

J. H. HEUSER.
 PHOTOGRAPHIC PRINTING FRAME.
 APPLICATION FILED OCT. 24, 1907.

973,783.

Patented Oct. 25, 1910.

2 SHEETS—SHEET 1.

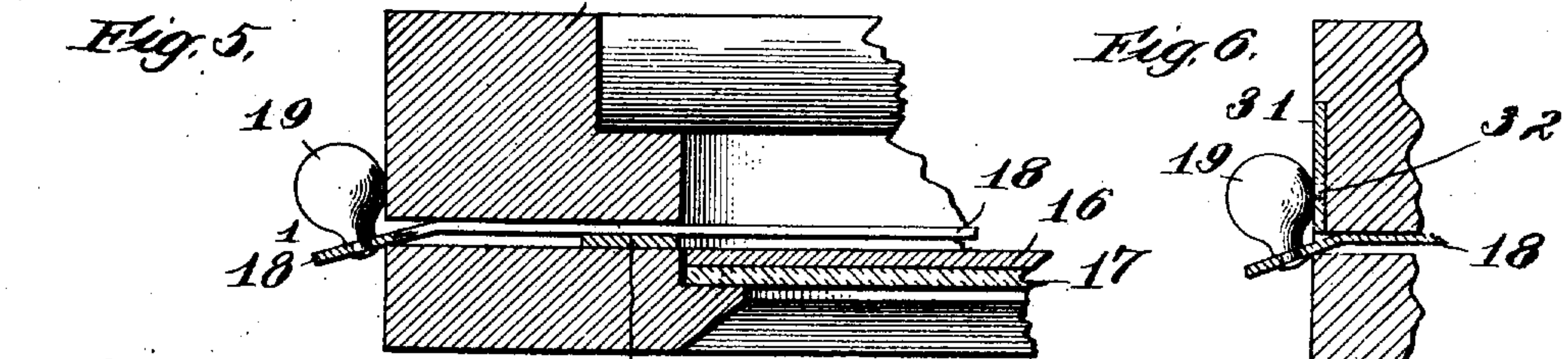
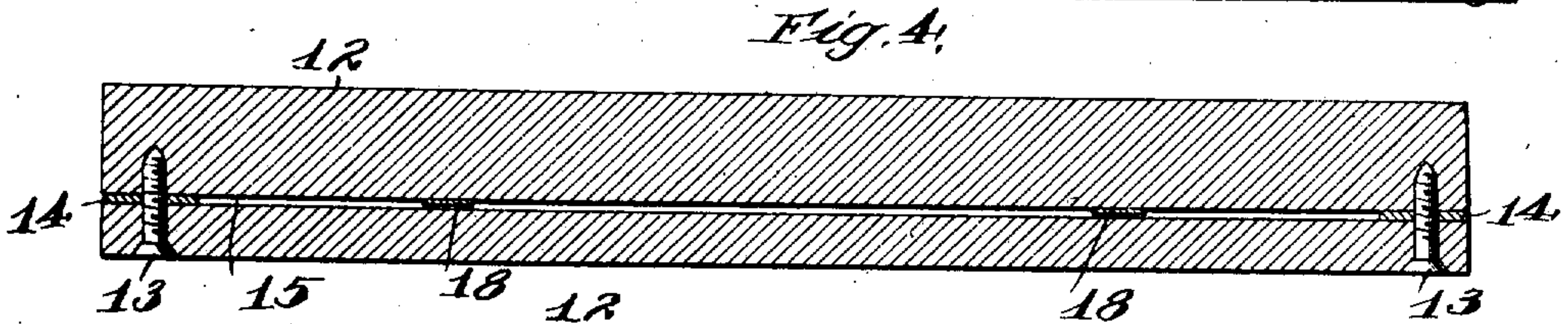
