets—Sheet 3.

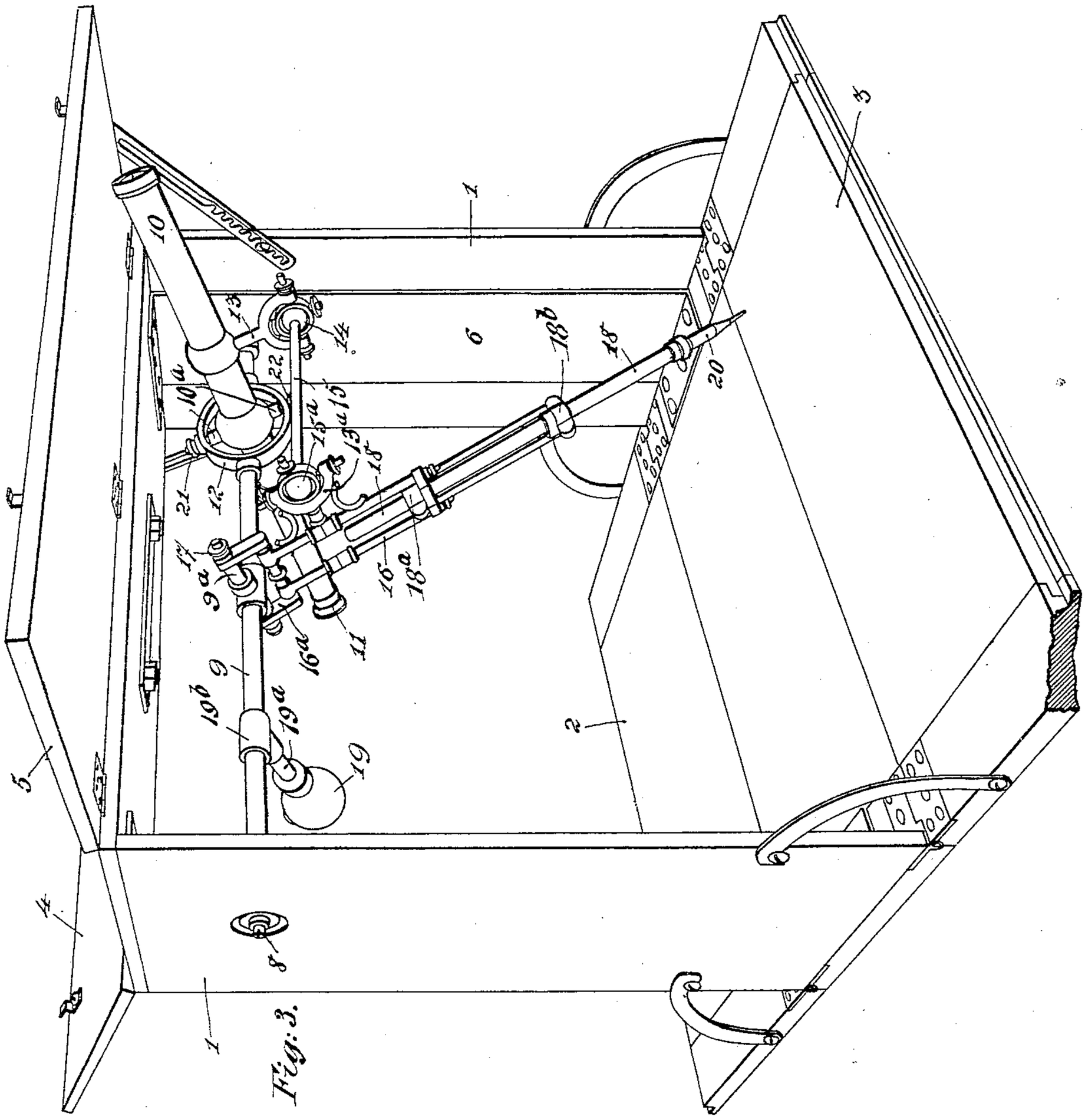

Fig. 3.

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UNITED STATES PATENT OFFICE.

OTTO EICHENBERGER, OF GENEVA, SWITZERLAND, ASSIGNOR TO PAUL GALOPIN, OF GENEVA, SWITZERLAND.

PERSPECTOGRAPH.

SPECIFICATION forming part of Letters Patent No. 704,307, dated July 8, 1902.

Application filed October 22, 1901. Serial No. 79,560. (No model.)

To all whom it may concern:

Be it known that I, OTTO EICHENBERGER, mechanician, a citizen of the Republic of Switzerland, and a resident of Geneva, Switzerland, have invented a Perspectograph, of which the following is a specification.

This invention relates to a perspectograph of improved construction that can be operated with facility and accuracy.

