

T. J. SAYLES.

ALINING AND MEASURING TABLE FOR USE BY PRINTERS.

APPLICATION FILED FEB. 17, 1911.

997,418.

Patented July 11, 1911.

2 SHEETS—SHEET 1.

FIG. 1.

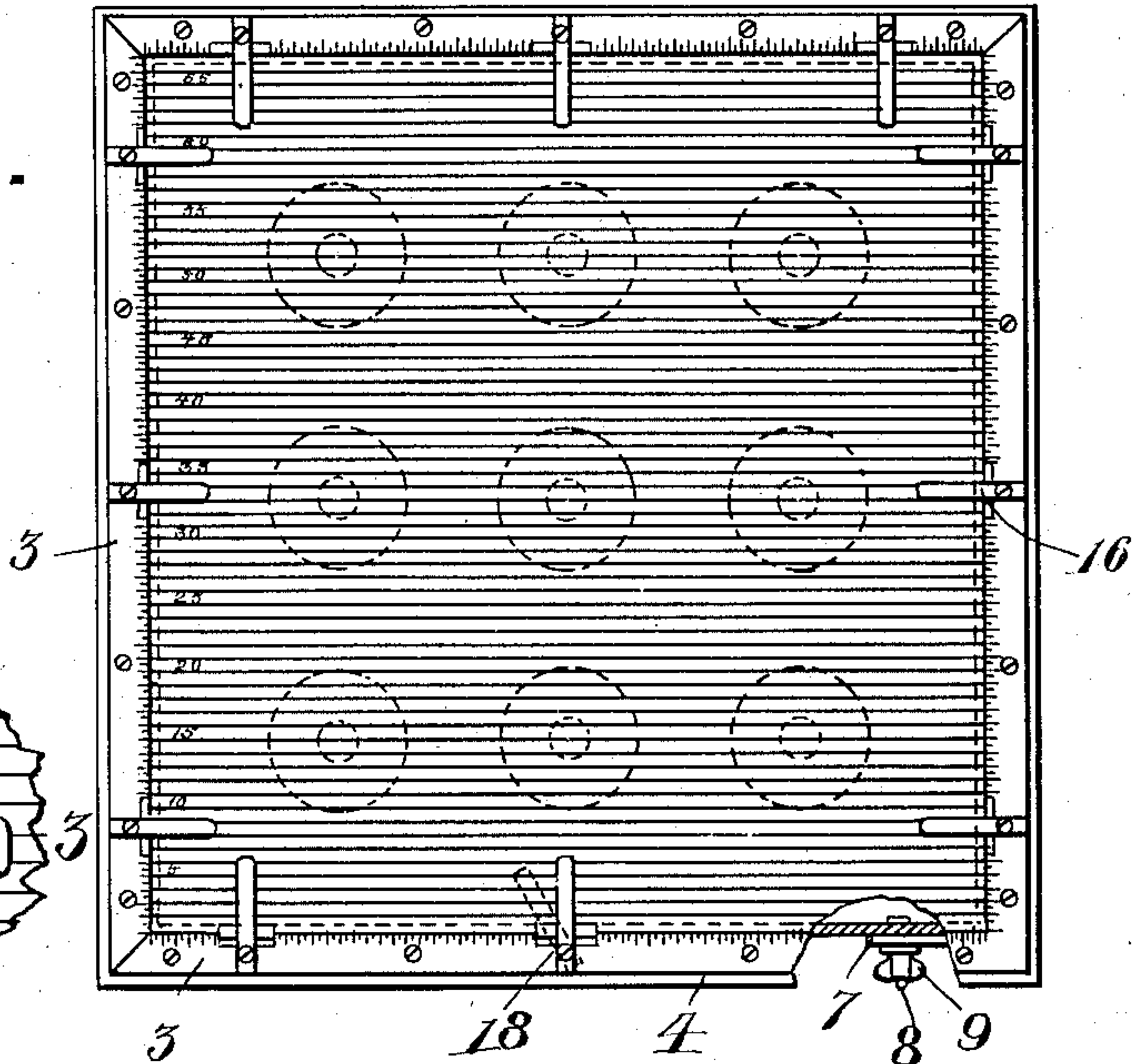


FIG. 3.