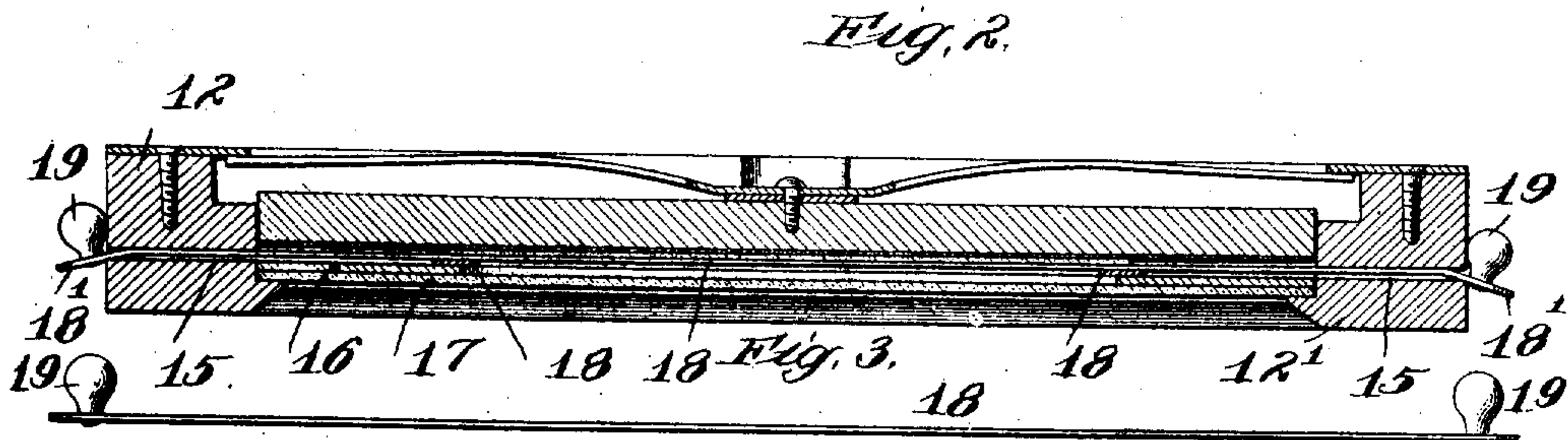
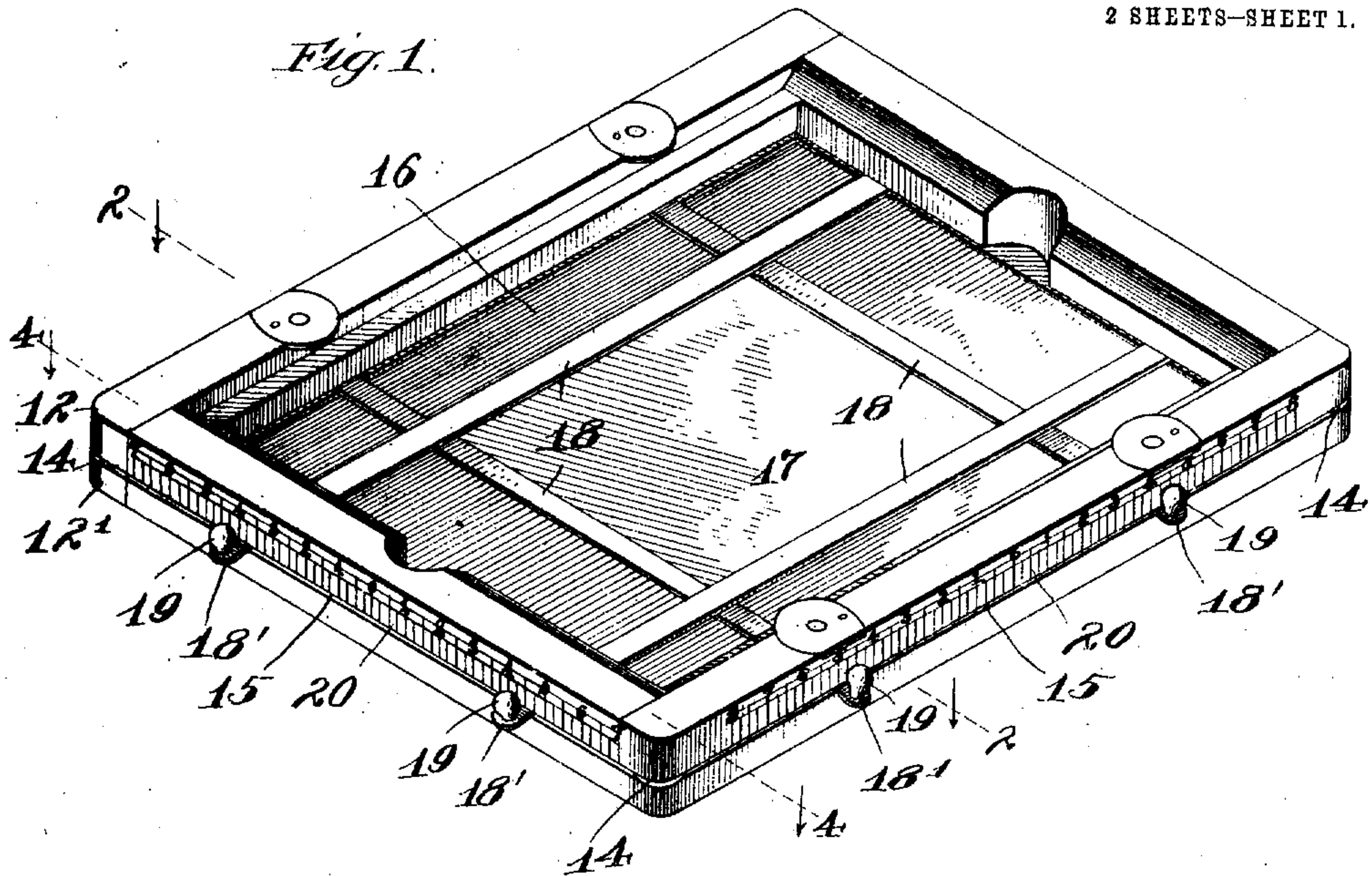


