

(No Model.)

C. R. WALDER.
COPYING PRESS.

4 Sheets—Sheet 1.

No. 535,268.

Patented Mar. 5, 1895.

Fig. 2.

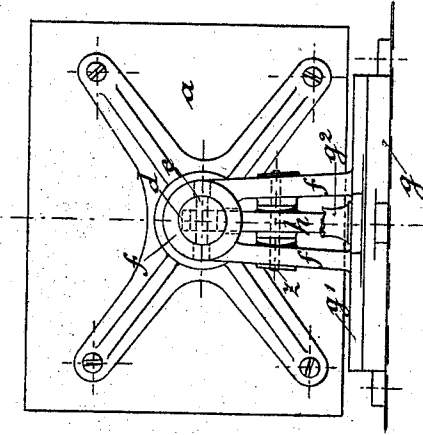


Fig. 3a.

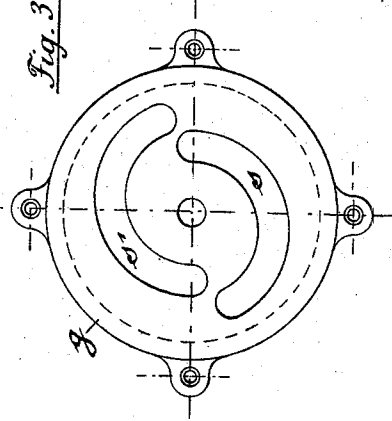


Fig. 1.

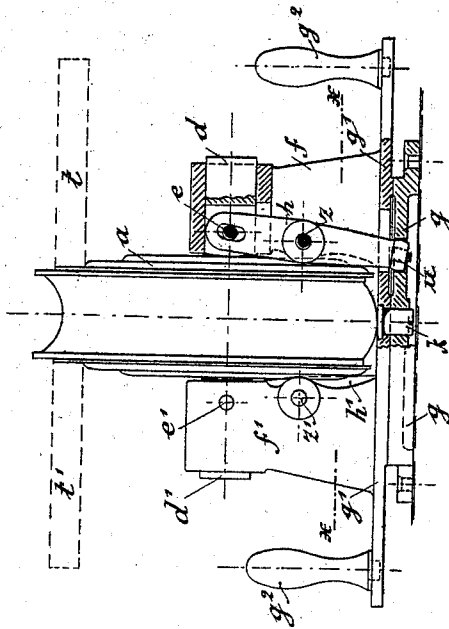
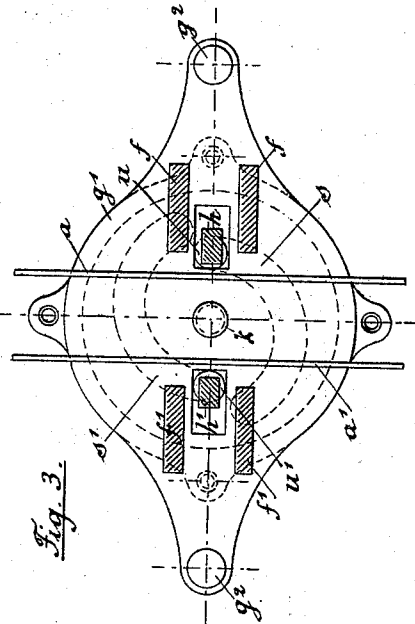


Fig. 3.



Witnesses:

Carl Wenzel.

Fritz Stetzer

Inventor:

Carl Robert Walder

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Fig. 5.

