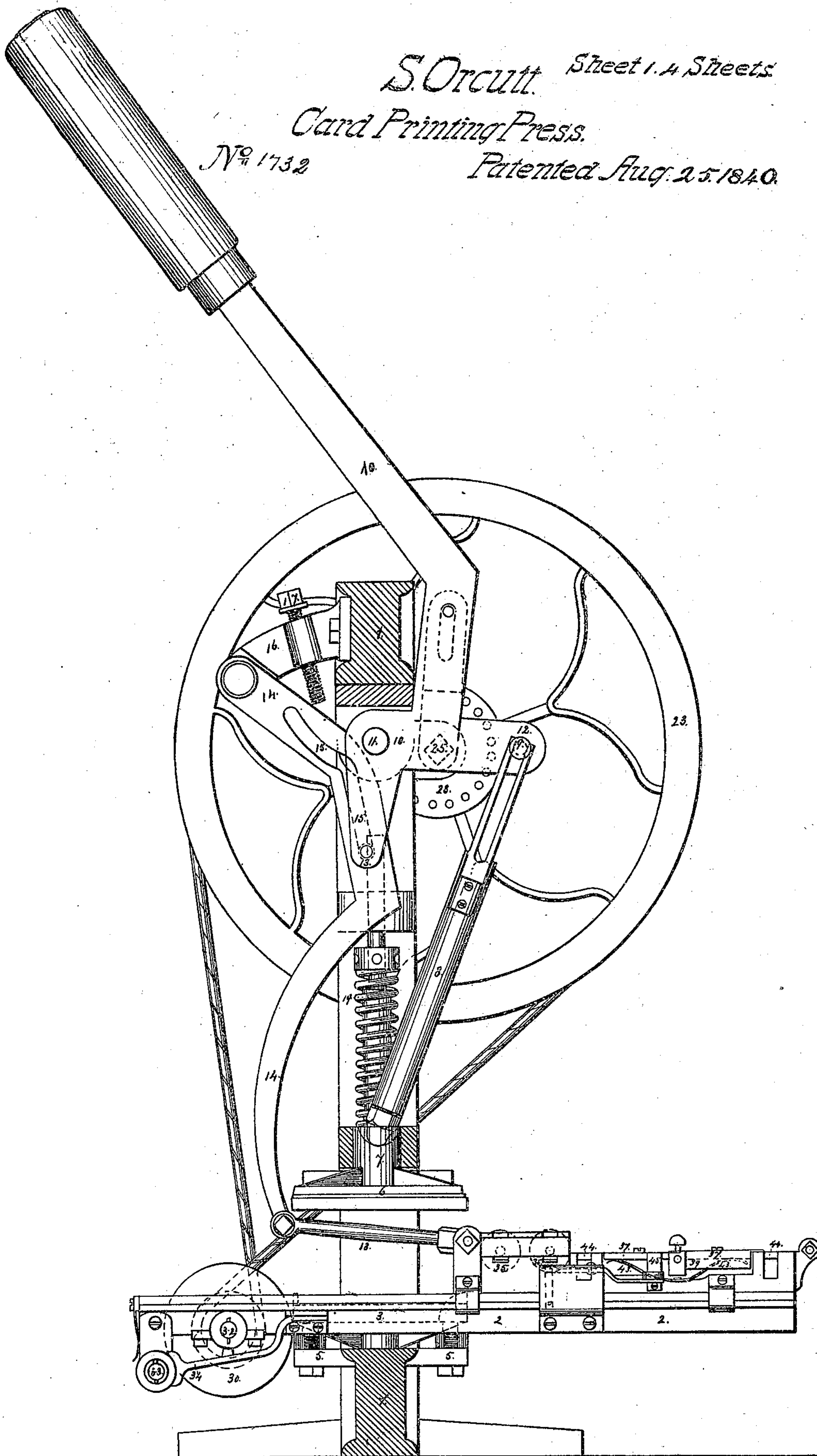


S. Orcutt Sheet 1.4 Sheets

Card Printing Press.

N^o 1732

Patented Aug. 25, 1840.