Fig. 5.

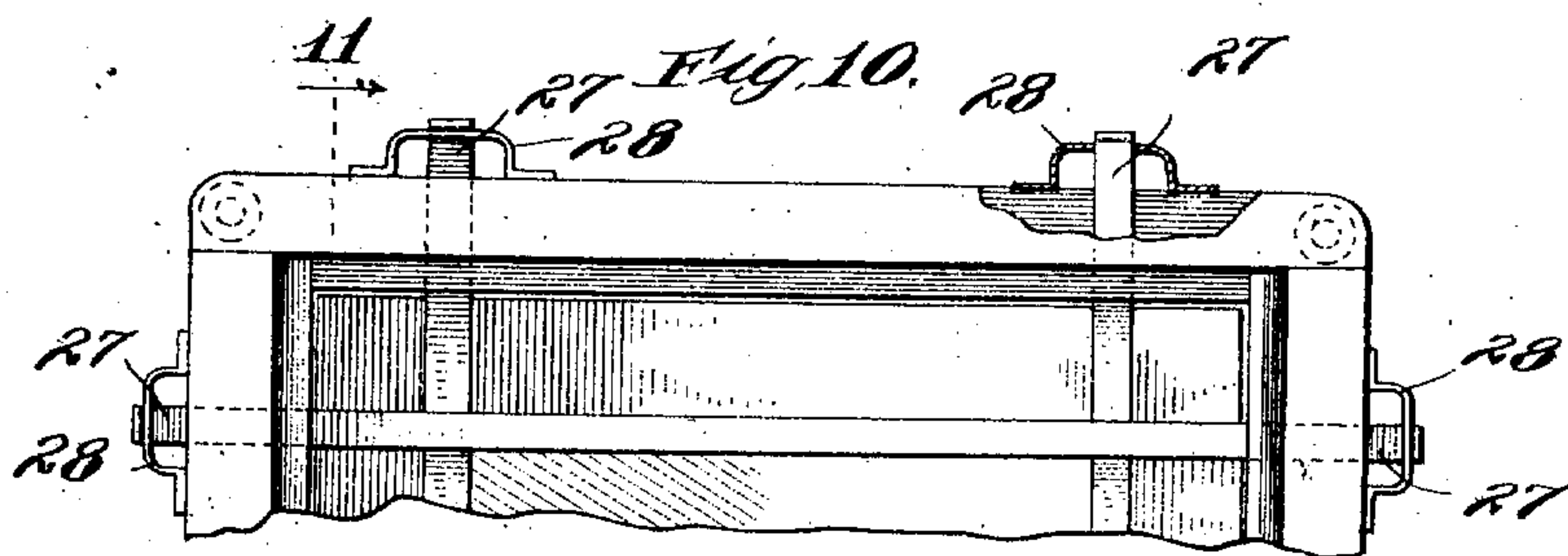
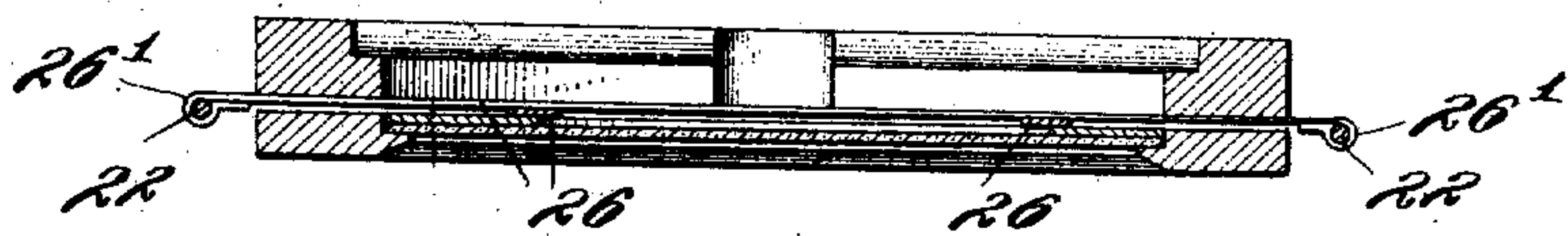
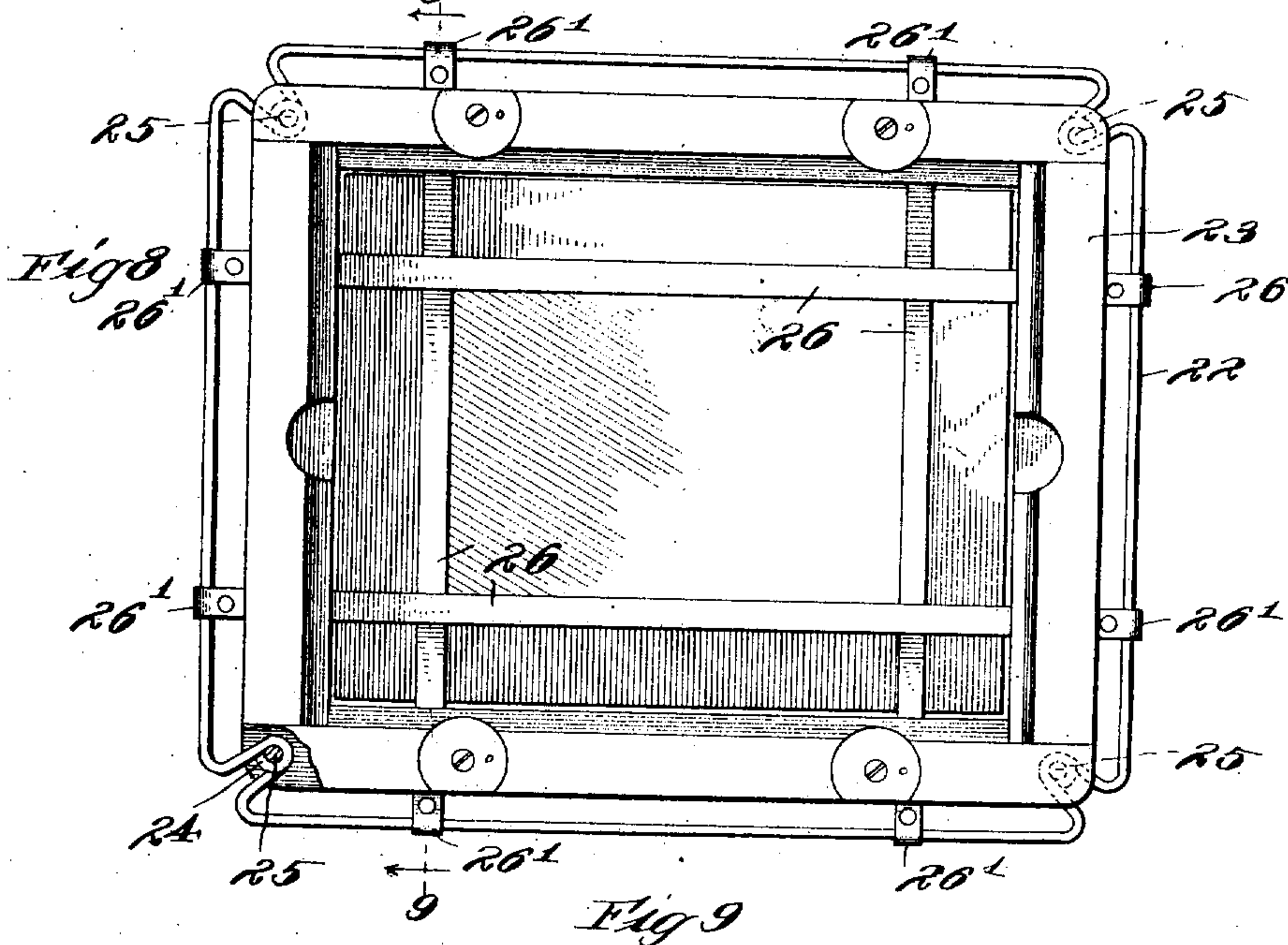