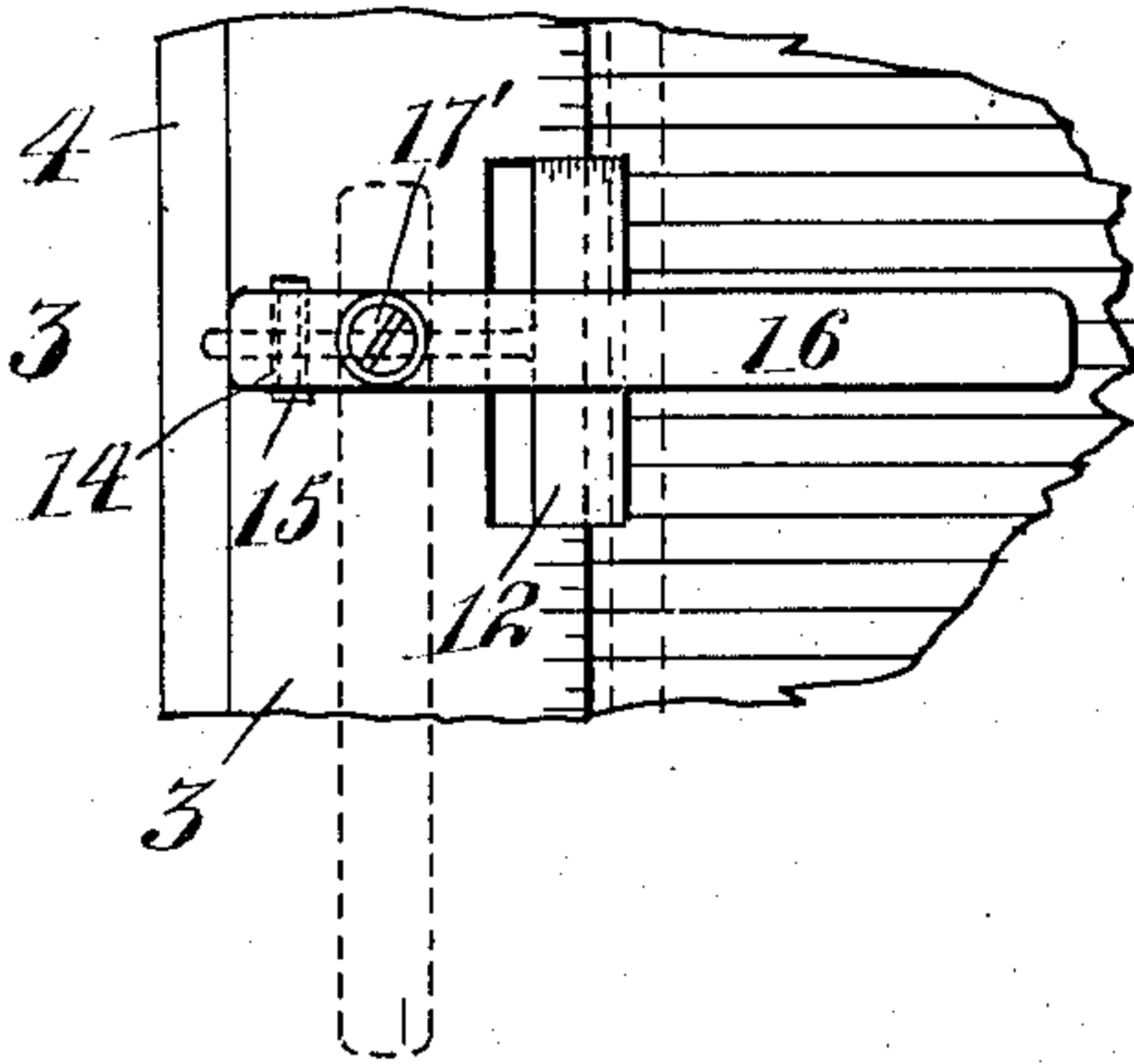


FIG. 2.

