

J. A. PARKS.
Lithographic-Press.

2 Sheets—Sheet 1.

No. 228,271.

Patented June 1, 1880.

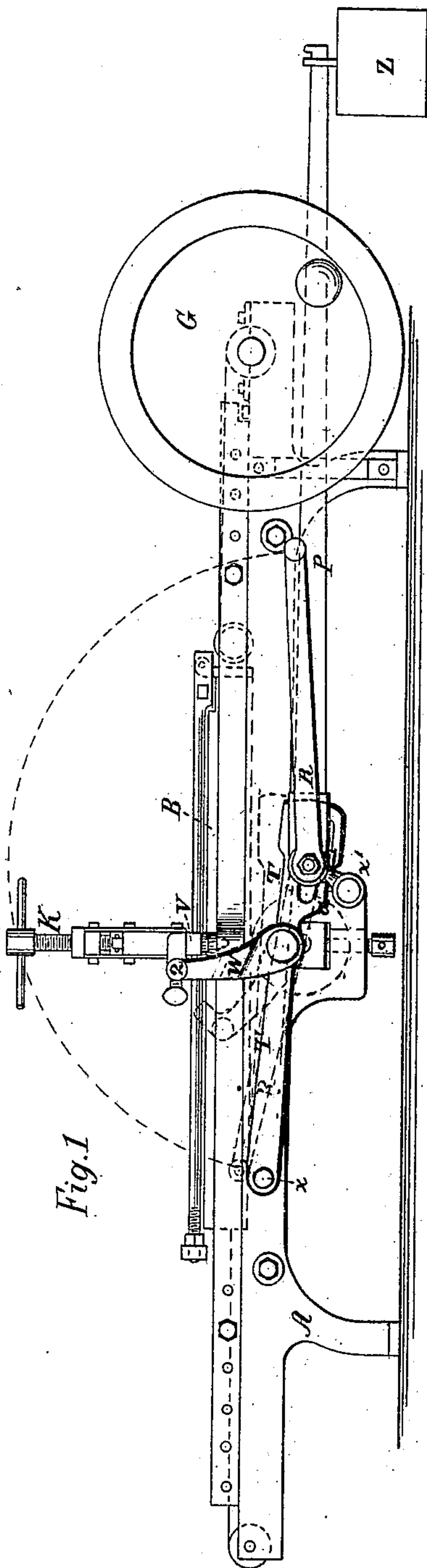


Fig. 1

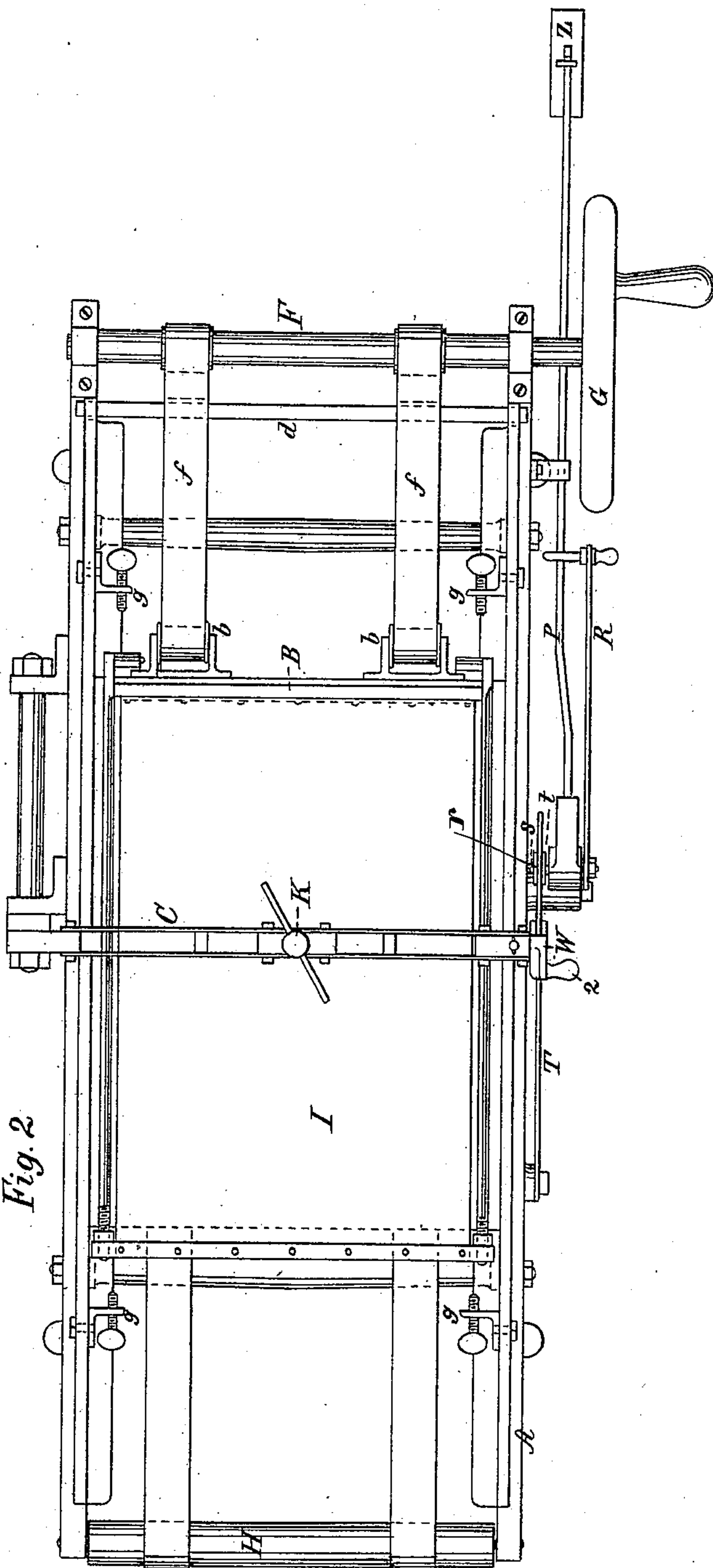