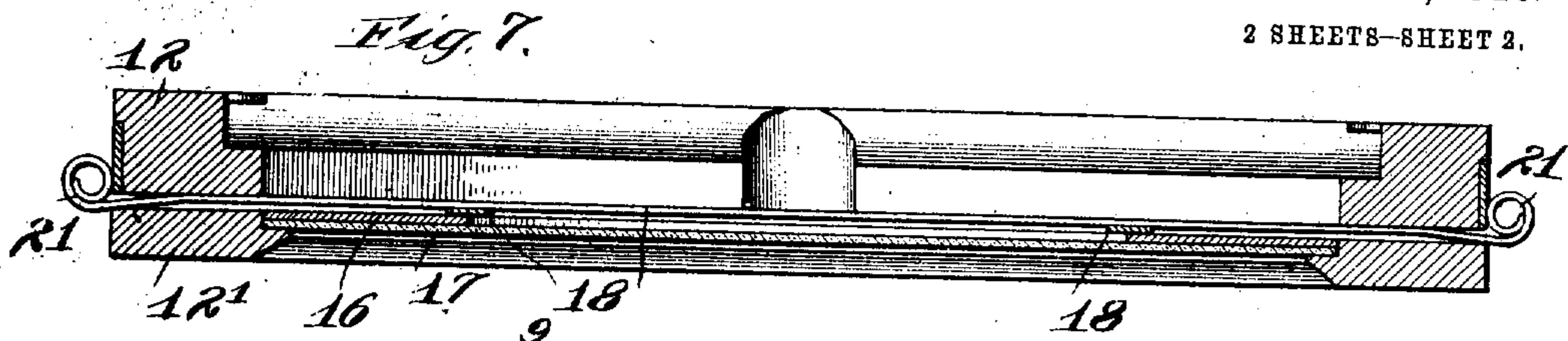
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Fig. 6.