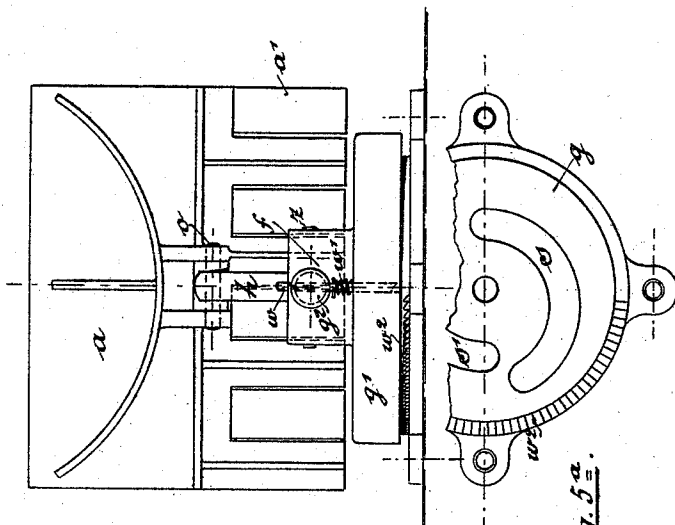
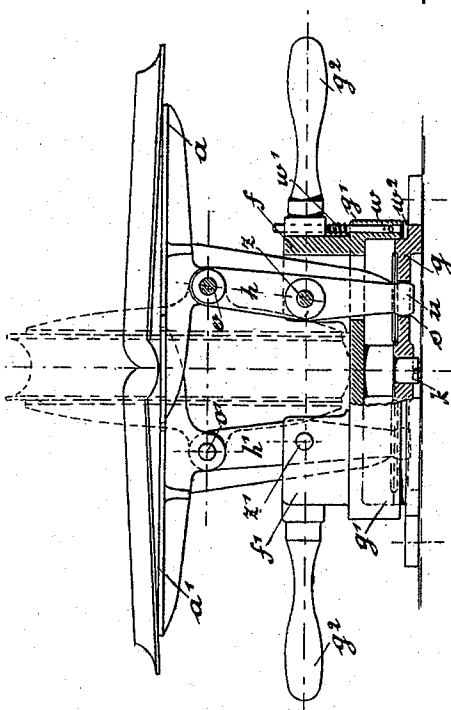


Fig. 5a.

Fig. 4.



Witnesses:

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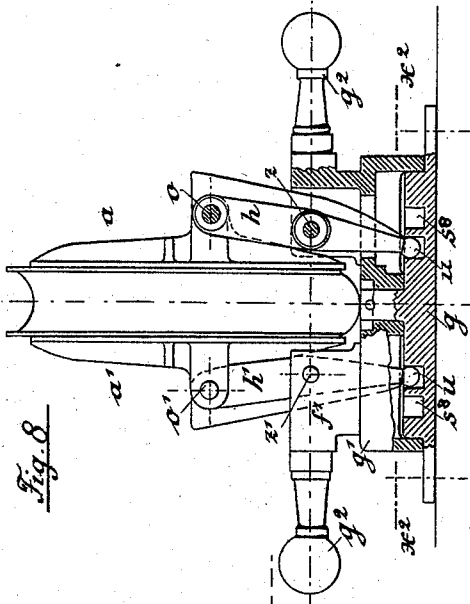


Fig. 8

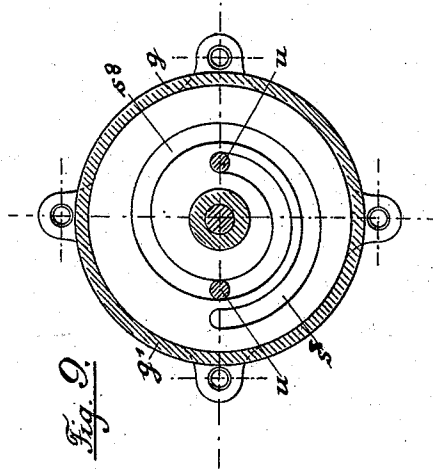


Fig. 9

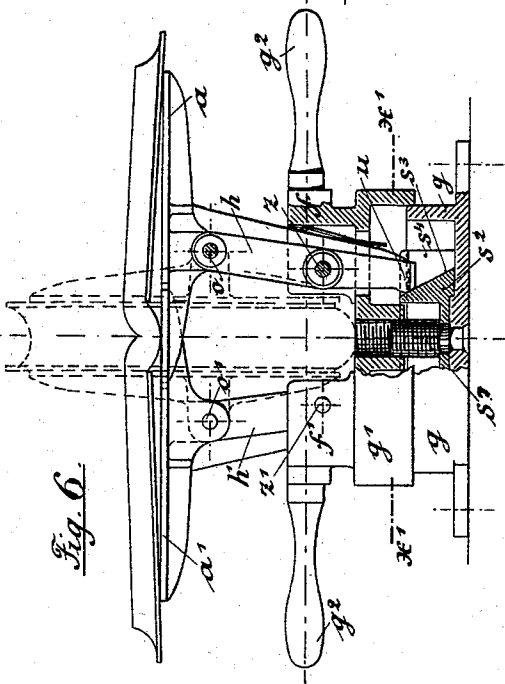


Fig. 6

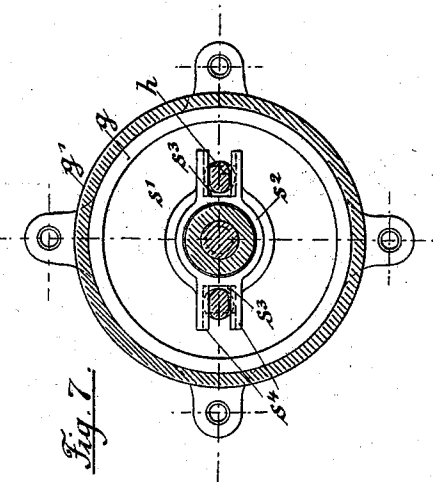


Fig. 7

Witnesses:

Carl Wenzel
Fritz Schirger

Inventor:

Carl Robert Walder,

(No Model.)