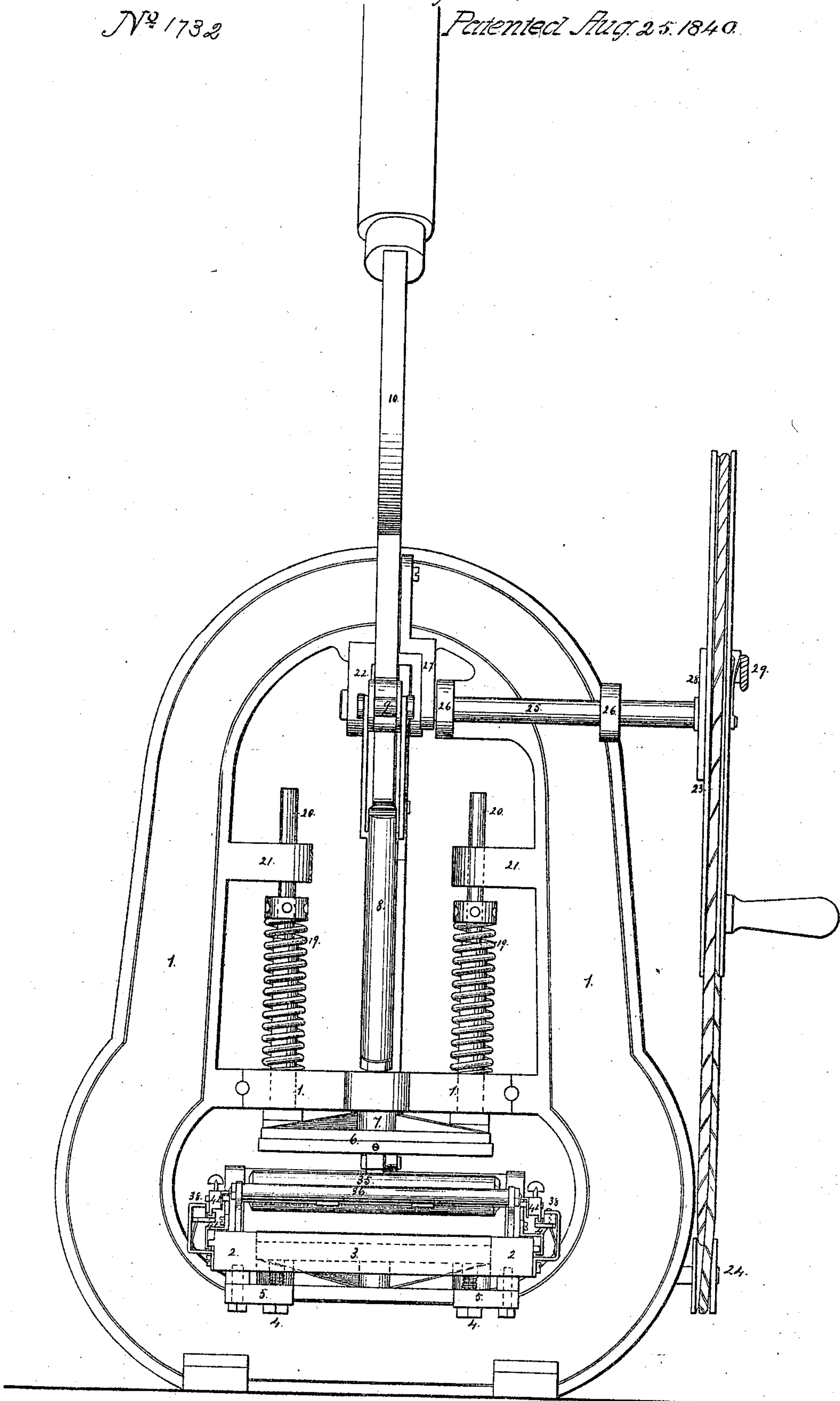
S. Orcutt.