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973,783.

2 SHEETS—SHEET 2.



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Fig 11.

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UNITED STATES PATENT OFFICE.

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PHOTOGRAPHIC-PRINTING FRAME.

973,783.

Specification of Letters Patent.

Patented Oct. 25, 1910.

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To all whom it may concern:

Be it known that I, JOHN H. HEUSER, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented new and useful Improvements in Photographic-Printing Frames, of which the following is a specification.

This invention relates to photographic printing frames and its object is to provide means of simple character which can be easily adjusted to the size of the particular negative which is being printed to produce a white margin of rectangular form on the print, whereby to render the print more attractive in appearance and to facilitate trimming the print when required.

Another object of the invention is to enable the margin strips to be adjusted relatively with accuracy so that they will produce a correct rectangular margin on the print and to hold the strips in fixed position while a number of prints are being made without further adjustment.

The invention also has for its object to utilize the strips which produce the margin for holding a film negative in fixed position in the frame so that successive prints may be made without adjusting the negative.

In the accompanying drawings Figure 1 is a perspective view of a frame embodying my invention with the back removed. Fig. 2 is a sectional view on the line 2—2 of Fig. 1 showing the back in place. Fig. 3 is a detail view of one of the margin strips. Fig. 4 is a sectional view on the line 4—4 of Fig. 1. Fig. 5 is a detail enlarged sectional view showing one of the margin strips wholly within the slot between the two parts of the frame. Fig. 6 is a detail view showing the knob on the margin strip provided with a locking teat. Fig. 7 is a sectional view of a frame showing another form of margin strip. Fig. 8 is a plan view of a frame, partly broken away, illustrating another embodiment of the invention. Fig. 9 is a sectional view on the line 9—9 of Fig. 8. Fig. 10 is a plan view, partly broken away, of a portion of a frame illustrating another embodiment of the invention, one of the strip heads being shown in section. Fig. 11 is a sectional view on the line 11—11 of Fig. 10.

The frame is rectangular in form, and of the usual construction, except that it is made in two parts 12, 12' which are secured to-

gether at the corners by screws 13 or other suitable devices and spaced apart by washers 14 (Fig. 4) to provide slots 15 in each side of the frame.

I have shown my invention embodied in a frame provided with a kit 16 behind the glass 17 and the slot 15 is located preferably in a plane with the back of the kit. The invention is not in any way dependent upon the use of a kit and I have illustrated the kit simply because it is a device of general use and enables the use of one frame for negatives of several different sizes.

The margin strips 18 are arranged to form a rectangle in every possible adjustment thereof and they project through the slots in the sides and are provided with heads which may be in the form of knobs 19 at their ends (Fig. 3). The distance between the knobs of each strip is less than the distance between the outer faces of the sides in which said strip is adapted to slide and consequently the knobs of the strip will be spread outward and the ends 18' of the strip will be sprung downward when the strip is arranged in place in the frame, as shown in Fig. 2. In this way the strip is put under tension and the knobs will bear against the sides of the frame with sufficient pressure, under ordinary circumstances, to hold the strip rigidly in its adjusted position.

To facilitate the adjustment of the strips scales 20 may be printed on the sides of the frame, as shown in Fig. 1, or the scale may be printed on the plate 31 fastened to the frame, as shown in Fig. 6. To provide a positive lock for the strip I may provide each knob with a teat 32 to enter an opening in the plate 31 (Fig. 6) and it will be understood that in carrying out this embodiment of the invention a series of openings will be provided along each side and that the openings on one side will correspond in location with the openings on the other side.

