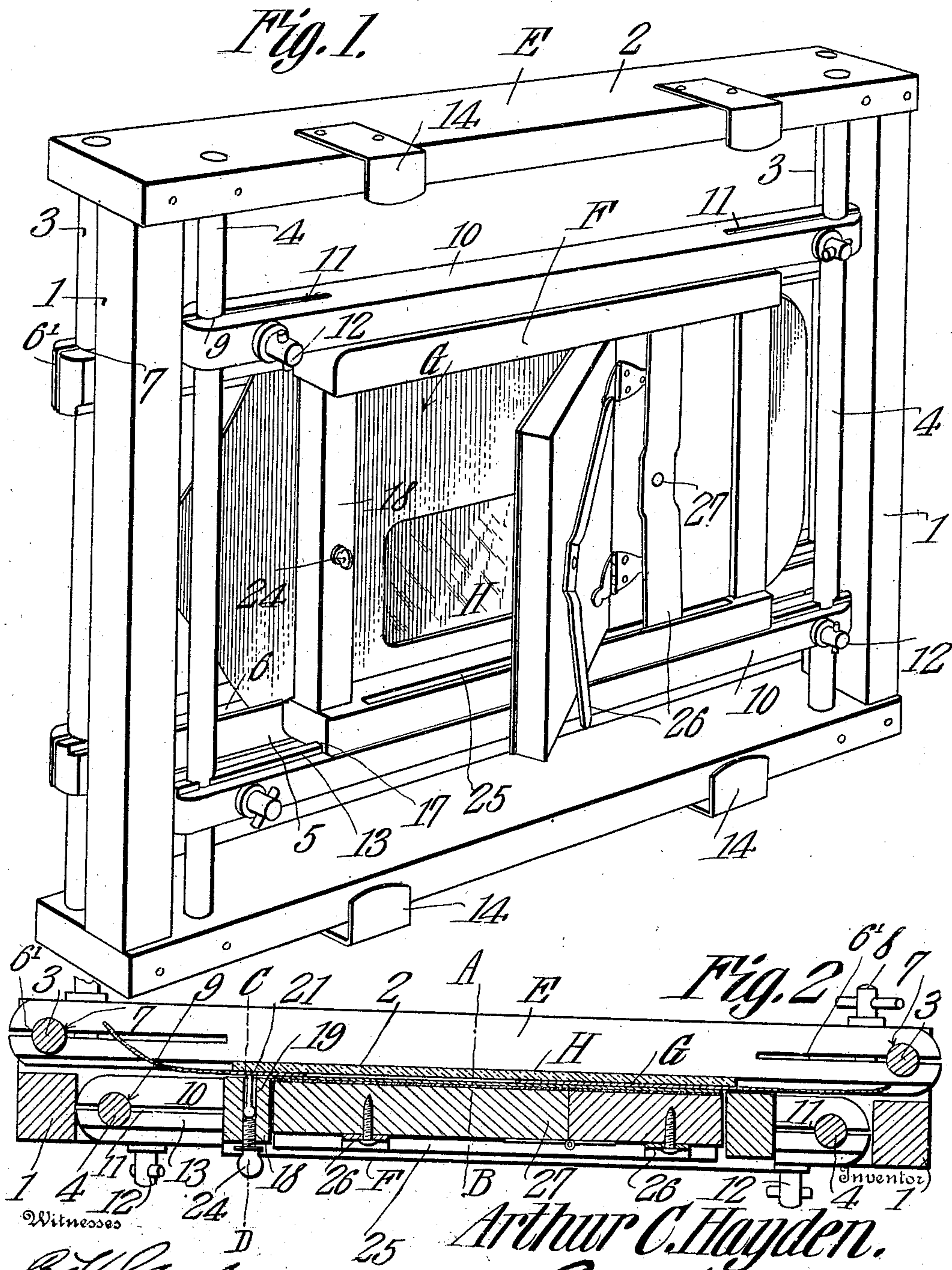


A. C. HAYDEN.
 PRINTING FRAME.
 APPLICATION FILED MAY 14, 1909.

994,157.

Patented June 6, 1911.