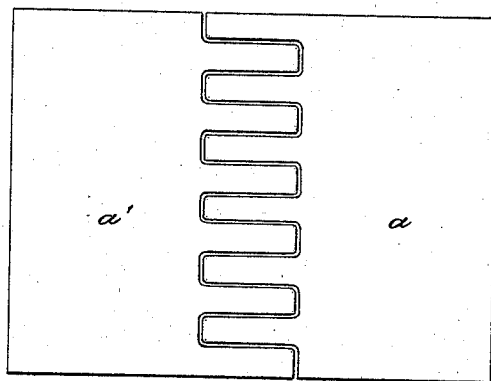
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Fig. 10.



WITNESSES:

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INVENTOR:

Carl Robert Walder.

BY

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ATTORNEYS.

UNITED STATES PATENT OFFICE.

CARL ROBERT WALDER, OF BERLIN, ASSIGNOR TO WILHELM VON DER NAHMER, OF REMSCHEID, GERMANY.

COPYING-PRESS.

SPECIFICATION forming part of Letters Patent No. 535,268, dated March 5, 1895.

Application filed June 28, 1894. Serial No. 515,987. (No model.)

To all whom it may concern:

Be it known that I, CARL ROBERT WALDER, a subject of the King of Prussia, residing at 96 Grossbeerenstrasse, in the city of Berlin, in the Kingdom of Prussia and German Empire, have invented new and useful Improvements in Copying-Presses, of which the following is a specification.

This invention relates to a press provided with table plates formed either on the pressure plates or by faces of said pressure plates, said table plates serving to support the copying book while being prepared for the press copying operation.

The press embodying this invention is illustrated in the annexed drawings, in which—

Figure 1 is a front elevation partly in section of the press. Fig. 2 is a side elevation of Fig. 1. Fig. 3 is a section along $x x$ Fig. 1. Fig. 3^a is a detail plan view of the foot plate. Fig. 4 is a front elevation partly in section of a modification. Fig. 5 is a side elevation of Fig. 4. Fig. 5^a is a detail plan view of the foot plate shown in Fig. 5. Fig. 6 is a front elevation partly in section of another modification. Fig. 7 is a section along $x' x'$ Fig. 6. Fig. 8 is a front elevation partly in section of another modification. Fig. 9 is a section along $x^2 x^2$ Fig. 8. Fig. 10 is a plan view, showing the pressure plates swung into position to form a table surface.

In the construction shown in Figs. 1, 2 and 3 the pressure plates $a a'$ are secured to the pressure rods $d d'$ horizontally guided in the supporting blocks $f f'$, and the plates are respectively actuated by levers $h h'$ fulcrumed at $z z'$ and connecting by their upper arms with cross pins $e e'$ in the pressure rods $d d'$. The lower lever arms are rounded or provided with rollers $u u'$ and engage into eccentric slots $s s'$ in the fixed foot plate g (Figs. 2, 3 and 3^a) upon which the entire upper portion of the press resting on plate g' can be turned or revolved about bolt k . Upon such revolution, readily effected by means of handles g^3 , the lower ends of levers $h h'$ glide in the slots $s s'$ and are consequently by the eccentricity of these slots forced gradually farther away from the center of the swivel bolt k , and the upper lever arms with press plates $a a'$ are moved toward one another, exerting pressure

on the interposed copy book. As both plates are moved sufficient travel is attained to enable varying thicknesses of books to be sufficiently pressed, and no adjustment of the plates for any determined distance is required. Furthermore as the opening between the pressure plates is unobstructed at three sides, the device has the advantage that the copy book can be conveniently inserted and is not so readily broken or injured at its outer edges as in the case of arch presses. Likewise the inlay sheets (oiled sheets and the like) used in copying remain in better condition than heretofore, since in the free opening of the pressure plates no indentation of the edges can occur.

