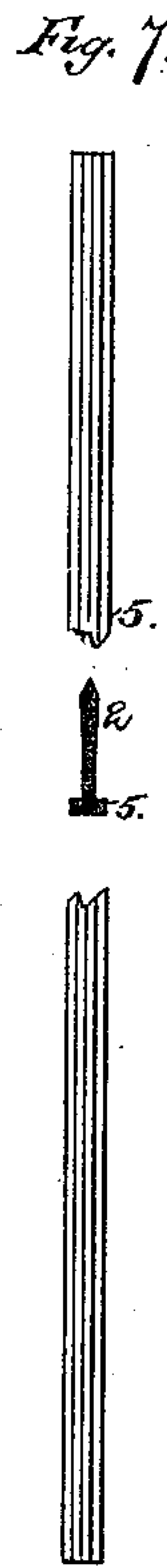
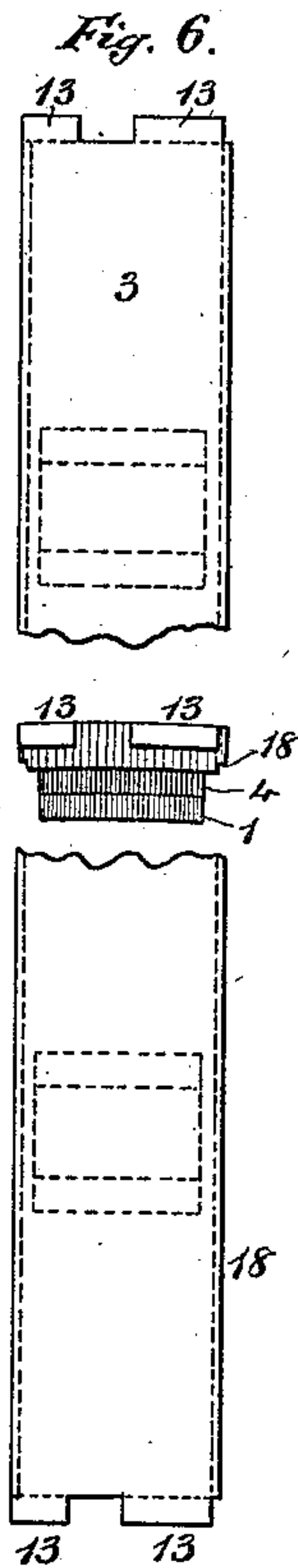