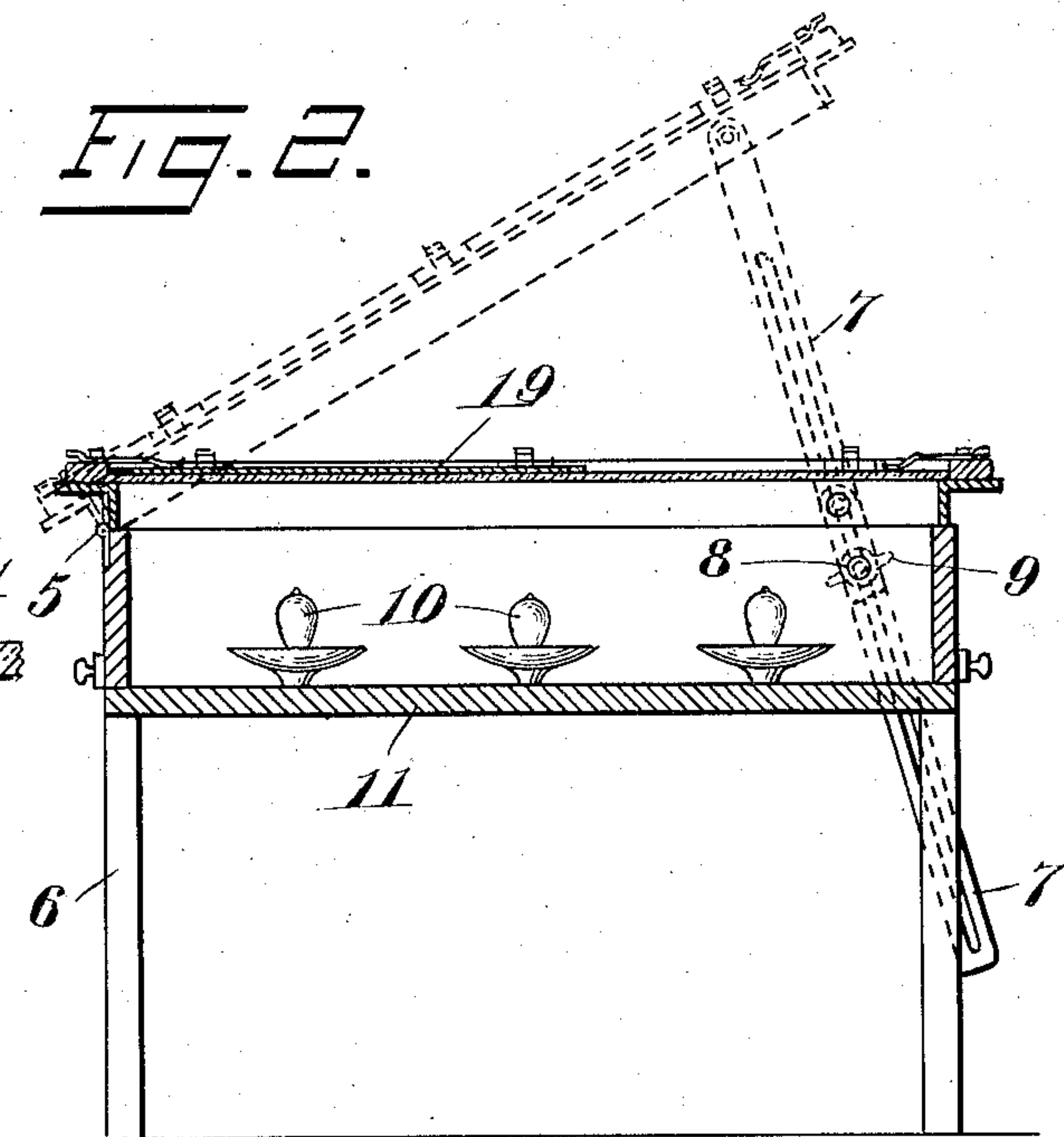
