

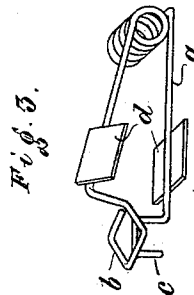
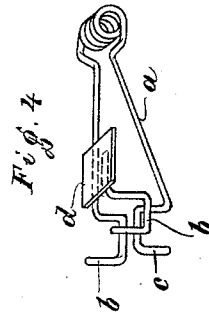
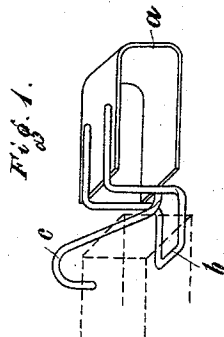
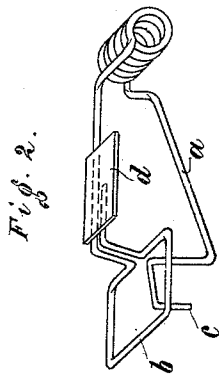
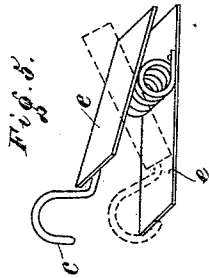
(No Model.)

A. DELUG.

CLIP FOR USE IN PHOTOGRAPHIC COPYING.

No. 485,758.

Patented Nov. 8, 1892.



Witnesses:
E. H. Clark
M. C. M. Traylor

Inventor:
Alois Delug
by *Max Jeng*
his Attorney.

UNITED STATES PATENT OFFICE.

ALOIS DELUG, OF MUNICH, GERMANY.

CLIP FOR USE IN PHOTOGRAPHIC COPYING.

SPECIFICATION forming part of Letters Patent No. 485,758, dated November 8, 1892.

Application filed March 14, 1892. Serial No. 424,775. (No model.) Patented in England January 15, 1892, No. 865.

To all whom it may concern:

Be it known that I, ALOIS DELUG, a citizen of the Kingdom of Bavaria, and a resident of Munich, Bavaria, Germany, have invented certain new and useful Improvements in Clamps or Clips for Use in Photographic Copying Processes, (for which I have obtained a patent in England, No. 865, dated January 15, 1892,) of which the following is a specification.

The clamps or clips employed in copying by photography are open to the objection that they intercept the light at the point at which they grasp the plate. The objections resulting therefrom are sufficiently familiar to those experienced in the art.

The present invention is designed to produce a copy free from shadows. This is accomplished by a suitable construction of the upper jaw of the clamp, and especially by causing the same to grasp the plate at one point only.

The drawings, comprising Figures 1, 2, 3, 4, and 5, show in isometric perspective five different clamps, each of which embodies my invention.

According to Figs. 1, 2, 3, and 4 the same consists in an outwardly-extending spring-yoke *a*, which consists either in a plate-spring, as shown in Fig. 1, or is formed of wire, as shown in Figs. 2, 3, and 4. The lower jaw *b* is attached to the upper arm of the yoke *a*, Fig. 1, and, as shown in the drawings, is bent downwardly, while the upper clamp-jaw *c* is bent upwardly and attached to the lower arm of the yoke *a*. The clamp-jaw *c*, as already stated, is so constructed that it will obstruct as little as possible the passage of the light, and for this purpose it grasps the plate only at a single point of its upper surface. This is best carried out by constructing the same of wire, which bears on the plate at right angles to the same, as shown in the drawings, and bends over and extends downwardly, where it is attached in the lower arm of the yoke *a*, Fig. 1. The lower clamp-jaw may consist in a broad surface bearing against the plate, or it may engage the plate at only two points, as shown in Fig. 4. According to

Figs. 2, 3, and 4 the yoke with the two clamp-jaws is made from a single piece of wire provided at *g* with suitable finger-pieces for manipulating the same, which may be soldered or otherwise secured to the wire.

Fig. 5 shows another modification embodying my invention, comprising two plates *e*, connected by a spiral spring to form a clamp and whose upper plate is provided with a clamp-jaw *c*, similar to that already described—that is, consisting of a single piece of wire bearing upon the plate substantially at right angles to the same.

By causing the wire clamp-jaw to bear substantially at right angles upon the plate and bending over at some distance from the same I am enabled to cause the light to fall upon all points of the plate with the exception of the single contact-point of the upper clamp-jaw *c* during its entire exposure.

What I claim, and desire to secure by Letters Patent, is—

1. In a clip for photographic copying, the combination, with a flat jaw having an extended bearing-surface, of a second jaw consisting of a wire bent at right angles to the first jaw, substantially as set forth.

2. A clip for photographic copying, consisting of a jaw formed of a piece of wire bent in the shape of a flat horizontal loop, as *b*, in combination with a second jaw formed of a piece of wire having a forward vertical end adapted to bear on the plate at one point only, the two jaws being connected by an intermediate spring, substantially as set forth.

3. A clip for photographic copying, consisting of a wire one end of which is bent into the shape of a horizontal flat loop, as *b*, and the other end in the form of a vertical pin, as *c*, the wire being bent in the form of a spiral at an intermediate point, substantially as set forth.

In testimony that I claim the foregoing as my invention I have signed my name in presence of two subscribing witnesses.

ALOIS DELUG.

Witnesses:

EMIL HENZEL,
KONRAD KRIEG.