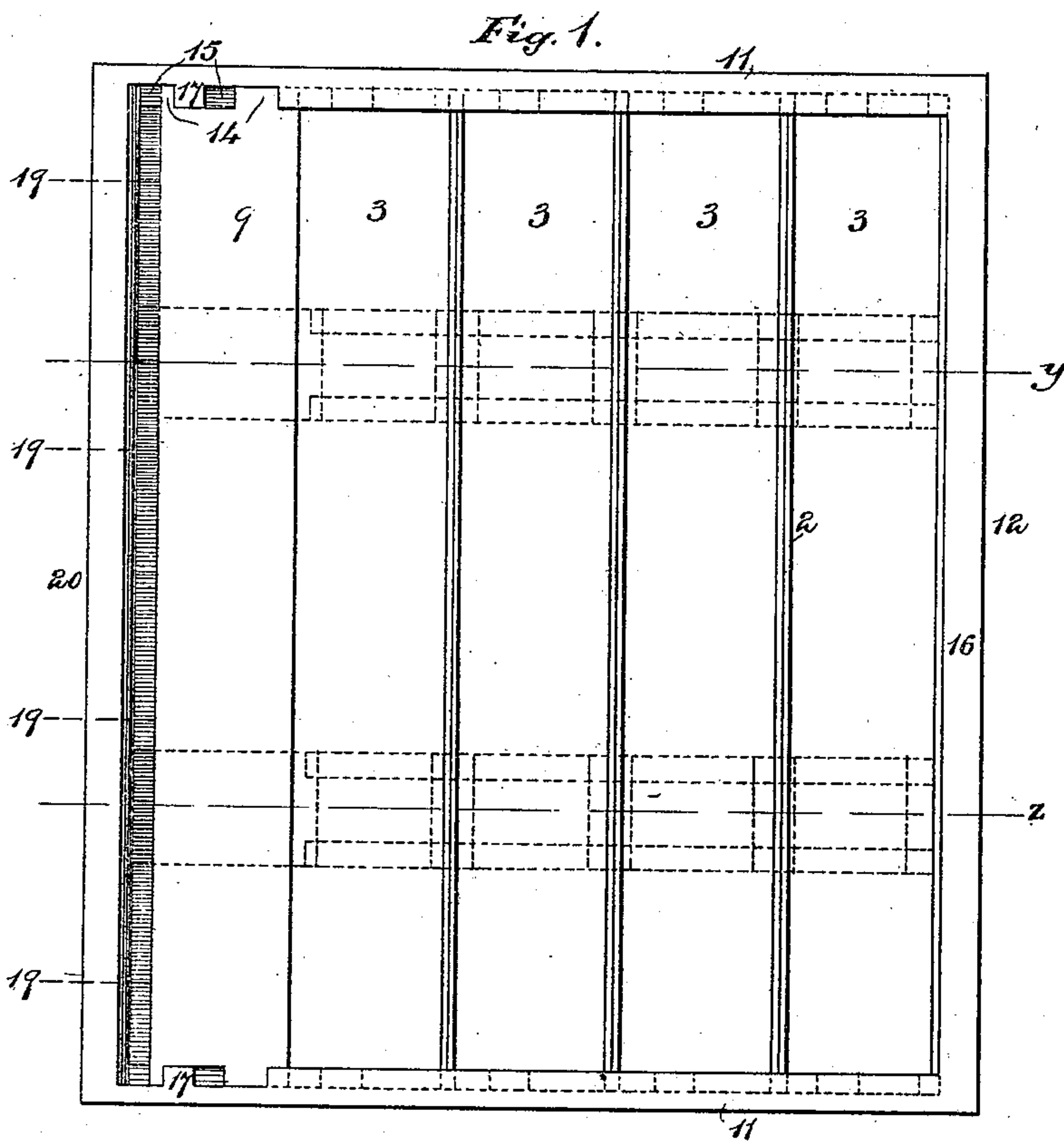
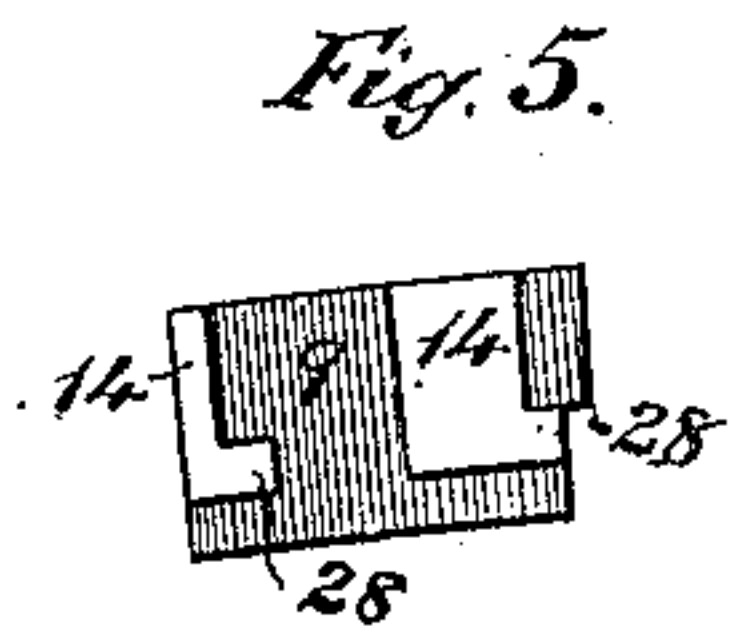