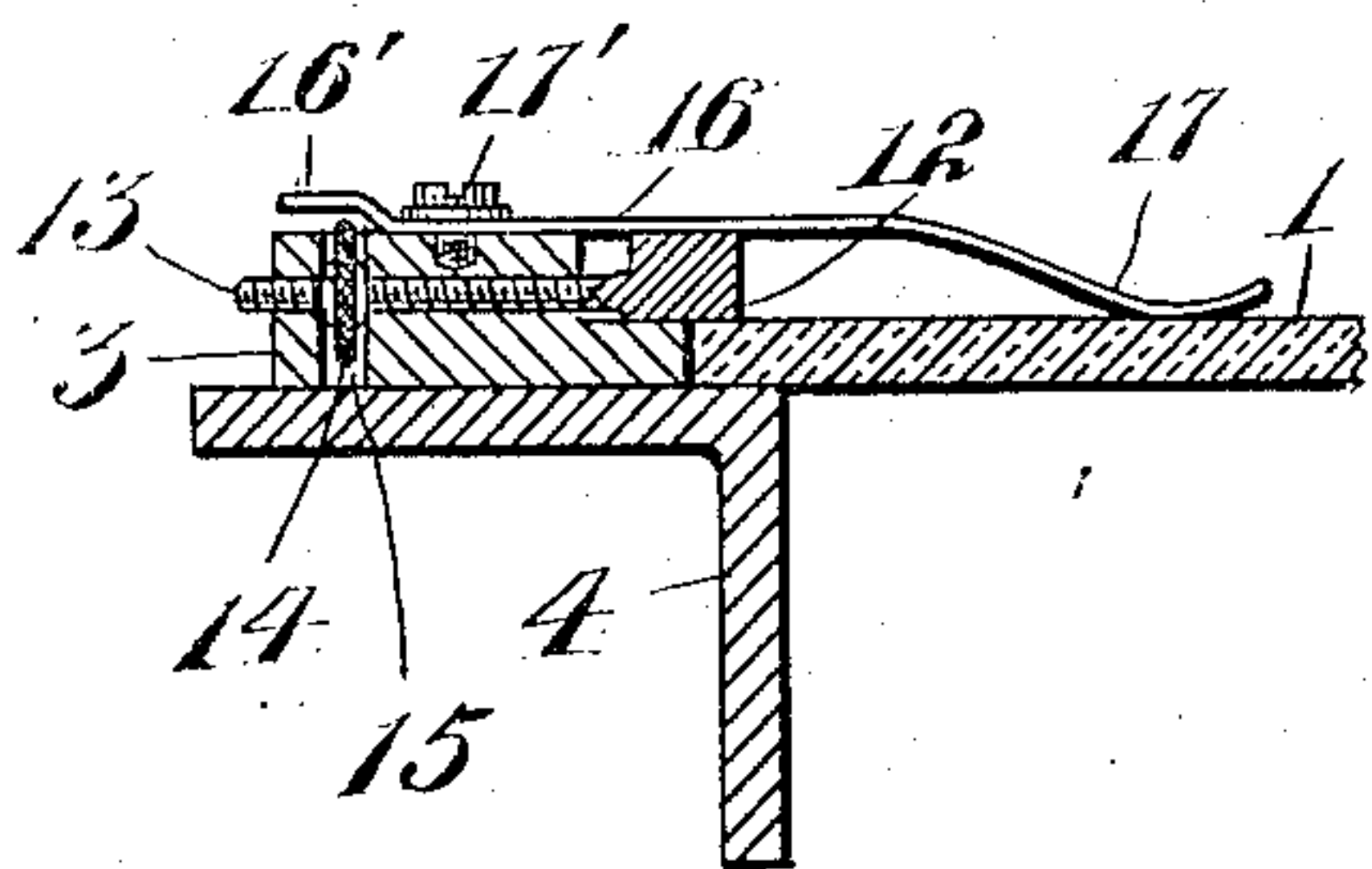