Fig. 2

Witnesses
E. K. Van Beuren
J. H. Hobbie

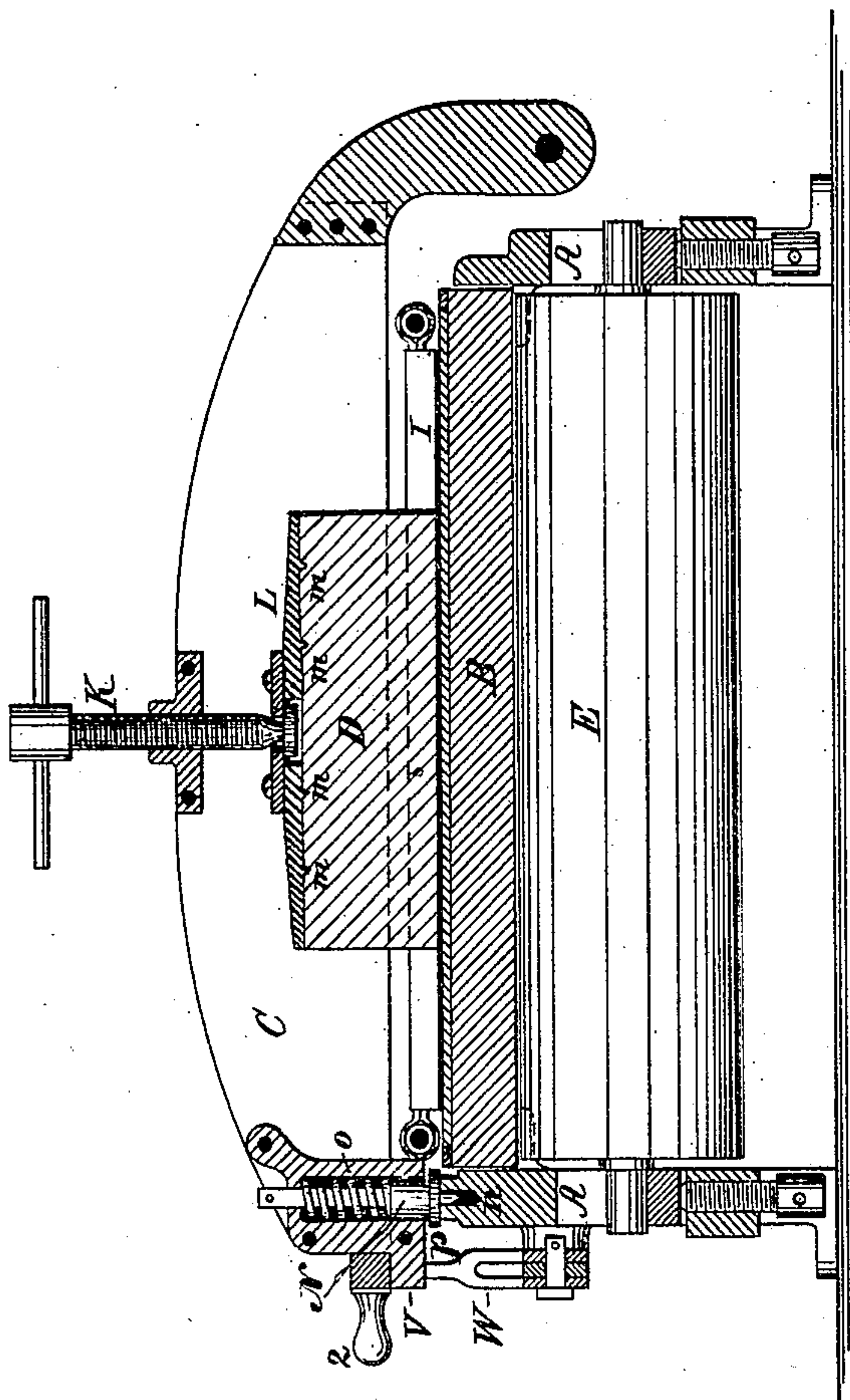
Inventor
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Fig. 3