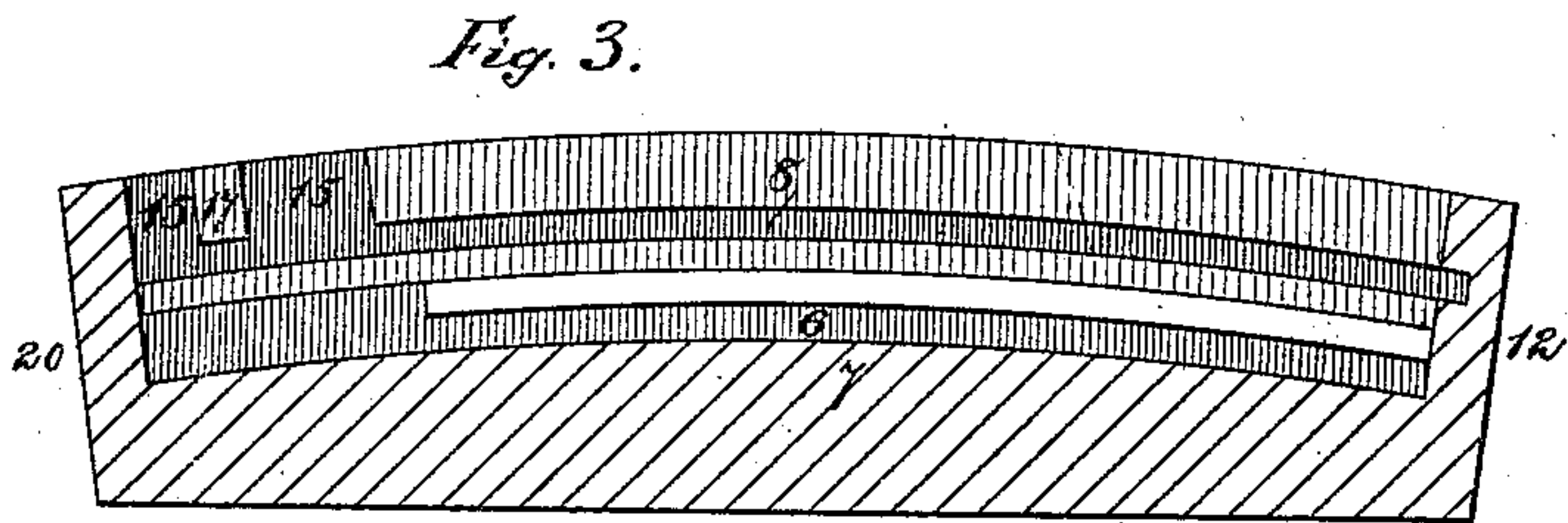
