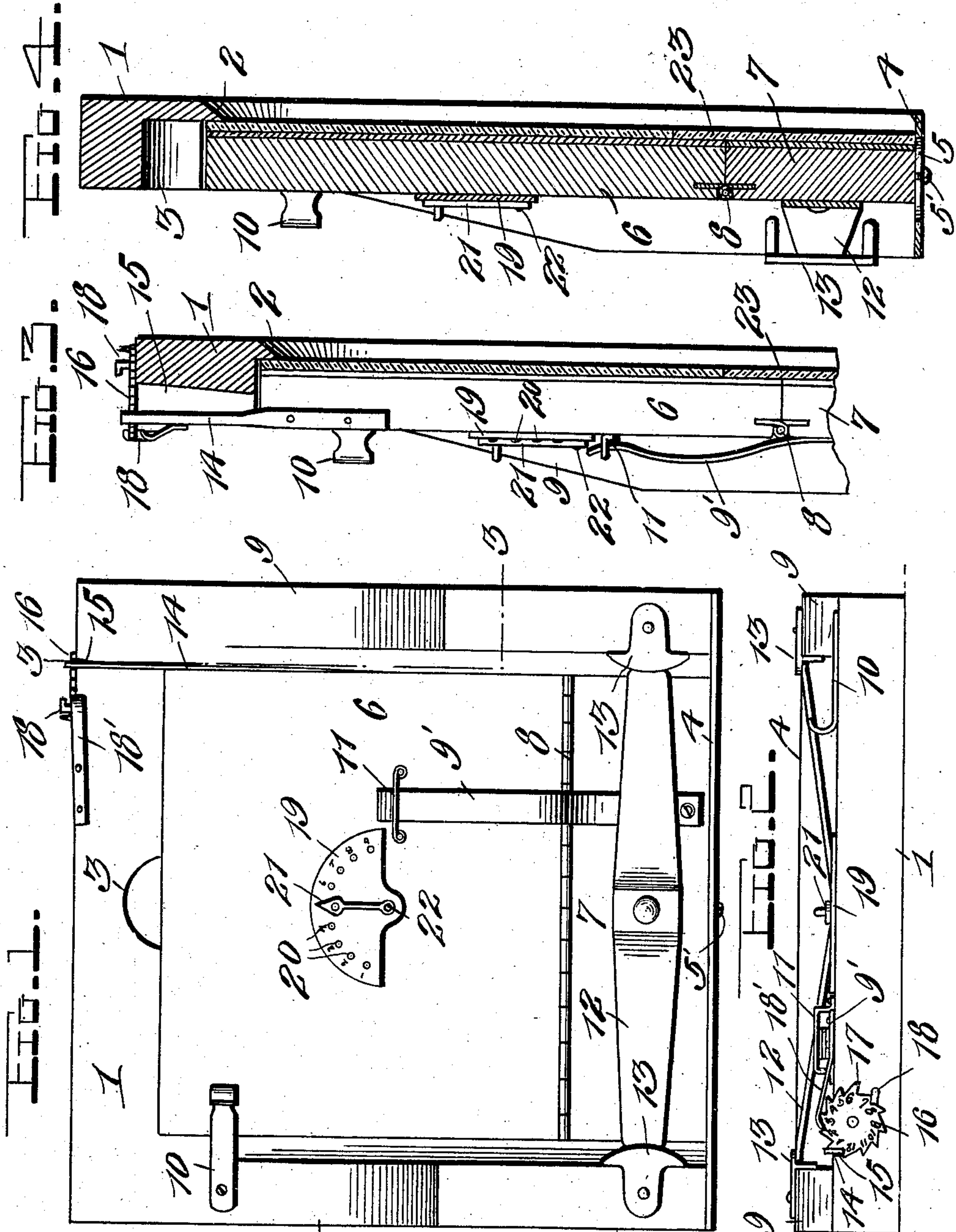


B. L. MICKAELSON.
 PRINTING FRAME.
 APPLICATION FILED OCT. 15, 1910.

994,529.

Patented June 6, 1911.



Witnesses

Chas. L. Griesbauer.
H. L. McQuay.

Inventor
B. L. Mickaelson,

By *Watson E. Coleman.*
 Attorney

UNITED STATES PATENT OFFICE.

BENJAMIN L. MICKAELSON, OF LEBANON, SOUTH DAKOTA.

PRINTING-FRAME.

994,529.

Specification of Letters Patent.

Patented June 6, 1911.

Application filed October 15, 1910. Serial No. 587,227.

To all whom it may concern:

Be it known that I, BENJAMIN L. MICKAELSON, a citizen of the United States, residing at Lebanon, in the county of Potter and State of South Dakota, have invented certain new and useful Improvements in Printing-Frames, of which the following is a specification, reference being had to the accompanying drawings.

10 This invention relates to improvements in photographic printing frames, its primary object being to provide a novel and simple construction of means for locking the back in closed position and automatically swinging the same to open position upon the release of the locking means, thereby permitting the paper and negative to be quickly and conveniently inserted within or removed from the frame.