In the former lever presses as also in the screw spindle presses, the preparation of the copy book for the copying process, such as dampening of the leaves, insertion of the letter to be copied and the like, had to be performed outside of the copying press and the copy book had then to be inserted and subsequently removed from the press. In addition to the press a free table space is consequently required for supporting the book during preparation. In the above described arrangement and movement of pressure plates the copying press can be so arranged that the copy book remains in combination with the press also during preparation or during the entire labor of copying, so that the book does not have to be transported into and out of the press. For this purpose the pressure plates $a a'$ are provided with horizontal plates $t t'$ Fig. 1 forming a resting table for the copy book, or the pressure plates are rotatably mounted on hinge pins $o o'$ (Figs. 4 and 5) on the upper arms of levers $h h'$, so that these pressure plates when properly swung will form a table on which the copy book can be prepared before copying. In this rotary arrangement, the pressure plates are serrated at the lower end (Figs. 5 and 10) so that these plates can be brought into horizontal position (Figs. 4 and 10), and the teeth of one plate are in such relative position to the teeth of the other plate, that on the turning of the plates the teeth respectively enter the opposite interstices, thus preventing a collision of the plates as their serrations engage into one another.

When swung over as shown in Fig. 10 the plates form an unbroken surface. When the copy book has been prepared on this surface and said book occupying the position shown in Fig. 4 is now closed and its back caused to exert a downward pressure on the plates $a a'$ at the place where the serrations engage one another, said plates as the book is pressed downward into vertical position will swing into vertical position against the book covers to the position shown in Fig. 4 in dotted lines. To exert pressure both plates can now be moved toward one another, as already described with reference to the construction shown in Figs. 1 to 5.

To lock the press when required under high pressure so that no return movement can occur, the upper rotary part can be provided with a detent w and the foot plate g with teeth w^2 (Figs. 4, 5 and 5^a). If the lower end of the detent engages into the teeth, the upper part of the press cannot be turned backward, until freed by the withdrawal of the detent from the teeth. A spring w' may be applied for automatically freeing the detent.

To prepare the book the same is laid on the table leaves $t t'$ as already noted, and after being closed the book is passed down between the pressure plates, after which pressure is exerted when the book can again be laid open on the table leaves.

In Figs. 6, 7, 8 and 9 are shown presses with rotary table or pressure plates, in which a stronger pressure can be exerted on the copy book such pressure being effected in the arrangement of Figs. 6 and 7 by mounting the upper part g' of the press on a screw s^7 which takes the place of the connecting bolt k , the levers $h h'$ with their lower parts u moving along the inclined face s^3 of a shoe or wedge s^2 , as the upper part g' is screwed down on the screw s^7 . The shoe is rotary on the lower part of screw s^7 and said shoe engages the lever ends guided between the lugs s^4 , and the more the upper part g' is screwed down, the more the lever ends u are spread, moving the pressure plates toward one another. On screwing back the upper part the lower ends of the levers are moved together by springs placed behind said lower ends so that the le-

ver ends are continually held against the inclined face s^3 of the shoe s^2 .

In the construction shown in Figs. 8 and 9 the pressure is intensified by making the slots s in the foot plate g in form of a spiral. The ends u of the levers $h h'$ travel in this spiral, and as the latter can be given a slight rise, the turning of the upper part g' will cause the pressure plates to move toward one another so as to exert considerable power. It will thus be noticed that the table plates or table surfaces for supporting the copy-book during the preparatory work preceding the copying pressure, can be formed either by plates or faces $t t'$ specially secured to the pressure plates, or by faces of said pressure plates themselves, said plates in the latter case being rotary or swinging to bring their said faces into supporting or table like position.

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

1. A copying press comprising pressure plates provided with table faces for supporting the copying book in open position preparatory to the copying process and hand operated levers for positively moving the pressure plates in right lines to and from the pressing position, substantially as described.

2. A copying press comprising pressure plates, in combination with vertically arranged levers of the first class, said levers having their upwardly extending arms connected to the pressure-plates, and a cam located on the base of the press and made to engage the lower arms of said levers to actuate the latter, substantially as described.

3. A copying press having a horizontal base provided with a cam or actuator, combined with a rotating horizontal plate provided with levers made to engage the cam, and pressure plates connected to said levers, substantially as described.

In testimony whereof I have hereunto set my hand in the presence of two subscribing witnesses.

CARL ROBERT WALDER.

Witnesses:

W. HAUPT,
JOHN WATERS, Jr.