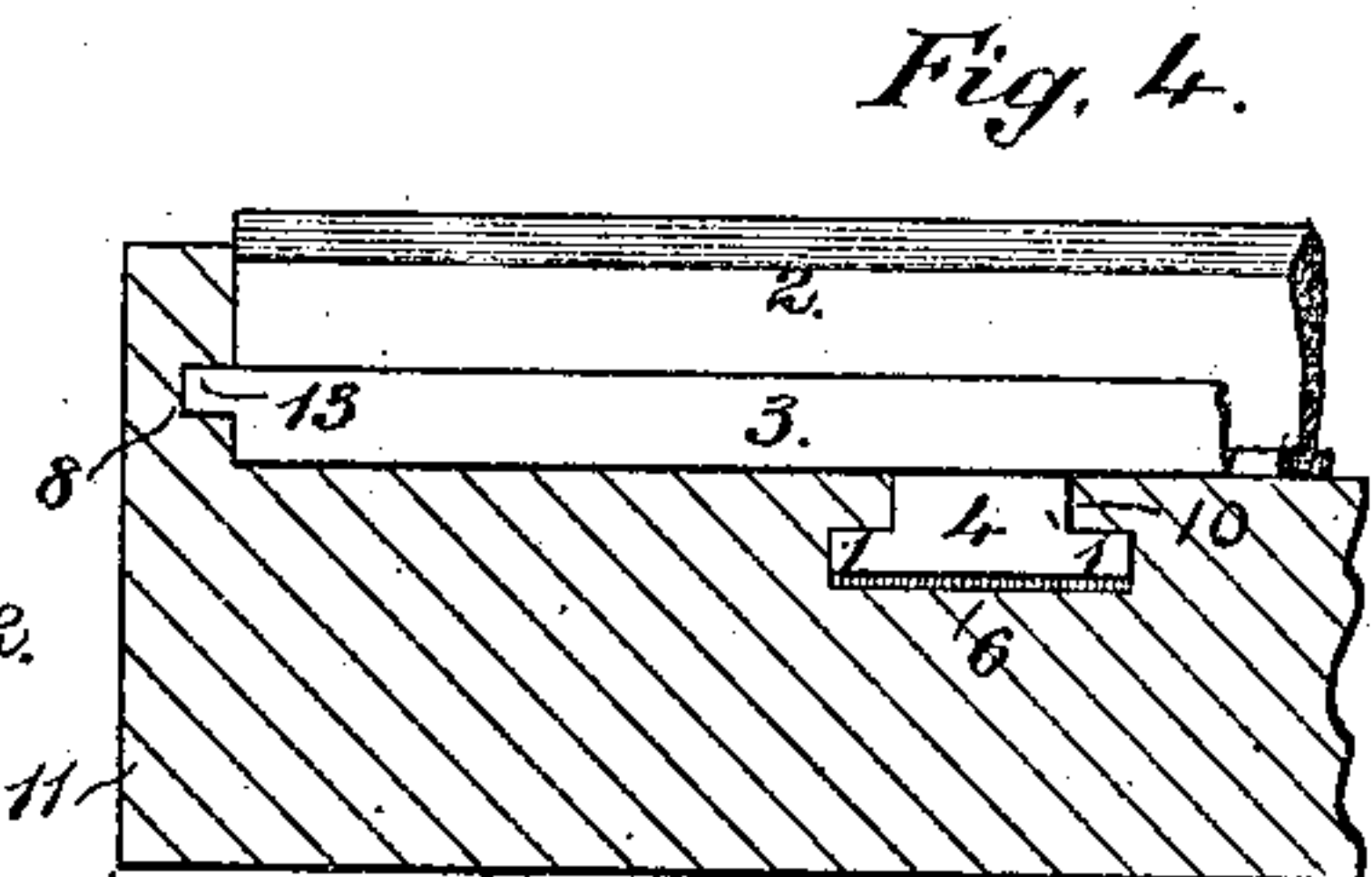
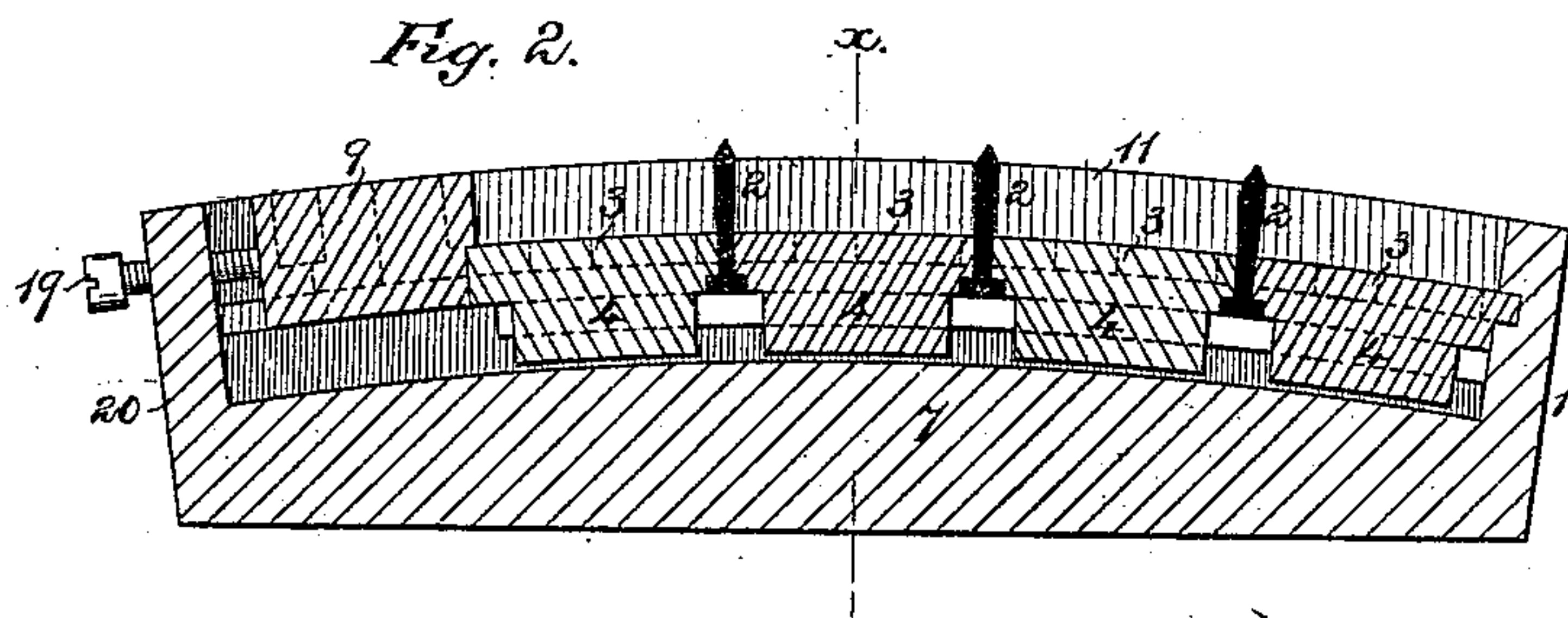