2 SHEETS—SHEET 1.



Witnesses
E. J. Hunt
Herbert D. Lawson

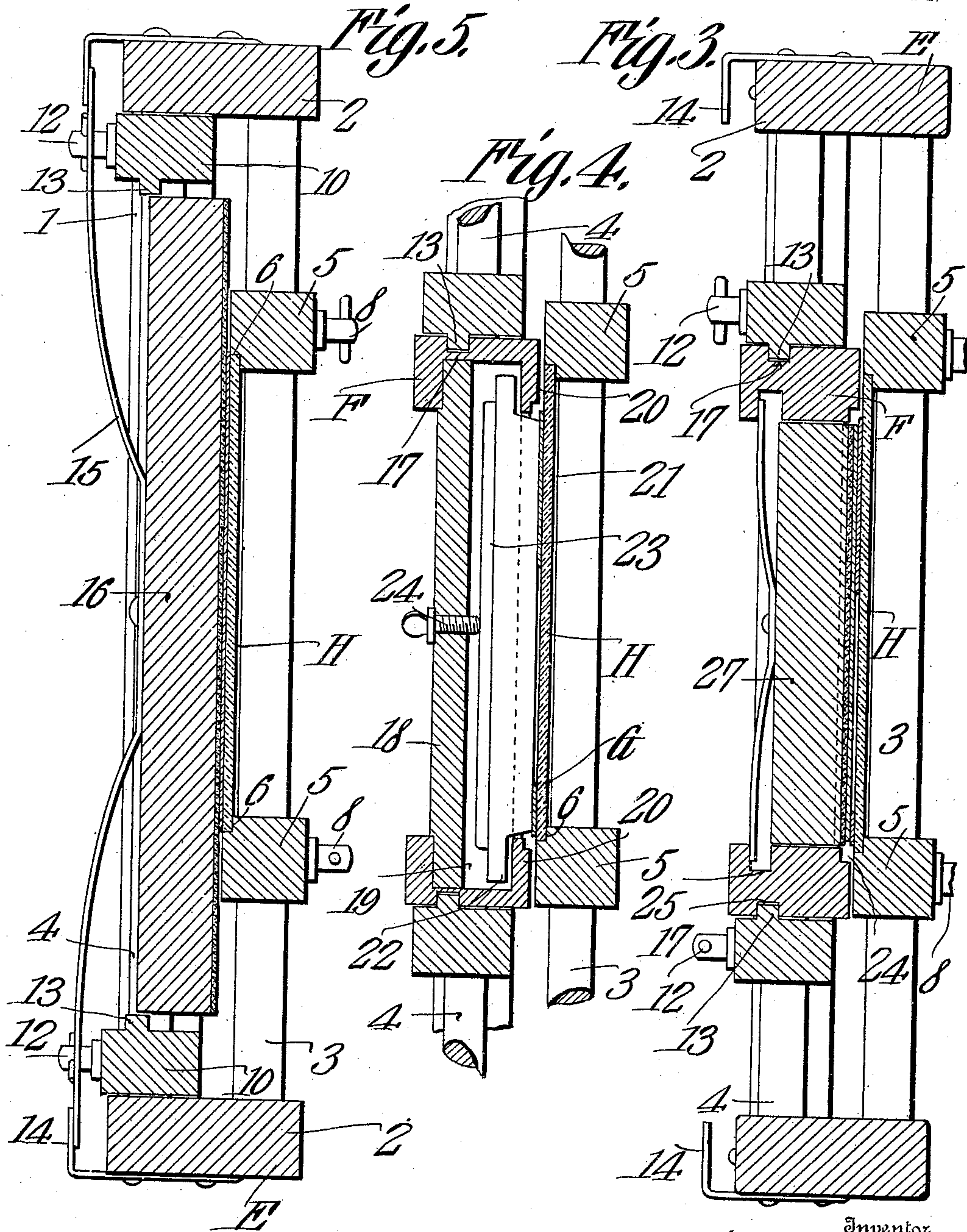
Arthur C. Hayden.
 By *C. A. Snow & Co.*
 Attorneys

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E. J. [Signature]
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Inventor
Arthur C. Hayden.
By *CA Snow & Co.*
Attorneys

UNITED STATES PATENT OFFICE.

ARTHUR C. HAYDEN, OF BROCKTON, MASSACHUSETTS.

PRINTING-FRAME.

994,157.

Specification of Letters Patent.

Patented June 6, 1911.

Application filed May 14, 1909. Serial No. 495,912.

To all whom it may concern:

Be it known that I, ARTHUR C. HAYDEN, citizen of the United States, residing at Brockton, in the county of Plymouth and State of Massachusetts, have invented a new and useful Printing-Frame, of which the following is a specification.

