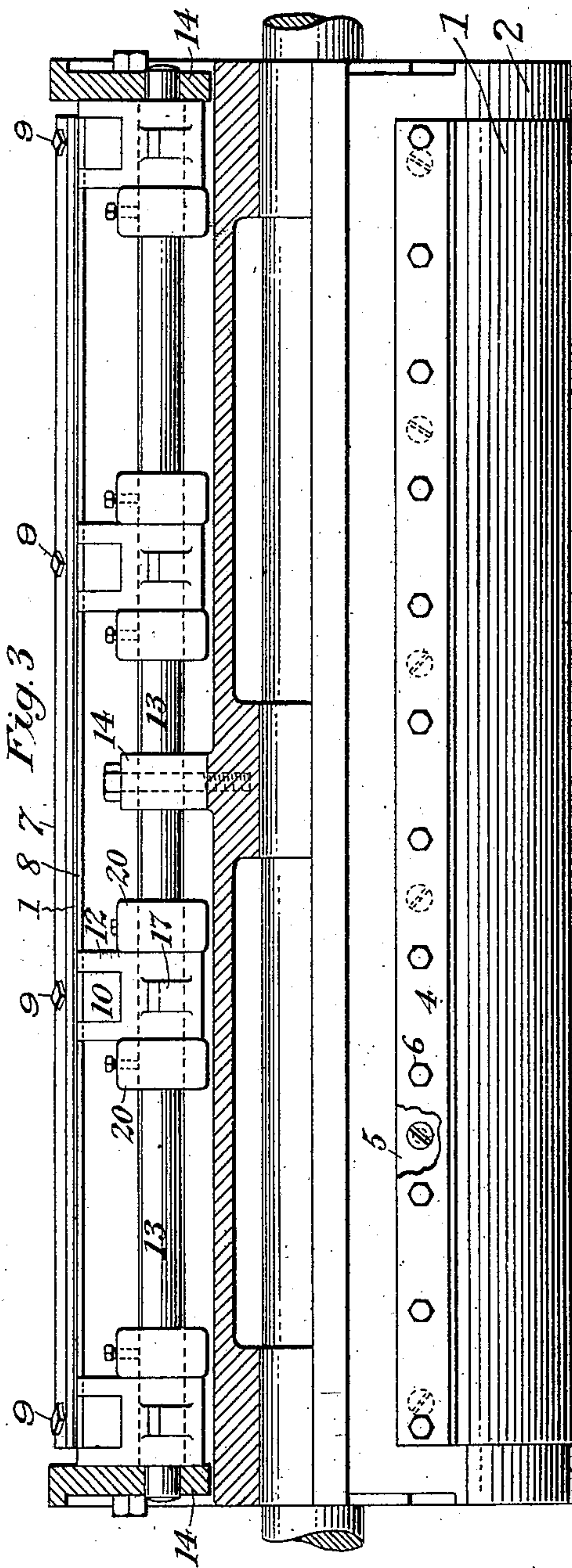
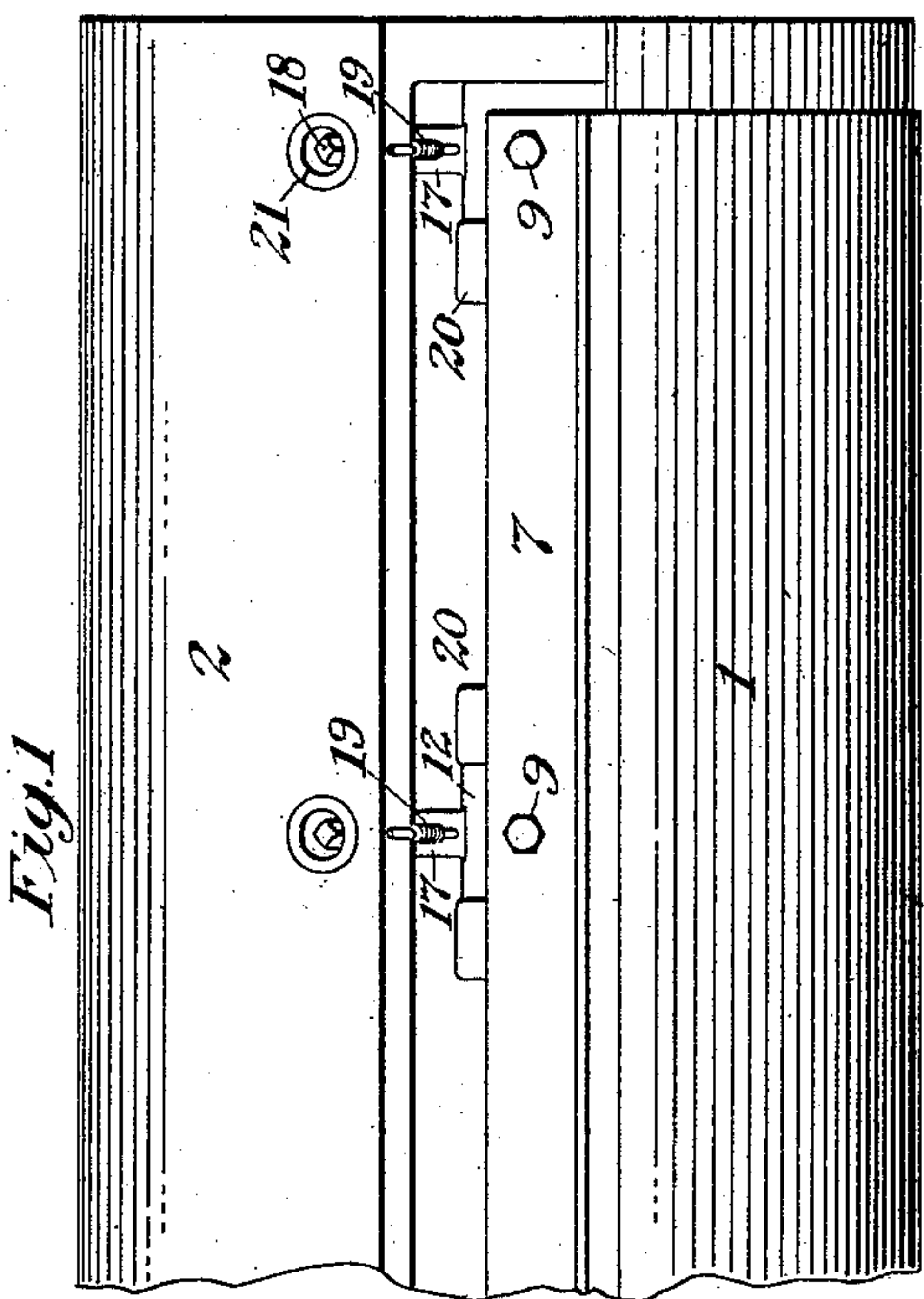