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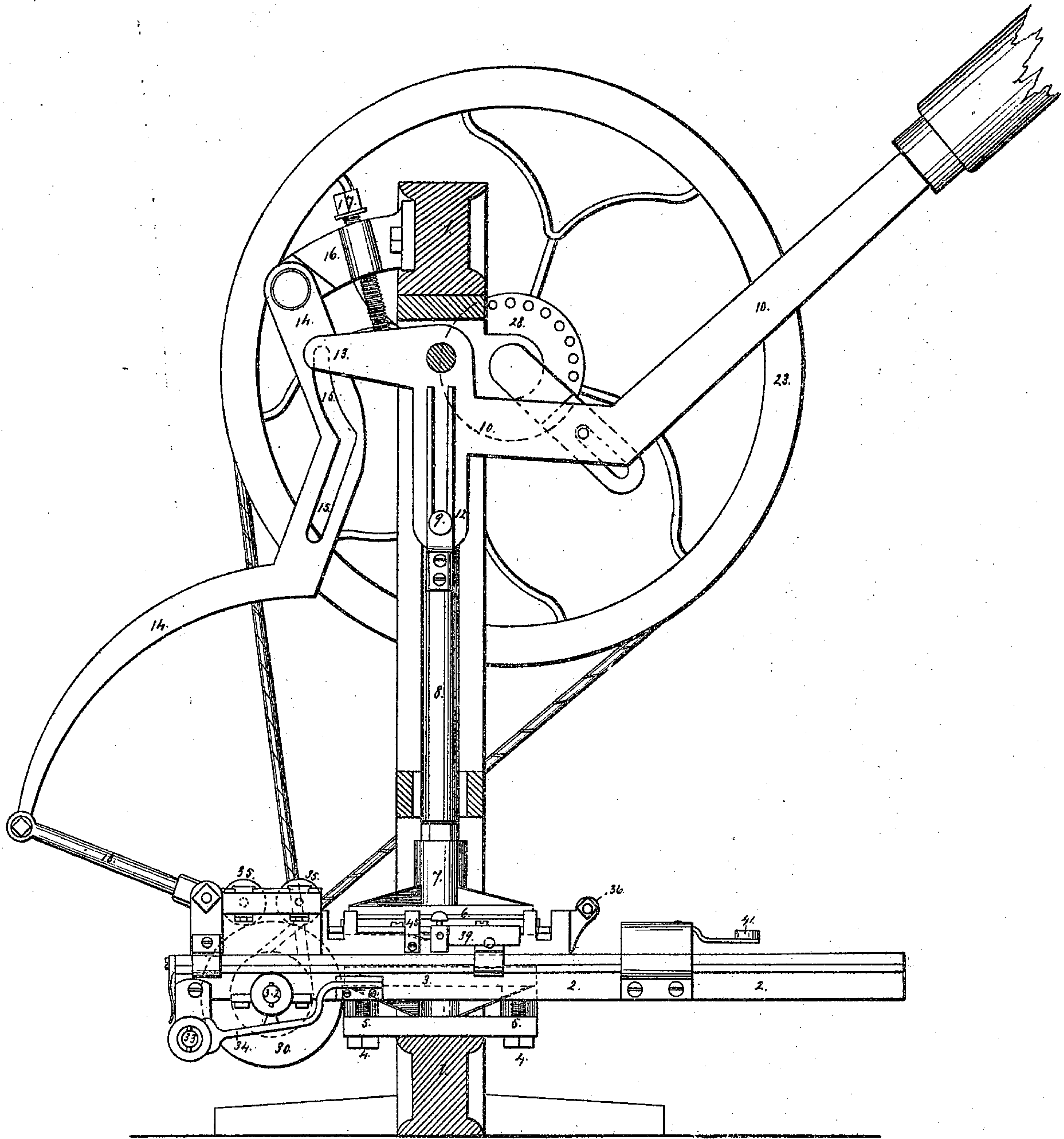
Card Printing Press.