This invention relates to printing frames for use by photographers and its object is to provide a frame of this type designed to hold plates of various sizes, there being adjustably mounted negative holders within the frame and means also adjustably mounted within the frame for the purpose of holding a supplemental frame.

Another object is to provide a supplemental frame having a mat or mask holding member of novel form.

A further object is to provide adjustable negative and supplemental-frame holding strips which are mounted in a novel manner and provided with means whereby they may be conveniently secured in any position to which they may be adjusted.

With these and other objects in view the invention consists in certain novel details of construction and combinations of parts hereinafter more fully described and pointed out in the claims.

In the accompanying drawings the preferred form of the invention has been shown.

In said drawings:—Figure 1 is a perspective view of a printing frame embodying the present improvements, the supplemental frame being mounted therein for use in printing postal-cards and the like. Fig. 2 is a central longitudinal section through the parts shown in Fig. 1, the back of the supplemental frame being shown closed. Fig. 3 is a section on line A—B Fig. 2. Fig. 4 is a section on line C—D Fig. 2, said section being taken only through the attachment mounted within the main frame. Fig. 5 is a section similar to Fig. 3, but showing the frame with the postal-card printing attachment removed.

Referring to the figures by characters of reference E designates the main printing frame, the end strips 1 thereof being of less width than the longitudinal strips 2, and the end portions of said longitudinal strips being connected by pairs of guide rods 3 and 4, the rods 4 being located between the end strips 1 and close to them, while the guide rods 3 are located adjacent and parallel with the front faces of the said end strips.

Slidably mounted upon the guide rods 3 are plate-supporting strips 5, each of which is provided in its inner face with a longitudinal rabbet 6, constituting a seat for one edge portion of a plate. These strips 5 have their ends slotted longitudinally as indicated at 6', said slots intersecting transverse openings 7 through which the rods 3 extend. Screws 8 extend transversely through the slotted portions of the strips 5 and constitute means for drawing the walls of the slots toward each other for the purpose of binding the walls of the openings 7 upon the guide rods 3 and thus securing the strips 5 against movement upon the rods.

The guide-rods 4 extend through openings 9 formed within the end portions of guide strips 10, which, as indicated in the drawings, have longitudinal slots 11 in the end portions thereof, said slots intersecting the openings 9 and having transversely extending screws 12 within them by means of which the walls of the openings 9 can be bound tightly upon the rods 4 so as to hold the guide strips 10 against movement thereon. Guide ribs 13 are formed longitudinally upon the inner or adjoining faces of the strips 10 and are for the purpose hereinafter set forth.

Ears 14 are secured to the longitudinal strips 2 of the main frame and lap the back edges of said strips, these ears being designed to be engaged by the terminals of spring-holding strips 15 which are pivotally mounted upon the back 16 of the main frame.

In using the printing frame herein described the supporting strips 5 are adjusted along the guide rods 6 by first loosening the screws 8 and then sliding the said strips to any desired positions after which they can be locked by tightening the screws 8. The plate from which prints are to be taken is then placed with its opposite edges within the rabbets 6, after which the back 16 is inserted between the guide strips 10 which are of course adjusted toward or from each other so as to permit the back to fit snugly between them. These guide strips are held in adjusted positions by tightening the screws 12 in the manner hereinbefore set forth.

When it is desired to print postal-cards or other articles of a uniform size, it is desirable to use an attachment such as has been indicated in Figs. 1 to 4 of the drawings. This attachment consists of a supple-

mental frame F, the side or longitudinal strips of which are formed with longitudinal grooves 17 in their outer faces designed to receive the ribs 13. One of the end strips 5 18 of the supplemental frame has a longitudinal groove 19 therein provided at its ends with stop shoulders 20. A clamping strip 21 is movably mounted within the slot 19 and has arms 22 at its ends which project 10 back of the shoulders 20 and cooperate therewith to limit the outward movement of the clamping strip. A wire 23 bears upon the inner edge of the strip 21 and constitutes a bearing for an adjusting screw 24 which 15 extends through the end strips 18 and into the slot 19. By means of this screw the strip 21 can be projected any desired distance beyond the slot 19 so as to clamp upon an object in the manner hereinafter set forth. 20 Longitudinal grooves 25 are formed within the inner or adjoining faces of the side strips of the frame F and are designed to receive the terminals of pivoted spring strips 26 carried by the hingedly connected sections 25 of the back 27 of the frame F.