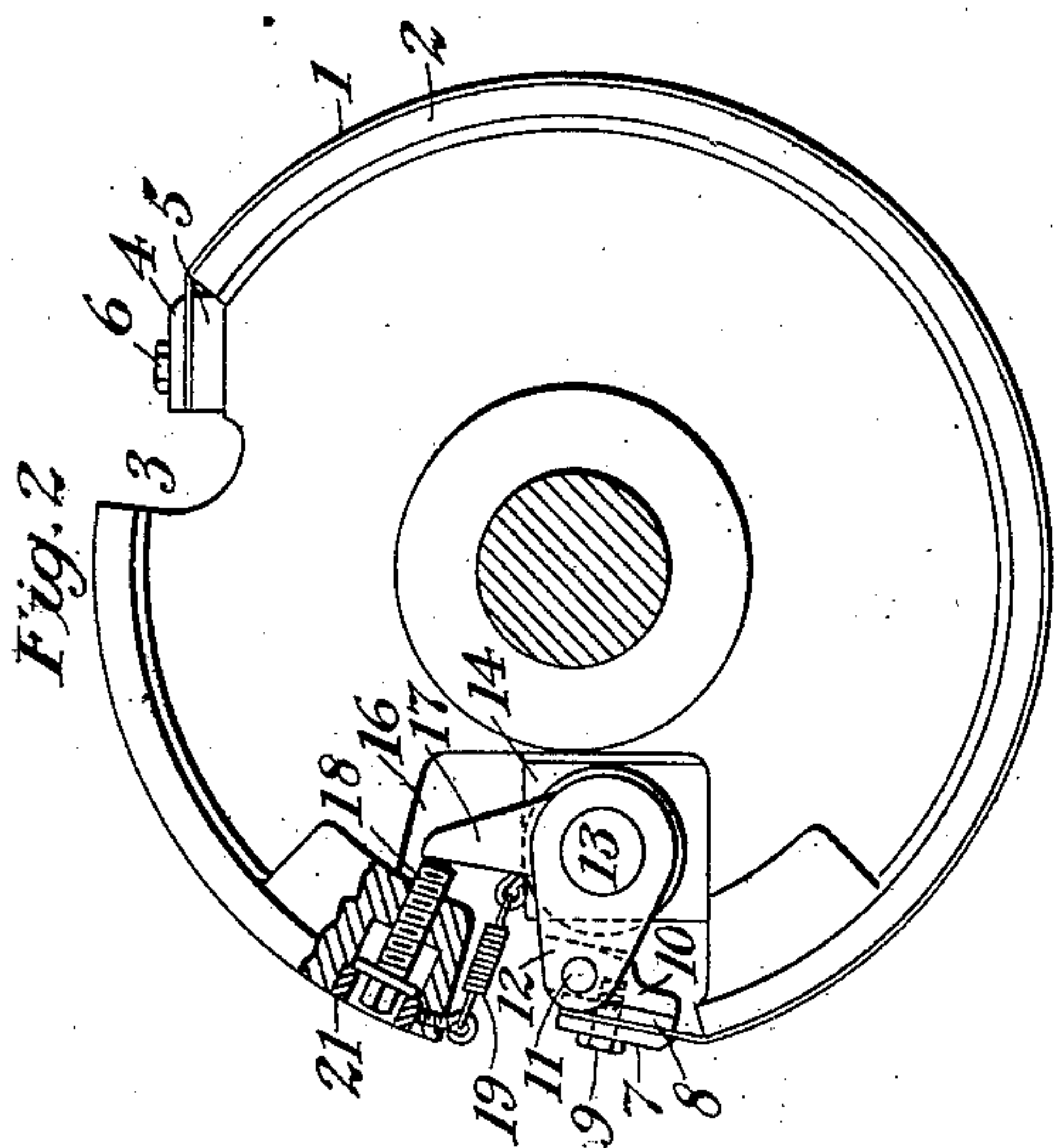