The strips are made of thin spring metal and of any suitable width and the construction is such that they can be adjusted to any position within the rectangular opening of the frame, or they can be moved back into the slot in the sides of the frame, as shown in Fig. 5. Instead of making the heads in the form of knobs which are riveted or otherwise secured on the strips I may provide the strips with coils 21 at their ends, as

shown in Fig. 7. These coils will produce the proper tension on the strips and hold them in adjusted position.

In Figs. 8 and 9 I have shown another embodiment of the invention which contemplates a guide frame 22 surrounding the printing frame 23 and made of spring wire. This wire frame is provided at its corners with eyes or loops 24 which receive the screws 25 connecting the two parts of the printing frame and which are arranged between said parts to take the place of the washers 14, as shown in the construction of Fig. 4. The margin strips 26 are provided at their ends with eyes or loops 26' which are engaged with the wire frame. In this construction the strips will be held at tension constantly by the spring frame 22 so that they will stay in their adjusted position.

In Figs. 10 and 11 I have shown another embodiment of the invention in which the strips 27 are engaged with spring heads 28 made of spring metal in U-form and adapted to slide along the sides of the printing frame in a manner similar to the knobs 19 of the construction shown in Fig. 2 and the coils 21 in the construction shown in Fig. 7. These spring metal heads 28 will give the proper tension to the strips to hold them in adjusted position.

The invention is simple in construction and, as it will be observed, the adjustment of the margin strips can be easily made. The strips are held at sufficient tension to hold them in proper relative arrangement so that in every adjustment thereof they will form a perfect rectangle. The margin strips, being at tension and overlapping the edges of the negative, will hold the negative securely in fixed position against the glass so that a series of prints may be taken from the same negative without necessitating a re-adjustment thereof.

The scale is preferably divided according to linear measure in inches and fractions thereof and the half inches are numbered consecutively from zero at the middle of each scale to the ends thereof. Therefore if two strips register with the marks designated "3" they will be three inches apart.

What I claim and desire to secure by Letters Patent is:

1. A photographic printing frame having slotted sides, margin strips extending across the frame and projecting through the slots

therein at opposite sides of the frame, and means mounted upon said strips and adapted to engage with the frame, for maintaining said strips under tension.

2. A photographic printing frame having slotted sides, margin strips extending across the frame and projecting through the slots at opposite sides thereof, and means secured at either end of the strips for engaging the outer side of the frame, and maintaining the strips in adjusted position.

3. A photographic printing frame having slotted sides, margin strips extending across the frame and projecting through the slots at the opposite sides thereof, and means secured at either end of said strips and adapted to yieldingly engage the outer sides of the frame, for holding said strips under tension and in adjusted position.

4. A photographic printing frame having slotted sides, a plurality of margin strips extending across the frame and projecting through the slots therein, and means on the strips to frictionally engage the outer faces of the sides of the frame and hold the strips under tension in adjusted position.

5. A photographic printing frame having slotted sides, margin strips extending across the frame and projecting through opposite sides thereof, and heads on said strips, at the ends thereof to frictionally engage the outer faces of the sides of the frame.

6. A photographic printing frame having slotted sides, margin strips extending across the frame and projecting through opposite sides thereof, and knobs on said strips, at the ends thereof, to bear against the outer faces of the sides of the frame, the distance between said knobs being less than the distance between the faces of the sides on which they bear whereby the ends of the strips are sprung downward and the strips are held at tension.

7. A photographic printing frame having slotted sides and a plurality of openings in said sides, margin strips extending across the frame and projecting through the slots in opposite sides thereof, knobs on the ends of said strips to bear against the outer faces of the sides of the frame, and teats on said knobs to engage said openings.

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