When it is desired to use the attachment for the purpose of printing postal-cards and the like the supporting strips 5 are adjusted toward each other so as to receive the op- 30 posite longitudinal edges of the negative and a mask or mat G is then placed upon the said negative so that only a desired part thereof will be exposed to the sensitized paper which may be placed within the 35 frame. The supplemental frame F is then placed upon the mat G and the strips 10 adjusted toward each other so as to bring their ribs 13 into positions within the grooves 17. The screw 24 is then turned 40 to project the clamping strip 21 against the mat and bind it firmly upon the negative. After the parts have thus been adjusted the sensitized material is placed within the frame F and the back 27 secured in place. 45 Inasmuch as the depth of the rabbets 6 is equal to the thickness of the negative, which has been indicated at H, longitudinal rabbets 28 are preferably formed within the side strips of the frame F so as to receive 50 the mat G.

It will be seen that by providing a frame such as herein described negatives of various sizes may be accommodated, the various parts being readily adjustable and being 55 firmly held after such adjustment by the simple means utilized. It will also be noted that after the mat or mask has once been properly positioned upon the negative while the supplemental frame F is being utilized, 60 it will not become accidentally displaced, and therefore all of the cards or the like printed within the attachment will be exact duplicates.

It is of course to be understood that by 65 substituting an ordinary glass plate for the

negative H, a film may be printed in the same manner as has been heretofore described.

It is of course to be understood that various changes may be made in the construction and arrangement of the parts without departing from the spirit or sacrificing the advantages of the invention.

What is claimed is:—

1. A printing frame including opposed 75 pairs of guide rods, negative-supporting strips adjustably mounted upon the rods of one pair, and guide strips adjustably mounted upon the rods of the other pair.

2. A printing frame including guide rods 80 at opposite ends thereof and arranged in pairs, negative-supporting strips adjustably mounted upon the rods of one pair, guide strips adjustably mounted upon the rods of the other pair, means carried by each of the 85 strips for binding them upon the rods.

3. A printing frame including guide rods disposed at the end portions thereof, said rods being arranged in pairs, negative-supporting strips slidably mounted upon the 90 rods of one pair, said strips having their terminal portions slotted longitudinally, guide strips slidably mounted upon the rods of the other pair and having their terminal portions slotted longitudinally, and means 95 extending through each slotted portion of each strip for binding the strip upon the guide rods.

4. A printing frame including separately movable, slidably mounted negative-support- 100 ing members and separately movable, slidably mounted guide members.

5. A printing frame including separately movable, slidable negative-supporting members, guides therefor, separately slidable 105 guide members, guides therefor, and means carried by each of said members for binding it upon a guide.

6. A printing frame including guide rods arranged in pairs, negative-supporting mem- 110 bers having contractible terminal portions slidably mounted upon the rods of one pair, guide members having contractible terminal portions slidably mounted upon the other rods, and separate means carried by the 115 members for contracting said terminal portions to bind the members upon the guide.

7. A printing frame including separately movable, slidable negative-supporting mem- 120 bers, separately slidable guide members, and a back member interposed between and engaged by the guide members.

8. A printing frame including separately movable, slidable negative-supporting mem- 125 bers, separately slidable guide members, and a supplemental frame slidably and detachably engaging the guide members.

9. A printing frame including negative-supporting members, a supplemental frame supported adjacent to said members, said 130

frame having a slot therein, a clamping strip movably mounted within the slot and means for projecting said strip beyond the slot.

5 10. A printing frame including negative-supporting members, a supplemental frame mounted adjacent to said members, said frame having a slot therein, a mat-clamp-
10 ing strip movably mounted within the slot, cooperating means upon the strip and frame for limiting the movement of said strip in one direction, and means for projecting the strip beyond the slot into clamping position.

15 11. A printing frame including negative-supporting members, adjustable guide members, a supplemental frame engaged and supported by the guide members, said supplemental frame having a slot therein, there
20 being mat-receiving grooves within one face of the supplemental frame, a mat-clamping

strip movably mounted within the slot, and means for projecting the strip beyond the slot and against the mat seated within the grooves.

25 12. A printing frame including adjustable negative-supporting members, adjustable guide strips, a supplemental frame engaged and supported by the guide strips, said supplemental frame having grooves provided
30 with open ends to receive a longitudinally movable mat, and a mat-clamping device seated in and carried by the supplemental frame.

In testimony that I claim the foregoing
35 as my own, I have hereto affixed my signature in the presence of two witnesses.

ARTHUR C. HAYDEN.

Witnesses:

E. HUME TALBERT,

F. T. CHAPMAN.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."