N^o 1732

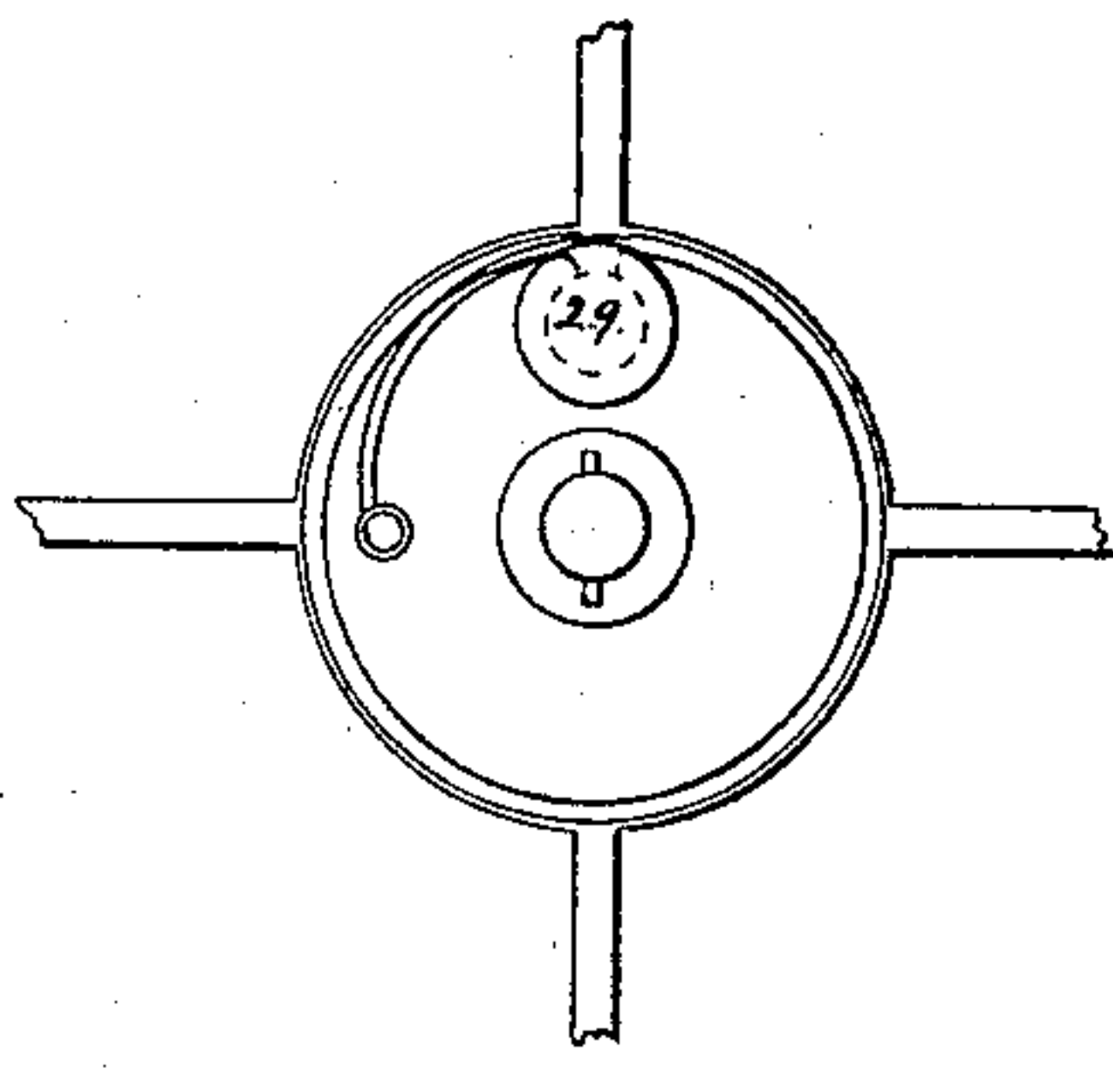
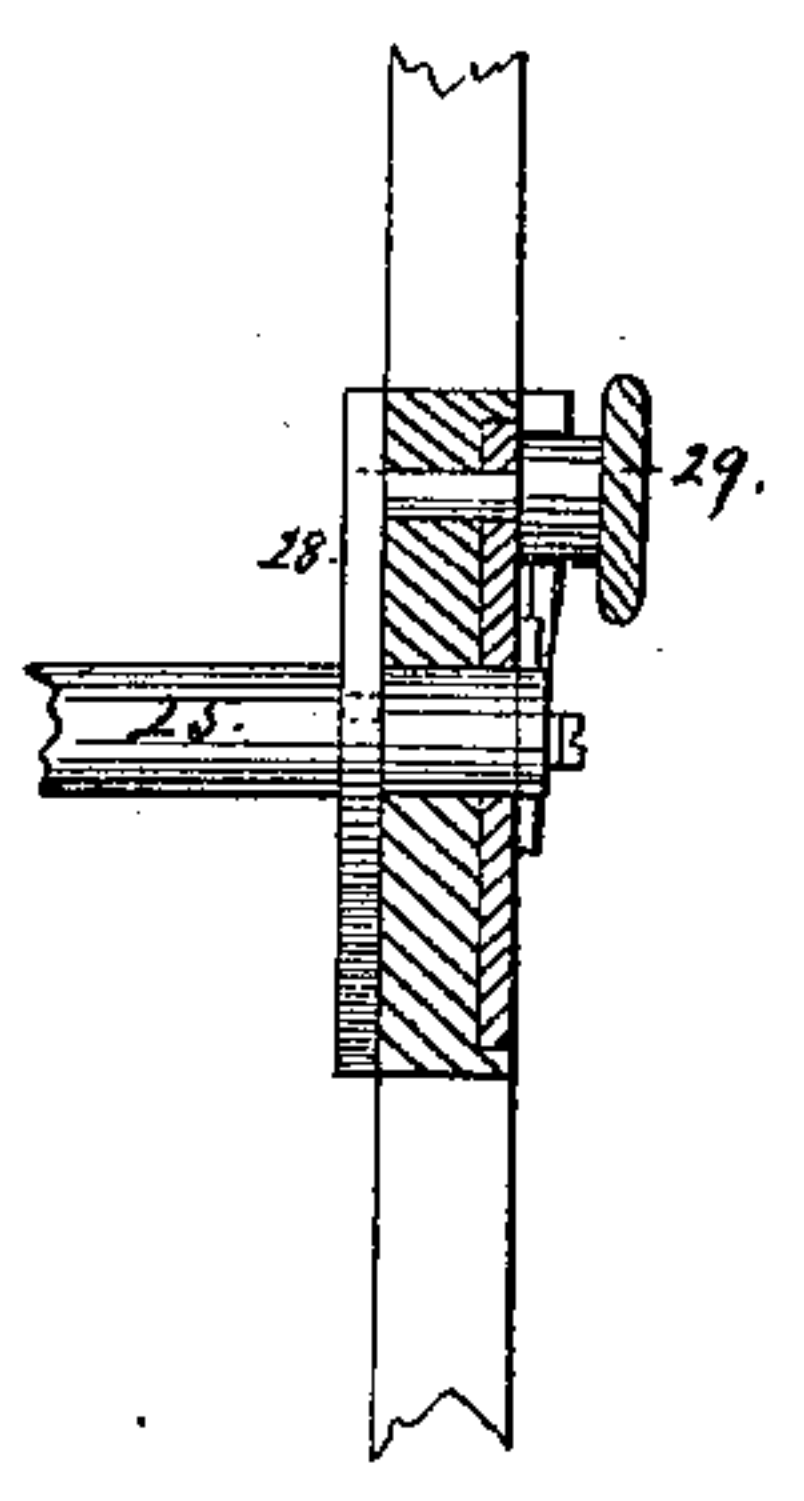