FIG. 4.



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2 SHEETS—SHEET 2.

FIG. 5.

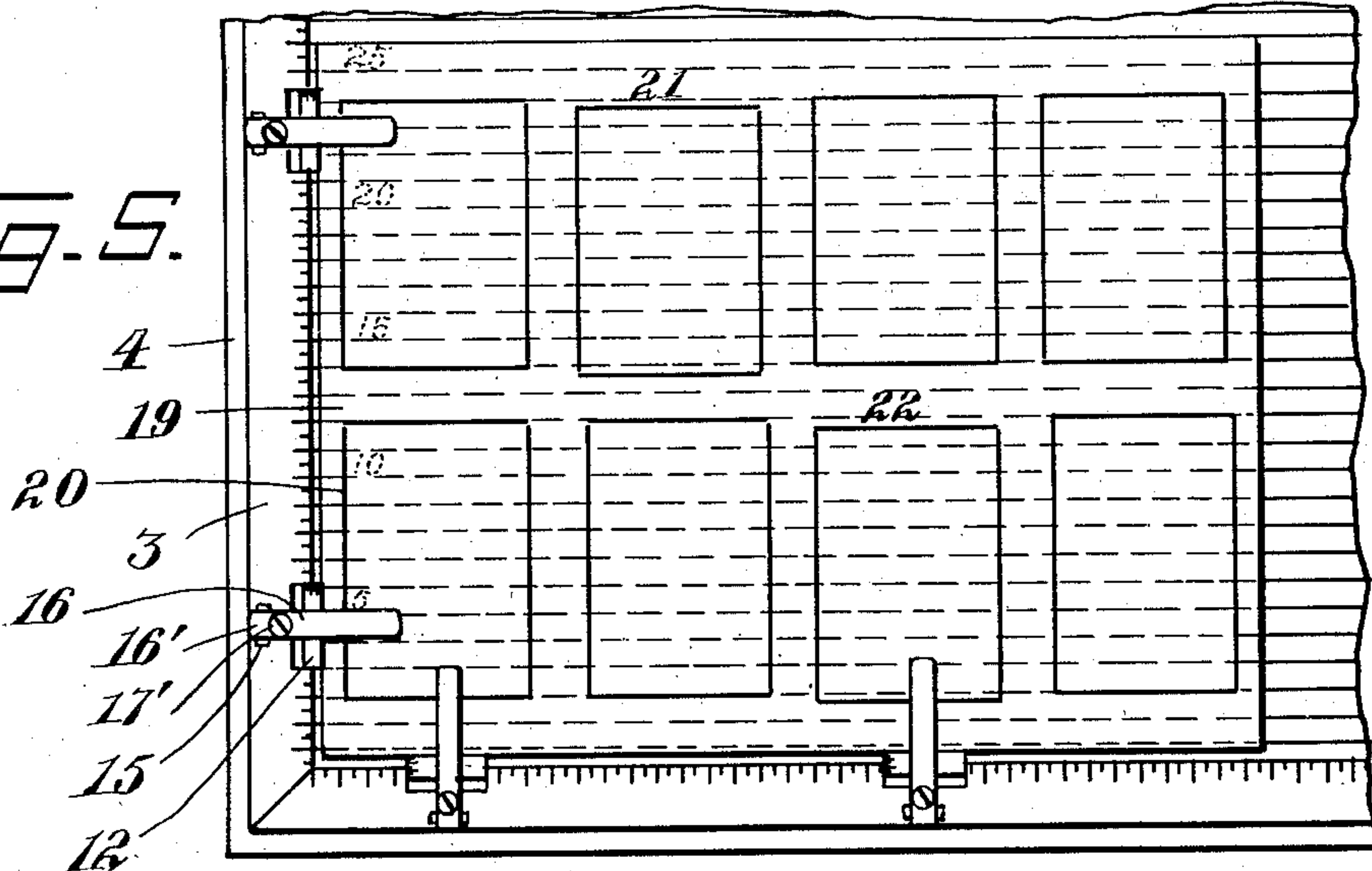
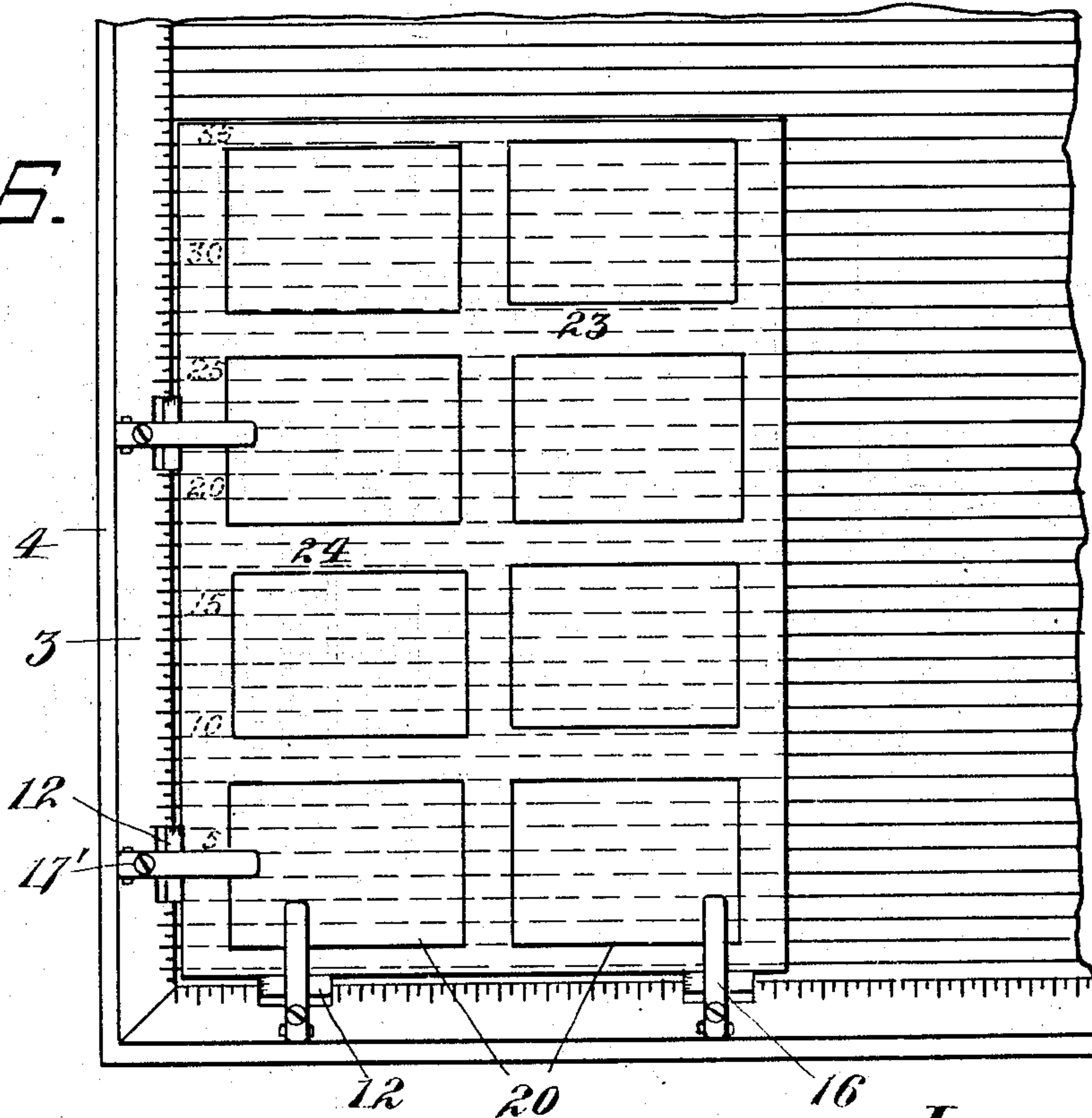


FIG. 6.