A. J. FORD.
PLATE CLAMP.

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915,088.

Patented Mar. 16, 1909.



Witnesses:

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UNITED STATES PATENT OFFICE.

ALBERT J. FORD, OF NEW YORK, N. Y., ASSIGNOR TO FUCHS AND LANG MANUFACTURING COMPANY, A CORPORATION OF NEW YORK.

PLATE-CLAMP.

No. 915,088.

Specification of Letters Patent.

Patented March 16, 1909.

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To all whom it may concern:

Be it known that I, ALBERT J. FORD, a citizen of the United States, residing at the borough of Manhattan, city of New York, in the county of New York and State of New York, have invented a certain new and useful Improvement in Plate - Clamps, of which the following is a specification, reference being had therein to the accompanying drawings, forming part thereof.

My invention relates to means for clamping and adjusting a stereotype plate or other sheet material upon the cylinder or platen of a printing press, and the object of the invention is to produce a device of this character which is simple and convenient in construction and operation and which will operate without injury to the plate secured thereby.

The invention consists in the improved plate clamps hereinafter described, as defined in the succeeding claims.

I will now describe the embodiment of the invention illustrated in the accompanying drawings, and will thereafter point out my invention in claims.

Figure 1 is a front elevation of a portion of a form cylinder provided with a plate clamp constructed in accordance with the present invention. Fig. 2 is a transverse section of the cylinder and clamp. Fig. 3 is a plan view, partly in section, of the entire cylinder and clamp.

In the illustrated embodiment of the invention a plate 1 of thin sheet material is bent around and secured upon a form cylinder 2 of a rotary printing press. One edge of the plate is secured by a fixed clamp located in a longitudinal recess 3 in the cylinder. This clamp comprises bars 4 and 5 secured together by screws 6 and gripping the plate between them. The other edge of the plate is secured by an adjustable clamp forming particularly the subject-matter of the invention. This clamp comprises plate-gripping means consisting of bars 7 and 8 secured together by screws 9 and gripping the plate between them. These bars are mounted on lugs 10, and the lugs are mounted on pivots 11 in the forked arms of bell-crank levers 12. The levers are loosely journaled on a shaft 13 located in a longitudinal recess 16 in the cylinder and mounted in brackets 14 therein. Collars 20 on the

shaft restrain the lugs against longitudinal movement on the shaft.

To adjust and tighten the plate, means are provided for locking the bell-crank levers on the shaft 13. Each lever has an arm 17 engaged by an adjusting screw 18, and these screws thrust the arms in the direction to tighten the plate. To move the bell-crank levers in the opposite direction when the screws are loosened, a spring 19 is fixed to each arm 17 and to the cylinder. The screws 18 are provided with collars adapted to engage bushings 21, to prevent the screws from being accidentally unscrewed far enough to project from the surface of the cylinder.

By means of the conjoint action of the screws and the springs the bell-crank levers may be moved in either direction to adjust and tighten or loosen the plate, and since the bell-crank levers are independently controlled they may be operated to tighten the plate with perfect uniformity across its width, the elasticity of the bars 7 and 8 being sufficient to permit a slight differential action of the bell-crank levers.

The pivotal arrangement of the lugs 10 on the bell-crank levers permits the gripping plates 7 and 8 to swing as the levers are rocked, so that the plate 1 is not bent at its point of attachment as it would be without this arrangement, and injury to the plate is avoided.

It is obvious that various modifications may be made in the details of construction and operation of the illustrated embodiment of the invention within the nature and scope of the invention as defined in the following claims.

I claim:—

1. A plate clamp for printing presses comprising plate-gripping means consisting of two continuous bars substantially coextensive with the width of the plate and means for securing the bars together with the edge of the plate between them, a plurality of independently movable and adjustable levers upon which the plate gripping bars are mounted, and pivotal connections between the bars and the levers.

2. A plate clamp for printing presses comprising plate gripping means continuously coextensive with the width of the plate, a plurality of bell-crank levers on which said means are pivotally mounted, and means for

moving the levers independently in both directions.

3. A plate clamp for printing presses comprising, in combination with a printing element, plate-gripping means, a pivoted bell-crank lever having an arm upon which the plate-gripping means are mounted and a rearwardly-extending arm, an outwardly-projecting adjusting screw engaging the rearwardly-extending arm of the bell-crank

lever, and means limiting the movement of the adjusting screw to prevent its projection beyond the surface of the printing element.

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

ALBERT J. FORD.

Witnesses:

HENRY H. DAVIS,
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