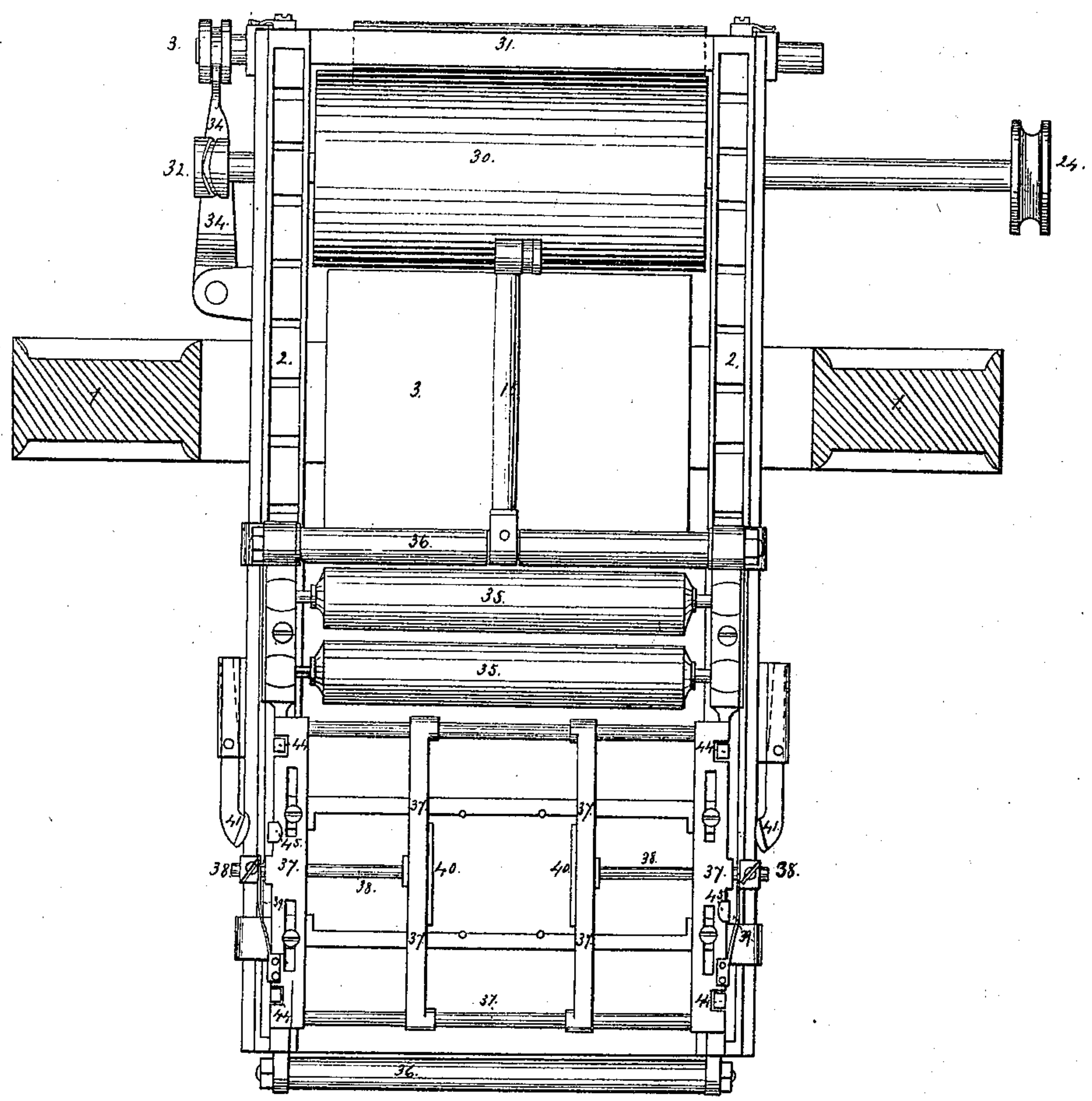
Patented Aug. 25. 1840.