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ALINING AND MEASURING TABLE FOR USE BY PRINTERS.

997,418.

Specification of Letters Patent.

Patented July 11, 1911.

Application filed February 17, 1911. Serial No. 609,097.

To all whom it may concern:

Be it known that I, THOMAS J. SAYLES, a citizen of the United States, residing in Hackensack, in the county of Bergen and State of New Jersey, have invented certain new and useful Improvements in Alining and Measuring Tables for Use by Printers, of which the following is a specification.

My present invention relates to a table for use by printers for aiding them in alining and measuring forms and margins of several pages where they are printed on one sheet. In locking the forms they are apt to be forced out of alinement with each other. This may be readily noted after taking a proof of the same and laying it on the transparent table top which has lights underneath for the purpose of rendering the proof translucent. The table top is ruled or lined across one way with a series of lines cut into the top and preferably filled with some opaque material like black paint, to emphasize the lining. The lines of the table top are parallel and placed closely together and have marked graduations thereon. They may be spaced about $\frac{1}{8}$ " apart.

By the use of my table the work of lining up forms and margins is greatly accelerated and simplified, requiring no skill, and results are far superior to any hand work heretofore done and a great saving of time and labor is effected. By the old hand method it is necessary to use a T-square, a lead pencil, and more or less skill and time, and results are not always satisfactory, being dependent upon the intelligence and skill of the employee.

In the accompanying drawings Figure 1 is a plan view of the table. Fig. 2 is a side elevation, showing the table top lifted to an angular position, shown in dotted lines, for the purpose of utilizing natural light. Fig. 3 is an enlarged plan view of the paper gripping means and measuring block. Fig. 4 is a sectional view taken on line 3—3, Fig. 3, showing the construction and method of assembly of the paper gripping means. Figs. 5 and 6 show one corner of the table, plan view, slightly enlarged upon which are placed in quartering positions in the same corner of the table a proof sheet.

Like numbers represent like figures throughout the drawings and description.

In conjunction with my improved alining table I have placed on the table top, Fig. 1, four steel side bars in the form of a frame

which are attached to the angle iron frame member 4 by suitable means. These steel side bars are recessed at intervals for the purpose of receiving within each recess a graduated adjustable block 12, Figs. 3 and 4, all of which have a thread portion 13 extending backwardly through a clearance hole in the steel side bars 3, and a knurled and threaded thumb nut 14 which is screwed on the threaded portion 13 to adjust the blocks 12 to and from the square edge of the bars 3. The knurled nut 14 rotates in a slot 15 which is let into the bar 3; this knurled nut projecting slightly above the top of the bar to be readily rotatable by the thumb. The knurled thumb nut 14 is protected against accidental turning when set by a spring clip 16 which has an end 16', upset to clear the knurled nut. This spring clip performs two functions. It will be noted that the upcurled end of 17 rests upon the top 1, being held in position by a screw and washer 17' on the bar 3. The clip 16 is used to hold the proof sheet firmly to the glass during the process of measuring and alining. When it becomes necessary to manipulate the thumb nut 14, the spring 17 may be turned circumferentially a limited amount on the screw 17', thus exposing the thumb nut as shown at 18, Fig. 1.