S. D. TUCKER.  
Revolving Type Bed.

No. 230,973.

Patented Aug. 10, 1880.



Witnesses  
Geo. H. Graham.  
John F. Kluber.

Inventor  
Stephen D. Tucker  
By *Newton & Philipp*  
ATTORNEYS



# UNITED STATES PATENT OFFICE.

STEPHEN D. TUCKER, OF NEW YORK, N. Y.

## REVOLVING TYPE-BED.

SPECIFICATION forming part of Letters Patent No. 230,973, dated August 10, 1880.

Application filed April 21, 1877.

*To all whom it may concern:*

Be it known that I, STEPHEN D. TUCKER, of the city, county, and State of New York, have invented certain new and useful Improvements in Revolving Type-Beds, of which the following is a full, clear, and exact description.

In the accompanying drawings, Figure 1 is a plan view of the type-bed; Fig. 2, a transverse sectional elevation of the same on line *z* of Fig. 1; Fig. 3, a transverse sectional elevation of the same on line *y*, Fig. 1, showing the construction of one of the ends; Fig. 4, a longitudinal section of one end of the type-bed on line *x*, Fig. 2, showing the bottom piece and column-rule in elevation; Fig. 5, an end view of the locking-bar; Fig. 6, plan and end views of one of the bottom pieces; and Fig. 7 plan and sectional views of a column-rule.

The type-cylinders of type-revolving printing-machines are limited in size by the width of the wedge-shaped space formed by the sides of two adjacent columns of type, which space is filled by the tapered column-rule, for it is obvious that the smaller the cylinder, the wider this space becomes at the surface or faces of the type, and consequently the broader the blank line between the printed impressions from two adjacent columns of type. Moreover, this space is increased by the thickness required for the narrow feet of the column-rules now used, which must be made thick enough to give them the strength necessary to hold them and the type in place in the type-bed. The greater this blank space is made the wider the printed page must become, the cost of paper is thus increased and the printed page rendered unsightly.

The object of this invention is the reduction of this space between the faces of the types composing columns set side by side upon a curved surface; and it consists in a construction of parts which permits the use of a very thin column-rule, whereby the size of the type-cylinder may be greatly reduced, while the space between the columns of type is no greater than in the constructions now in use.

In carrying out my invention the feet of the column-rules are made to extend the whole length of the type-bed, and are provided at their bottoms with flanges 5 projecting from

both sides. (See Fig. 7.) These column-rules rest throughout their whole length upon the convexly-curved base-plate 7 of the type-bed, and are secured in positions parallel to each other by interposing between them bottom pieces, 3, which are of column width. These bottom pieces are provided at their ends with tenons 13, which fit into rabbeted recesses 8 formed in the ends 11 of the type-bed, and at one or more points of their length with feet 4, provided at each side with projections 1, which adapt them to enter transverse rabbeted grooves 6 in the base-plate 7. The said bottom pieces are thus held firmly in place in the type-bed, and being provided on their lower edges with rabbets 18, which fit over the flanges 5 of the column-rules 2, securely lock said column-rules between them.

The bottom pieces, 3, are introduced vertically into the type-bed by reason of their tenons 13 readily passing through the recesses 15 in the ends 11, the overhanging edges 10 of the grooves 6 in the base-plate being removed at the side 20 to permit the free entrance of the feet 4. Thus introduced each bottom piece may enter its tenons 13 into the grooves 8, and its feet into the grooves 6, and be slid therein against the side 12, where the forward edge of the foremost bottom piece enters a groove, 16. A column-rule 2 is then introduced against its unprotected side, and another bottom piece, column of type, and column-rule 2 are introduced, and so on until the type-bed is full.

The locking-bar 9, which is nearly of type-height, is then introduced and moved against the last bottom piece, 3. This locking-bar 9 has on each end tenons 14, with projections 28, one of which enters the groove 8 and the other underlies the jaw 17, by which means it is held in place. The columns of type are then placed upon the bottom pieces between the column-rules.

The columns of type are forcibly pressed laterally in place between the column-rules by means of pressure applied to the locking-bar, which may be done either by the screws 19, shown in Fig. 2, or by wedge blocks or quoins, or by side-sticks whose inclined faces bear upon each other, and one of which sticks is moved longitudinally by any mechanical means.

The types of the columns may be pressed

firmly together endwise by power applied to blocks at the ends of the columns, the medium being screws or similar devices, as has just been described with reference to the lateral movement of said types.

The type-bed may be secured upon the type-cylinder by the usual means—that is, by screws or clamps, as is well understood.

Either the grooves 8 and tenons 13, or the grooves 6 and feet 4, may be the means for holding the bottom plates in plates, though both together are preferable.

What is claimed is—

1. Removable column-rules having feet or flanges 5 extending throughout the length of

the column of type, whereby greater strength with less thickness is secured, substantially as described.

2. The combination of the longitudinally-flanged column-rules 2, base-plates having longitudinally - rabbeted recesses, and bottom pieces, 3, having rabbets 18 and flanged feet 4, substantially as described.

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

STEPHEN D. TUCKER.

Witnesses:

H. T. MUNSON,  
M. B. PHILIPP.