S. Orcutt. Sheet 3.4 Sheets.
Card Printing Press.
Nº 1732 Patented Aug 25. 1840.



S. Orcutt. Sheet 4 of 5 Sheets.
Card Printing Press.
Nº 1732 Patented Aug. 25. 1840



UNITED STATES PATENT OFFICE.

SAMUEL ORCUTT, OF BOSTON, MASSACHUSETTS.

CARD-PRINTING PRESS.

Specification of Letters Patent No. 1,732, dated August 25, 1840.

To all whom it may concern:

Be it known that I, SAMUEL ORCUTT, of Boston, in the county of Suffolk and Commonwealth of Massachusetts, have invented a new and useful Machine called a "Card-Printing Press," of which the following is a full and exact description.

Reference being had to the drawings, which are hereto annexed and form a part of this specification, 1 is the frame of cast iron, or other convenient material, of such size and strength as may be desired, which frame is most fully shown in drawing No. 2, with section thereof seen in No. 1 and No. 3, and in each of said drawings the same numbers indicate the same parts of said machine. Fig. 2 in drawing No. 2, is the railway, for the frisket carriage to traverse upon, more fully shown in No. 1 and No. 3. It is made in the usual form, with a rising edge, or rim, and with transverse grooves to receive oil or to collect any dirt. It is firmly fixed to the frame by screws, upon projections cast thereon for that purpose, as at 5. No. 2, by strong screws, as shown in that part of the drawing. Fig. 3, shows the bed on which the type is to be placed, screwed to the frame, through the projections at 5, as shown by the screws, marked 4. The bed is 4 inches in length, by 5 in breadth, and may be of any other convenient size, and the drawings being in due proportion throughout the dimensions of all the other parts, as the machine may be proportioned, may be gained therefrom, and the proportions may be varied at pleasure.

The projections, 5, are cast solid as a part of the frame of sufficient extent and thickness, to hold the railway and bed with entire firmness.

6 is the platen and tympan frame screwed fast to the edge of the platen, and the same is formed and arranged in the usual mode, with blankets &c. as in ordinary presses.

7 is a step upon the top of the platen and forming a part thereof, with a hollow or socket in the top to receive the lower end or point of the toggle, as best shown in No. 1, and said step is held in its place and plays up and down in a cross piece of the frame as shown in No. 2.