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UNITED STATES PATENT OFFICE.

JOHN A. PARKS, OF BROOKLYN, NEW YORK.

LITHOGRAPHIC PRESS.

SPECIFICATION forming part of Letters Patent No. 228,271, dated June 1, 1880.

Application filed June 11, 1879.

To all whom it may concern:

Be it known that I, JOHN A. PARKS, of the city of Brooklyn, county of Kings, and State of New York, have invented a new and useful Improvement in Photo-Mechanical Presses; and I hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, forming a part of this specification, in which—

Figure 1 is a side elevation, Fig. 2 is a plan view, and Fig. 3 is a central transverse section, of a machine embodying my invention.

This invention relates to that class of hand-presses in which a reciprocating carriage carrying the design and a stationary pressure-scraper are employed; and the invention consists in the construction and arrangement of the operative mechanism, whereby the machine is conveniently and easily manipulated and capable of adjustment to various degrees of pressure, and with a uniform distribution of the same throughout the operation.

The invention also consists in a novel means of connecting the scraper with its holder, so that it will adjust itself upon the work and bear equally upon the entire surface in contact and be easily detached.

In order to enable others to understand and use my invention, I will first proceed to refer to the general organization of a machine to which my improvements are adapted, and then to particularly describe and claim the same.

In the drawings, A represents the framework or bed of the machine, B the reciprocating carriage, and C the swinging platen or holder to which the scraper D is attached. The carriage B moves in guideways and rests upon a friction-roller, E, suspended in the direct line of pressure, and forms an unyielding support to the carriage. The friction-roller E is supported upon adjustable bearings, in order that lost motion occasioned by wear may be remedied.

The carriage B is movable in one direction by means of the roller F, operated by the hand-wheel G and the intermediate straps, *ff*, which pass from the roller over friction-pulleys *b b*, attached to the carriage, and return to a cross-bar, *d*, which is square in cross-section and

rests in corresponding notches in the frame of the machine. This cross-bar is removable, and the length of the straps for variable movements of the carriage may be changed by coiling the same thereon accordingly.

The definite distance of travel of the carriage is regulated by the adjustable stops *g g*, located in the guideways. The return movement of the carriage is effected by similar straps attached to its opposite end and wound upon a spring-roller, H.

