(No Model.)

H. KOCH.

AUTOLITHOGRAPHIC PRESS.

No. 561,513. Patented June 2, 1896.

Fig. 1

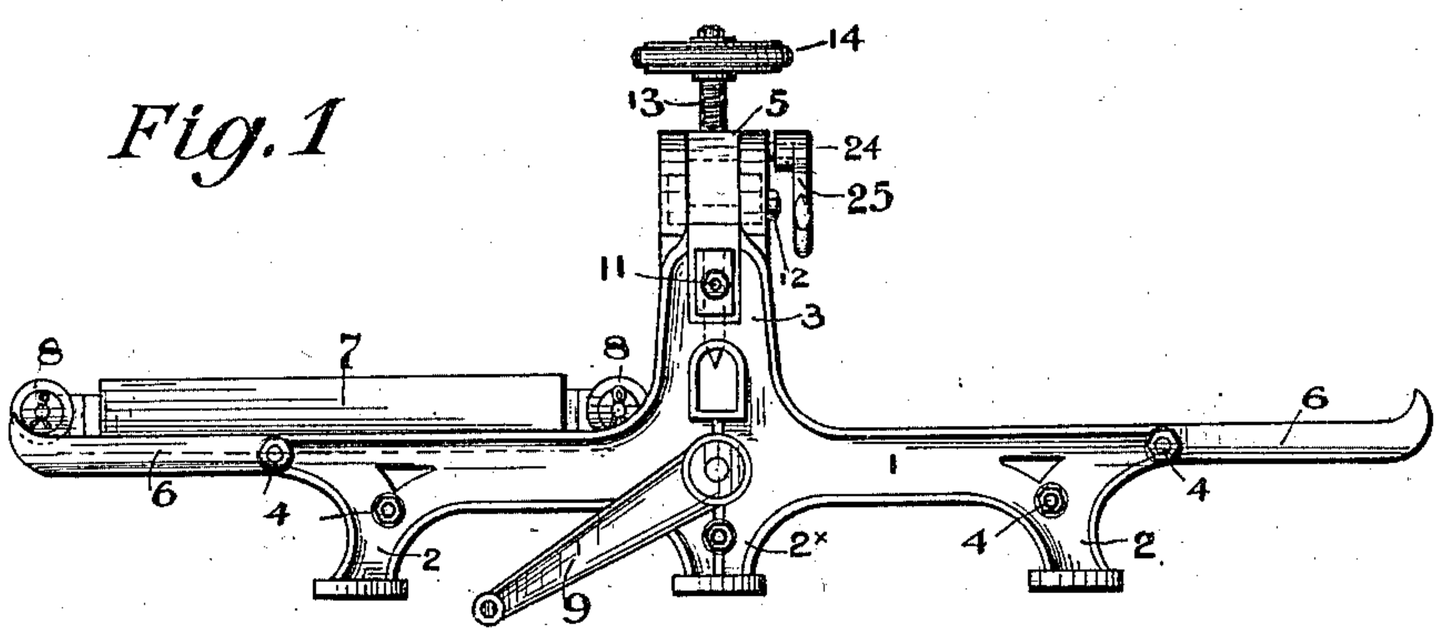


Fig. 4

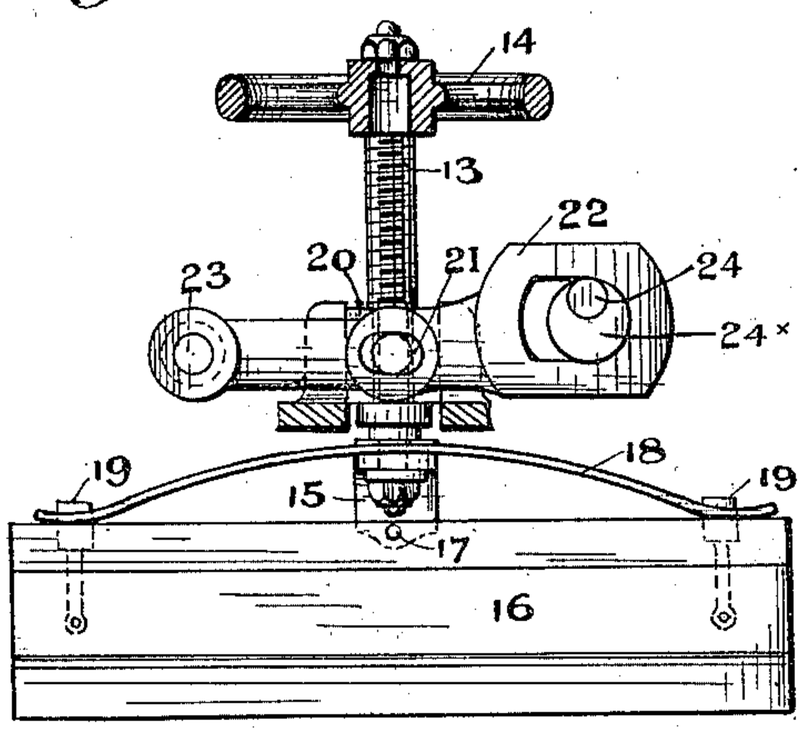


Fig. 2

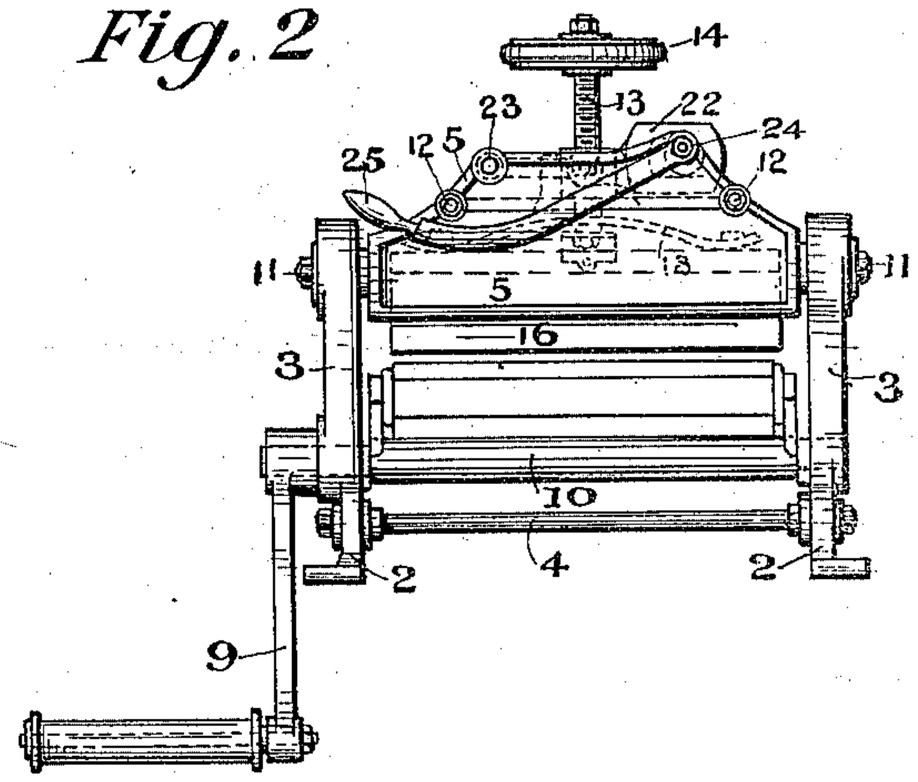


Fig. 3