20 Another object is to provide novel means for automatically counting the pictures as they are printed.

With the above and other objects in view the invention consists in the details of construction and in the arrangement and combination of parts whereby a printing frame is produced which possesses advantages in points of efficiency, and durability, and is inexpensive of manufacture, and at the same time simple in construction and operation.

30 The invention consists in the novel features of construction hereinafter described, pointed out in the claims and shown in the accompanying drawings, in which—

35 Figure 1 is a top plan view; Fig. 2 is an end elevation; Fig. 3 is a sectional view on the line 3—3 of Fig. 1; Fig. 4 is a longitudinal sectional view.

Referring more particularly to the drawings 1 indicates a rectangular frame of wood or other suitable material, which is provided with shoulders 2 on the inner edges thereof to support the negative or glass. The frame 1 is provided at one end with a recess 3 for facilitating the removal or opening the same to remove the prints. The other end of the frame is formed of a metal strip 4 having a slot 5 formed in the center of said strip. The pressure board is preferably made of two sections 6 and 7 which are connected by means of the hinge 8. The sides of the frame 1 are cut down as shown at 9, and secured upon one of the cut down sides is a fastening means 10 for holding the section 6 in closed position upon the negative and print. Upon releasing the section 6 it

will be automatically swung open by means of a spring 9', said spring being secured to the section 7 and bent upwardly and then its end brought down and securely fastened to the section 6 by means of a keeper member 11.

The section 7 is provided with a spring clamp 12, the frame 1 having ears 13 to hold the spring in a locking position. The section 7 is also provided with a pin 5' secured thereto and engaged within the slot 5 of the metal strip 4 which will allow the section to be raised when it is desired to change the glass 23 to a different thickness, and it will also allow the section 7 to give when printing from different thicknesses of negatives.

Secured upon the longitudinal edge of the section 6 is a pawl 14 operating within a recess 15. A toothed number wheel 16 is rotatably mounted upon one end of the frame adjacent the recess 15, tooth 17 of which being longer than any of the others on the wheel 16 forms a stop after a single revolution of the wheel. A stop 18 is provided for the tooth 17 to strike against after the revolution of the wheel 16. A spring pawl 18' is secured to the top of the frame and adapted to engage with the toothed wheel to prevent its backward movement. Mounted on the top of the section 6 is an index 19 shown as made of a semicircular piece of metal and provided with raised portions 20, each portion being numbered.

21 indicates a pointer adapted to be swung in the arc of a circle, upon a pin 22.

The frame as shown is designed for use in printing negatives 4 by 5. A plain piece of glass 23 is placed in the frame under the section 7 and extends out beyond the edge of the same, and the negative is placed in the frame adjacent the glass 23, and the section 6 being larger than the negative it will not catch the print and crumple it when the section is raised or lowered. The frame can be used to print from any thickness of plate or negative as the spring 12 on the section 7 and the slot 5 will allow the two sections to give. If it is so desired the glass 23 can be replaced by any thickness desired by releasing the spring 12 and raising the section 7 in the slot 5.

In printing the number wheel 16 is placed in position so that the numeral 1 is opposite the pawl 14, and when the section 6 is placed in position over the print the pawl 14 will engage the tooth 1 on the heel and turn the wheel so that tooth number 2 is

turned up for engagement. As the pawl 14 is released the spring pawl 18' prevents the wheel from backward movement. When the wheel 16 has rotated to the tooth number 12 the spring pawl 18' is released and the wheel is then turned back to its first position. After a single rotation of the wheel 16, a dozen pictures have been printed and these are marked on the index 19 by placing the pointer 21 on the raised portion numbered 1 and the operation is thus continued until the desired number of pictures have been printed.

From the above it will be seen that whatever number of copies are desired to be printed they are accurately tallied, thereby avoiding mistakes and unnecessary printing.

It will be seen that the invention is extremely simple in construction. The novel arrangement of the parts renders the devices effective and easily operated.

In the foregoing description I have shown the preferred form of my invention, but I do not limit myself thereto, as I am aware that modifications may be made therein without departing from the spirit of the invention or sacrificing the advantages thereof, and I therefore reserve the right to make such changes as fairly fall within the scope of my invention.

Having thus described my invention, what

I claim as new, and desire to procure by Letters Patent is:—

1. In a printing frame comprising a body having a sectional pressure board therein, actuating means carried by one of said sections, a recess formed in one end of the body adjacent one of the longitudinal sides thereof, a toothed number wheel rotatably mounted on the body adjacent said recess, and adapted to be engaged and actuated by said actuating means.

2. In a printing frame comprising a body having a sectional pressure board therein, actuating means carried by one of said sections, a recess formed in one end of said body adjacent one of the longitudinal sides thereof, a toothed number wheel rotatably mounted on the body adjacent said recess and adapted to be engaged and actuated by said actuating means, one of the teeth on said wheel being longer than the rest to serve as a stop after a single rotation of the wheel and a spring pawl secured to the top of the body to engage the wheel and prevent backward movement thereof.

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

BENJAMIN L. MICKAELSON.

Witnesses:

HENRY MORGEN,

C. E. GARDINER.