The action of the spring-roller is the same as the well-known curtain-spring in common use, the spring being compressed in the forward movement of the carriage, and its recoil effecting an automatic return movement when the scraper is relieved from pressure.

The adjustment and construction of the spring-roller referred to being well understood, a detailed description thereof is not deemed necessary.

The carriage B is also provided with a tympan, I, affixed to a hinged frame and applied in the usual manner.

Having referred to the parts composing the general organization of the machine, I will proceed to set forth my improvements in detail.

The scraper D is composed of wood, and in the form and place of location generally used. To the inner end of the adjusting-screw K a flat plate, L, is connected by a swivel-joint, as shown in Fig. 3, which permits a slight oscillatory motion. The scraper D is attached to such plate by means of projecting barbs *m m*, which penetrate the wood and hold the scraper in place. This mode of attachment allows an easy removal of the scraper, and the swivel-joint permits it to seat itself and bear equally upon the work.

The swinging platen or holder C, to which the scraper is attached, is provided at its free end with a depending stud or pin, N, which enters a corresponding recess, *n*, in the frame A when the holder C is in position for action. This stud or pin N rests upon a spiral spring, *o*, Fig. 3, and is capable of a slight yielding movement when pressure is applied to the holder C, the movement being arrested by the collar *p*. The object of this device is to allow the swinging holder C to be placed

in position, and to keep the scraper clear of the work until the connecting devices for applying the pressure are brought into operation.

5 The mechanism for producing and regulating the pressure is shown in the side-elevation figure of the drawings, and consists of a system of levers having their fixed pivotal points located at $x x'$, the latter acting as the
10 fulcrum of the bent lever P, upon the long arm of which the weight Z is adjusted. At the angle of this bent lever the operating-lever R is journaled, and capable of a throw of about one hundred and eighty degrees.

15 From the inner face of the journal r an eccentric-pin, s , projects and engages with the horizontal pivoted arm T by means of the bearing-block t , located near its free end within the slot u . This bearing-block t is capable
20 of a sliding movement within the slot equal to the eccentricity of the pin s and corresponding with the throw of the operating-lever R.

A latch, W, is pivoted to the arm T, and
25 engages with the projecting lug V upon the end of the swinging platen or holder C. This latch is pivoted to the arm T in such a relative position with the lug V that when the pressure is relieved it will automatically dis-
30 engage itself by gravitation, a suitable knob or handle, Q, being provided for its engagement. The relative position of these devices, when the pressure is applied or relieved, is shown in the full and dotted lines, respectively,
35 the movement of the operating-arm T, as indicated, producing a vertical movement of the latch W by means of the eccentric-pin s .

When the pressure is applied to the swinging platen C in the manner described, the bent
40 lever P will rise if sufficient weight is not ap-

plied to its long arm to prevent such action, a greater or less degree of pressure being applied to the scraper D by means of the adjusting-screw K. To maintain the pressure the weight Z must be adjusted accordingly, as
45 the extent of the movement of the operating-levers is invariable.

Having thus fully described my invention, what I claim, and desire to secure by Letters
50 Patent, is—

1. The combination of the plate L, provided with the depending points or barbs m , the scraper D, connected with said points or barbs, and the adjusting-screw K, connected with
55 said plate by a swivel-joint, substantially as and for the purpose described.

2. The combination of the swinging platen or scraper-holder C, provided with the projecting lug V, and the pivoted latch W, said latch being arranged to disengage itself by gravi-
60 tation when the pressure is relieved, as set forth.

3. The combination, with swinging platen or holder C, having lug V, and the pivoted gravitating latch W, for engaging said lug, of
65 the pivoted arm T and the lever R, provided with the eccentric-pin s , which is connected with the pivoted arm, substantially as and for the purpose described.

4. The bent lever P, carrying the adjustable weight Z, in combination with the yielding scraper-holder C and intermediate mechanism, substantially as described, whereby a
70 definite and uniform pressure is maintained throughout the operation.

JOHN A. PARKS.

Witnesses:

CHAS. W. FORBES,
EDWARD K. JONES.