The invention consists of a perspectograph comprising a pivotal shaft supported in suitable standards, a telescope, and a pencil-holding frame, each independently mounted on said shaft, said pencil-holding frame being adapted to move in plane at right angles with the telescope, and means for connecting said telescope and the pencil-holding frame so that they act in conjunction, as will be more fully described hereinafter and finally set forth in the claims, reference being had to the accompanying drawings, of which—

Figure 1 is a side view of the device supported in a foldable casing, the latter shown in open position and in cross-section. Fig. 2 is a front view showing the telescope in changed position; and Fig. 3 is a perspective view of the invention, showing the casing in open position.

Similar numerals of reference indicate corresponding parts.

Referring to the drawings, the device consists of a telescope and pencil-holding frame mounted upon a pivotal shaft, which latter is supported in any suitable manner.

The device is supported in a foldable casing 1, the sides of which consist of the lower side portions 2 and 3, hinged to the bottom, and the upper side portions 4 and 5, hinged to the top, of the casing. The side portions 2 and 3 form, with the base of the casing, when they are in open position a suitable drawing-board, upon which a sheet of paper is placed. The upper side portions or the top side portions may be supported in any suitable manner when it is desired to use the device. The pivotal shaft 9 is supported in the ends of the casing 6 and 7 by means of the journals 8.

Adjacent one end of the pivotal shaft 9 is supported the telescope 10, having the eye-piece 11 at one end and the cross-hairs 11^a at the opposite end. The telescope is mounted on the shaft 9 by means of the ring 12, having the adjustable bearings 21 and 22, which engage the pivotal arms 10^a of the telescope. About medially of the pivotal shaft is mounted the pencil-holding frame 16, having the arms 16^a at its upper end, that are pivotally secured to the diametrical arms 9^a of the pivotal shaft. The frame 16 consists of two rectangular sections that are rigidly secured together endwise and are respectively provided at their lower ends with the collars 18^a 18^b, in which is guided the rod 18, that carries at its lower end the pencil 20. The pivotal lugs 10^a of the telescope and the diametrical arms 9^a of the pivotal shaft are disposed at right angles to each other, so that the telescope and the pencil-holding frame are at all times in relatively right-angular planes; but the pencil-holding frame is movable to any angular position relative to the telescope in a plane at right angles thereto.

The telescope 10 and the pencil-holding frame 16 are connected by the rod 15 by means of the universal joints 14 and 15^a at the ends thereof that are respectively mounted on the telescope and the pencil-holding frame at points equidistant from their respective pivotal centers on the pivotal shaft. These universal joints 14 and 15^a are mounted in the yoke-shaped supports 13 and 13^a, respectively, of the telescope and pencil-holding frame. In order to effect a proper balancing of the telescope and pencil-holding frame, the weight 19 is adjustably supported upon the arm 19^a of the sleeve 19^b on the pivotal shaft. The weight 19 can be adjusted inwardly or outwardly on the arm 19^a, so as to obtain a proper adjustment of the device. The pencil-holding frame being connected with the telescope by means of the connecting-rod any movement of the telescope will cause the pencil-holding frame to move in a corresponding direction. A sheet of paper is secured to the drawing-board of the device, and the pencil is placed in contact thereon and the observations are then taken, the movements of the telescope being traced on the paper in an accurate manner by reason of the peculiar construction and the delicacy of the adjustment of the device.

Having thus described my invention, I

claim as new and desire to secure by Letters Patent—

1. In a perspectograph, the combination, of a pivotal shaft, standards therefor, a telescope mounted on said shaft, a pencil-holding frame independently mounted on said shaft in a plane at right angles to said telescope, and a rod connecting said telescope and pencil-holding frame, substantially as set forth.

2. In a perspectograph, the combination of a pivotal shaft, standards therefor, a telescope mounted on said shaft, a pencil-holding frame independently mounted on said shaft in a plane at right angles to said telescope, and a rod connecting said telescope and pencil-holding frame at points equidistant from their respective pivotal centers, substantially as set forth.

3. In a perspectograph, the combination, of a pivotal shaft supported on suitable standards, a telescope, a ring provided in said shaft, lugs on said telescope for mounting the telescope in said ring, a pencil-holding frame pivotally mounted on said shaft a suitable distance from said telescope and movable in a plane at right angles thereto, and a rod provided with universal joints for connecting with said telescope and pencil-holding frame at similar points relatively to their respective pivotal centers, substantially as set forth.

In testimony that I claim the foregoing as my invention I have signed my name in presence of two subscribing witnesses.

OTTO EICHENBERGER. [L. S.]

Witnesses:
E. IMER-SCHNEIDER,
L. H. MUNIER.