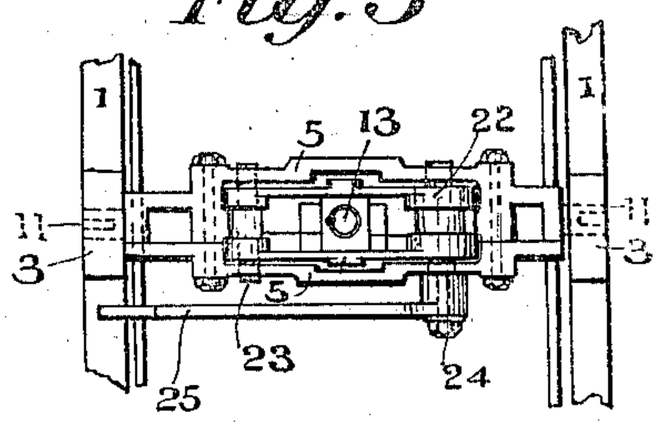
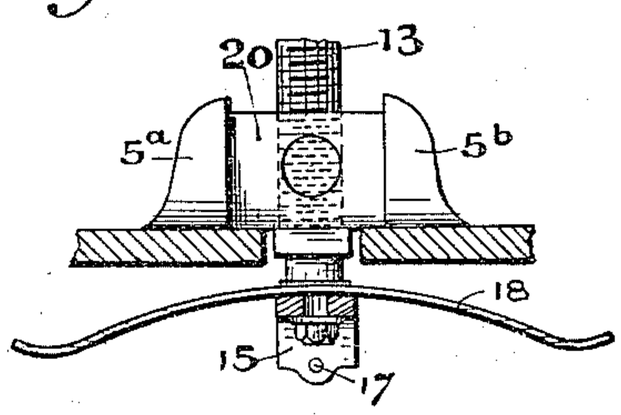


Fig. 5



Witnesses:-
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Inventor:-
Hugo Koch,
By his Atty. O. B. Reichelt.

UNITED STATES PATENT OFFICE.