Fig. 8, is the toggle, raised or bent as in No. 1 and No. 2, and extended so as to give the impression in No. 3. The lower end of the bar is perforated and fitted with a screw, upon which, as seen in No. 1, is a steel hemis-

phere, to fit the socket in the step, which may be raised or lowered, by means of the screw so as to adjust the impression, by varying the length of the toggle. Upon the upper end of the toggle are four guide rods, two upon each side, which embrace the arm of the lever 12, and the toggle pin 9, so as to prevent the toggle from falling and to guide the upper end to meet the pin. 9 is the toggle pin firmly inserted through the arm of the lever 12, so as to form one part of the toggle joint when depressed so as to come in contact with the upper end of the toggle, which is hollowed to receive it, and said pin slides up and down between the guide rods, with the motion of the arm.

10 is the lever, which moves upon a strong axis 11, with two arms.

12 is one of the arms which upon the depression of the lever comes in contact with the toggle, being hollowed at the end to allow the top of the toggle to meet the pin, when it gives the impression.

13 is an arm in which is affixed a roller to play in the cam of the vibrator, which cam is marked 15.

14 is the vibrator, turning on an axle at the top, fixed in a projection of the frame, 16, and through said projection is inserted a set screw 17, for the purpose of arresting the arm of the lever, as seen in No. 3, and to adjust the impression.

18, is the connecting rod between the lower end of the vibrator and the frisket carriage to move it back and forth. The form of the cam is shown in the drawings, being straight in the lower part, and circular in the upper, and the operation of this part of the machine is such, that when the lever 10 is pulled down, the 13 pushes forward the vibrator through the cam 15, thus bringing the frisket carriage, between the bed and platen; the arm 12 at the same time descends through the guide rods of the toggle, and as the joint is formed by the meeting of the toggle pin, and upper part of the toggle, the roller of the arm 13 enters the circular part of the cam 15, which so conforms to its motion, that the vibration and carriage remain stationary while the impression is given. Upon elevating the lever the reverse motion takes place, with the parts just named.

19, are two spiral springs to raise the platen, after the impression.

20, are two guide rods around which the

spiral spring is formed, and which pass through two projections in the frame 21, in No. 2.

22 is a bearing for the lever 10, made so as to receive the pin 11, and is dovetailed or otherwise firmly fastened to the frame.

23 is a pulley wheel, grooved to receive a belt, and it should be in a machine of the size here described, of such proportion as to give about 12 inches motion to the belt.

24, is a small pulley on the shaft of the inking drum, and should be of such proportion, that when connected with the pulley wheel 23 by the belt, it shall make three revolutions to every 12 inches motion of the belt.

25, is the shaft of the pulley wheel 23, turning in journals 26, which may be cast on or fastened to the frame.

27, is a crank, firmly fixed on the end of the shaft 25, and moved by a pin fastened to the lever at its other end, which pin plays in a slot, for the purpose of turning the crank and shaft, thus communicating motion from the lever, through the shaft and the large pulley wheel to the small pulley on the shaft of the inking drum. But the pulley wheel 23 turns loose on the shaft, 25, so that it may be turned and give motion to the inking drum, independently of the motion of the lever or of the rest of the machine.

28 is a dial plate with holes near its periphery, to receive the connecting pin 29; and the connecting pin 29, slides through the boss of the wheel 23, and is kept out from the plate 28 by a spring, the whole being shown in separate figures on plate 4 of the drawings. The operation is such that when the pin is inserted through the boss into the plate, they are connected and work by the motion of the lever, but when the pin is drawn back and kept out of the plate by the spring, the wheel may be turned separately by the handle, so as to prepare the inking apparatus or distribute the ink.

30 is the inking drum upon which the ink is placed to be distributed and delivered to the inking rollers; and it may be made of wood or any convenient material.

31 is the distributing roller, which revolves by contact with the drum, and has a lateral motion as hereafter described.

32, is a grooved cam on the shaft of the drum 30 which is made to receive and cause to vibrate the lever 34, giving two vibrations to each revolution.

33 is a revolving slot on the shaft of the distributing roller 31, made to receive the end of the lever 34, which plays in the groove, or slot.

34, is the vibrating lever, working at one end upon a pin, and in the middle in the grooved cam on the driver shaft; and in the other end playing by hollowed and proper

shaped arms, in the slot of the inking roller, so that with every revolution of the cam 32, the distributing roller is moved back and forth laterally, so as the better to distribute the ink on the drum.