In Fig. 1 the table top 1, which may be made of glass or other transparent material of sufficient thickness for strength, is prevented from sidewise motion by steel bars 3. To permit the top frame member to be angularly raised and lowered I attach hinges 5 between the table support and the angle iron frame member 4. For the purpose of maintaining the table in any angular position that may be required I have pivoted a slotted lever 7 to the upper end of the frame 4 opposite the hinges 5, which can be locked at will to the short bolt 8 which is pivoted near the upper edge of the table support 6 by a thumb screw 9. When it is practical to utilize the light from a window, this arrangement is convenient. I have, however, arranged the series of electric lights 10, mounted upon the standard 11, whereby the operator by leaving the top 1 at rest upon the support 6 in the horizontal plane, may true up the proof by turning on all or only a few of the lights, as necessity may require. The table support 6 is made of cast iron and preferably in one piece for rigidity.

It is necessary when proving or alining up the page forms to note whether the said sheets are cut square. To arrive at that conclusion a proof sheet with 16 pages, more
 5 or less, printed thereon is laid upon the table and fitted into one corner against the graduated blocks 12. This should, if it is cut square and true and the forms upon them being also square with the sheet, show parallelism with the lines on the glass top when
 10 the lights are turned on. If, however, the page forms are not parallel or are out of line in any way the discrepancy will immediately be noted. I am also able to measure
 15 margins and true them up, this process also aiding in spacing the pages on the sheet.

In Figs. 5 and 6 is shown a proof sheet 19 held by the grips 16 on the table top 1 and against the adjustable members 12.
 20 The rectangular outlines 20 diagrammatically represent the page forms. It will be noted that several of the page forms are out of line, as at 21, 22, 23 and 24. Upon using light, either artificial or natural, the discrepancies indicated are noted in pencil.
 25 The proof sheet is then taken and compared with the form in the chase and the proper amount of furniture is used to aline the page forms properly. The graduated blocks 12 are shown in Figs. 5 and 6 as standing
 30 out slightly from the edge of the bars 3 an equal distance. If the paper shows any tendency to buckle at any point the blocks nearest that point are withdrawn until the
 35 sheet lies flat and the blocks touch the edge. If, however, the paper has a convex edge the blocks are adjusted until they touch the edge and the graduations on all of the blocks are noted as showing the lack of squareness
 40 of the paper and the defect remedied in the cutting. I have also found it convenient to graduate the side bars 3 for the purpose of corroborating the length and width of the sheets during the process of alining. I
 45 might also state that while the lines on the table top preferably run across the table from one side to the other, I obtained perfect truth in squaring up by laying the sheet, first lengthwise at one side of the table,
 50 noting the differences, and then laying the short length of the sheet to the same side, it being unnecessary to have the lines crossing at right angles to one another. This

method of retrying the edges of the proof sheet alternately in the same square corner
 55 of the table, proves up the pages and sheet together.

It is not necessary to have the truing lines cut into the glass top, as other methods of alining can be used, for instance, such as
 60 photographically printing them on a prepared surface which may be placed thereon. This, however, is not as durable as my preferred construction.

Having thus described my invention, I
 65 claim:

1. In an alining and measuring table comprised of a transparent top ruled with a series of lines, a main supporting base, and a frame supported by said base, said frame
 70 supporting said transparent ruled top and having graduated bars fixed thereon, said bars having a plurality of angularly shiftable sheet retaining members pivoted thereto.

2. In an alining and measuring table with
 75 a ruled transparent top, a top frame holding member with graduated bars mounted thereon, said bars having a plurality of recesses therein to receive and support graduated adjustable blocks.
 80

3. In an alining and measuring table with a ruled transparent top, a top holding member with graduated bars mounted thereon, said bars having recesses to slidably support graduated adjustable gage blocks, said
 85 blocks having means for adjusting them in and out of said recesses.

4. In an alining and measuring table with a ruled transparent top, an adjustable top frame holding member with graduated bars
 90 mounted thereon, means for holding said top frame in any angular adjusted position, said graduated bars having a plurality of recesses therein to receive and slidably support graduated adjustable blocks, said
 95 blocks having means for adjusting them in and out of said recesses, circumferentially adjusted paper clamping means mounted upon said graduated bars and a supporting
 100 base member having means for supporting illuminating means under said transparent table top.

THOMAS J. SAYLES.

Witnesses:

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