HUGO KOCH, OF LEIPSIC, GERMANY.

AUTOLITHOGRAPHIC PRESS.

SPECIFICATION forming part of Letters Patent No. 561,513, dated June 2, 1896.

Application filed September 3, 1895. Serial No. 561,303. (No model.)

To all whom it may concern:

Be it known that I, HUGO KOCH, a citizen of the Kingdom of Saxony, and a resident of Leipsic, Connewitz, in the Kingdom of Saxony and German Empire, have invented certain new and useful Improvements in Autolithographic Presses, of which the following is a specification.

My invention relates to lithographic hand-presses wherein the stone is supported upon a movable carriage beneath a scraper made adjustable by a screw and raised and lowered by means of a hand-lever.

The present invention relates particularly to means for holding, operating, raising, and lowering the scraper; and the invention consists in certain details of construction and combinations of parts hereinafter particularly described and claimed with reference to the accompanying drawings, wherein—

Figure 1 is a side elevation, and Fig. 2 a front elevation, of a lithographic press embodying my invention; Fig. 3, a plan of the cross-head and fragments of the side pieces of the frame; Fig. 4, an enlarged front elevation of the scraper and its improved levers and connections for supporting, adjusting, and regulating the action of the same; and Fig. 5, a similarly-enlarged detail in elevation of the nut and adjusting-screw connection.

The frame of the machine consists of side plates 1, having pedestals 2 $2^{\times}$ and uprights 3, vertically projecting from the side plates 1, at the middle thereof, and directly above the middle pedestal $2^{\times}$ cross-bars 4, connecting the side plates and supporting guide and cross plates 5, connecting the uprights 3 and providing means for supporting the scraper and its adjusting and operating devices. Track plates or rails 6 are secured parallel to each other alongside of the side plates 1 and to the ends of the cross-bars 4 and support the carriage 7 by means of rollers 8, which allow the carriage to be freely moved upon the rails to carry the stone beneath the scraper by means of the usual crank 9 and roller 10, supported in boxes in the side plates directly beneath the frame-uprights in a well-known manner.

The guide and cross plates 5 are secured to the uprights 3 of the frame by pins 11 and comprise two separable plates held together securely by bolts 12, passing through them. The plates 5 have bossed pivot-bearings 5^{a} 5^{b}, respectively, upon opposite sides of the central vertical line in the axis of the adjusting-screw 13 of the machine. The adjusting-screw 13 carries at its upper end a hand-wheel 14 for operating it, and carries at its lower end a suspension-strap 15 and a scraper 16, secured thereto by a pin 17 and held with a yielding spring-pressure by a plate-spring 18, held at its ends by suspension-straps 19 to the said scraper, the latter being allowed to press upon the tympan placed over the paper upon the stone in a well-known manner.

The adjusting-screw 13 is fitted into a nut 20, which is supported by trunnions at its front and back sides, which fit in slightly-elongated holes 21 in the middle portion of levers 22. The levers 22 are pivoted at one end to a fixed stud or pin 23, secured to the cross-plates 5, and are raised and lowered at the other end by a cam-shaft 24, also journaled in the cross-plates 5, the said cams $24^{\times}$ moving in longitudinal slots in the ends of said levers and adapted to raise and lower the nut at the middle of said levers and with it the adjusting-screw and scraper suspended therefrom. A hand-lever 25 is secured to the cam-shaft 24, by means of which, together with the cam-shaft operating upon the long end of the lever, great power may be exerted upon the scraper, and by means of the adjusting-screw the scraper may be raised and lowered to suit any-sized stone which may be placed upon the press. The lever permits the scraper to be raised and lowered quickly.

The spring-pressure and pivot connection of the scraper to the adjusting-screw will admit of the scraper adjusting itself to the surface of the stone, whether it be level or otherwise.

I claim as my invention and desire to secure by Letters Patent—

1. A lithographic press comprising a frame having side plates, uprights and a cross-brace, a scraper and adjusting-screw connected together, a screw-nut and adjustable levers pivoted to the cross-brace and carrying the said nut-screw and scraper, substantially as described.

2. A lithographic press comprising a frame, uprights and cross-piece, a scraper and ad-

justing-screw connected together, a screw-nut and adjustable lever pivoted at one end to the cross-brace, carrying the said nut-screw and scraper, and slotted at its free end, a cam working in said slot, and a hand-lever for operating said lever and scraper, substantially as described.

3. A lithographic press comprising a frame and cross-piece, adjustable levers pivoted thereto, a nut, an adjusting-screw, a scraper suspended from the said screw by a pivot-pin, and a spring-plate pressing upon the free ends of said scraper, substantially as described.

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

HUGO KOCH.

Witnesses:
E. MAX OTTO,
RUDOLPH FRICKE.