35, are two inking rollers, which receive the ink by contact with the drum while the impression is given as in drawing No. 3, and then ink the type as they return back upon the elevation of the lever 10.

36, are the two ends of the frisket carriage.

37, is the frisket, formed of thin bars, or plates of any convenient metal. There are four bars or plates, all of which slide, so as to be adjusted to the size of any card which it is desired to print. The two which run laterally slide in slots in the frisket frame with set screws to hold them at any desirable point, according to the size of the card to be printed. The two which run longitudinally or lengthwise, slide on the end bars of the frisket frame in any convenient manner. These longitudinal bars are adjusted to the size of the card by means of two rods, marked 38, which may be set to the proper place by thumb screws in a head at each outer end, which head is connected with the carriage by a spring, made to press inward, so that the sliding longitudinal bars are held firmly in a particular position, until moved, as hereafter described.

40, are two ledges, on each longitudinal bar, to receive the card and carry it over the type; and the lateral bars, may go entirely across as in the drawing No. 4, with points as indicated therein to keep the card from moving, or they may be constructed to run from the slots in the frisket frame a shorter distance inward but sufficient to allow the lateral bars to slide to the proper size of any card in conjunction with the longitudinal bars, or points may be made to slide upon the longitudinal bars, by means of short bars and slots, so as to dispense with the lateral bars altogether, the object being to hold the card steady. The heads of the slide rods 38 have underneath each a projection, downward as shown in drawing No. 2 at Fig. 42, which are intended to be operated upon by the angular catch 41, as the frisket carriage travels back and forth; and as the carriage moves toward the platen and bed, the projection strikes the catch and the catch yields outward without moving the rods or longitudinal bars; but when the carriage returns after the impression the projection strikes the outside of the angular catch which then is firm and throws the sliding rods 38, and the longitudinal bars outward, so that the printed card falls down, beneath the frisket, and the springs of the rod heads return the longitudinal bars to their places to receive the next card.

41, are two angular catches attached to the railway 2, by springs which yield outward, but not inward, or toward the railway; the catch being a projection upward to meet and act against the downward projection of the rod heads, as they pass to and fro, as before described. So the entire operation of the card printing press, consists in placing the card on the frisket, and working the lever, with the exception of sometimes distributing the ink on the drum, by the pulley wheels, as before described. The frisket rests upon springs as shown at 43, drawing No. 1, being four one under each corner; it is also kept in its place by guides at each corner in the carriage to allow it to slide up and down so that it may rise by the spring above the type, or be depressed to receive the impression. The guides are marked 44. In the middle on both sides at forty five (45) is a catch, or stopper, to prevent the frisket from being thrown upward, by accident, or by the force of the springs below, and the catch is fastened to the carriage, and turned over the top of the frisket at a proper height, to allow it to pass over the type. There are various other parts of this press, of such common form of construction that they must be understood by every person versed in the art, and it is unnecessary to describe them in detail in this specification. What I consider new in this press is the particular combination of the movements of the frisket and the toggle, and of the inking drum and rollers, by the elevation and depression of the lever with the motion of the arms thereof; and also the adjustment of the frisket with the sliding bars and the

means of carrying and dropping the card. These several parts I have exhibited under that arrangement which I have deemed the most convenient, but every machinist is aware that variations may be made in devices of this kind which may effect the same purposes by analogous means; I do not, therefore, intend to limit myself to the particular form of the respective parts represented, but to vary these as I may think proper while they remain substantially the same in combination, and in the effects produced by them.

What I claim as constituting my improvements, and desire to secure by Letters Patent, is,

1. The manner in which I have connected and combined the lever and toggle with the frisket, the inking drum and inking rollers, so that by the depression and elevation of said lever, the frisket shall be carried under the platen, the inking apparatus be brought into operation, and the frisket moved out after the impression has been made, all as herein set forth.

2. I claim the general arrangement of the respective parts of the frisket for holding the card, in combination with the apparatus for dropping the card by withdrawing the parts upon which it is supported, by means of the angular catches, or triggers, and their appendages. The other parts described I do not claim, as many, if not all, of them, have been previously used in other forms.

SAMUEL ORCUTT.

Witnesses:

THOS. P. JONES,
GEO. WEST.