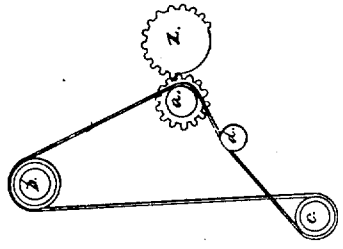
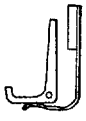
C. F. Voorhies.

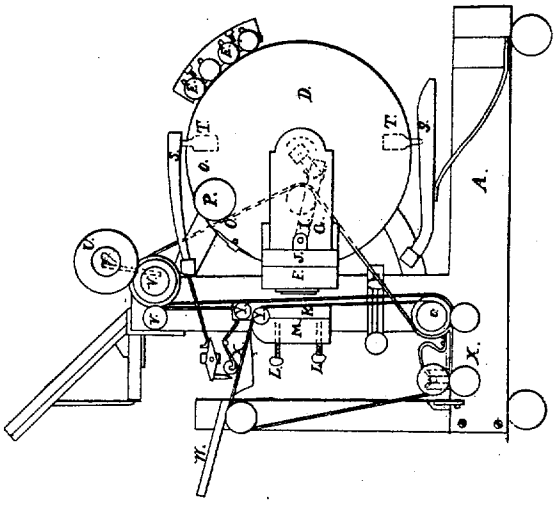
Printing Press.

No 8139X

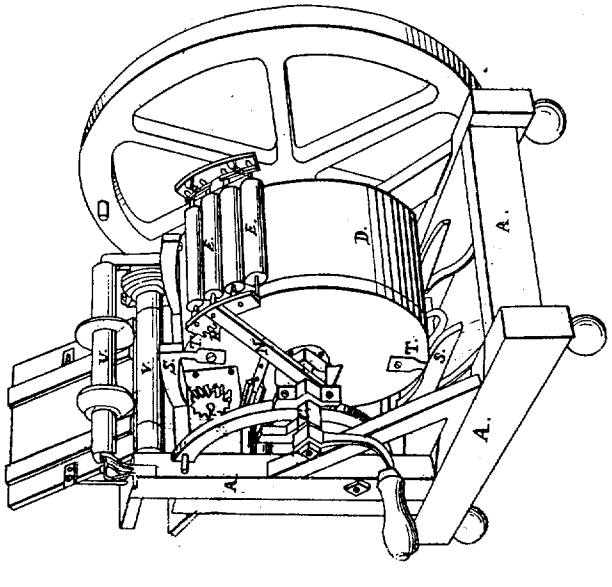
Patented Apr. 8. 1834.







Sectional Views.



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Charles F. Voorhies

Letters Patent

Printing Press

April 8. 1834.

The schedule referred to in these Letters Patent and making part of the same containing a description in the words of the said Charles F. Voorhies himself of his improvement in the machine for Printing

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To all whom it may concern. Be it known that I Charles F. Voorhies of Spring Oaks in the County of Essex and State of New Jersey have invented a new and useful machine for printing and I do hereby declare that the following is a full and exact description thereof reference being had to the drawings which accompany and make a part of this specification. Fig 1 is a perspective view of the whole machine and Fig 2. a vertical section taken longitudinally. In both these figures the parts which correspond are marked with the same letters of reference. As this machine is intended to be made both for large and small work I do not deem it necessary to give the dimensions of the respective parts as a competent machinist will readily proportion these to suit the required purpose from the printing of single cards, to that of the largest kinds of book work. The frame A A may be made in different forms. That represented in the drawing however I esteem convenient. The semicircular piece B. with a corresponding piece on the opposite side supports the shaft C which passes through and revolves within the inking cylinder D and has a fly wheel on its opposite end to regulate the motion. When the press is at work this cylinder is stationary its use being to sustain the form and to distribute the ink regularly upon the inking rollers E E. The form is placed vertically and is secured by driving wedges or otherwise in a frame, seen in section at F. The two ends of this frame are attached to sliding pieces which embrace the cylinder D. One of which is shown at G. figure 2. These sliding pieces serve as guides to the frame, being retained in their proper position by projecting grooves. The shaft C has each end crooked H. close to the heads of the cylinder D which by means of two connecting rods I. joined to the pieces J. carry the sliding pieces and the frame F. forward and backward. K. is a section of the platform which is stationary, but may be set so as to regulate the pressure by means of the screw

K4

L L working through a part of the frame M. The inking rollers E, E, are caused to roll the cylinder D by means of arms, one of which is shown at A. fastened at one end to the shaft C. and at the other to the frames which support the inking rollers. The gudgeons of these rollers work in slots in the frame, being borne down by means of spiral or other springs, so as to keep them in contact with the cylinder D. and to force them down upon the type as they pass over the form. Although the large surface of the cylinder D. over which the inking rollers pass will in general suffice to distribute the ink equally upon them. Similar sometimes to give to one a more effective motion which may be effected in various ways. The ink is to be contained in a reservoir A formed in the cylinder D. and reaching from one end of it to the other. Within this reservoir there is a supply roller P. one part of the periphery of which projects out above the surface of the cylinder D. The pinion B. is upon one of the gudgeons and as the inking rollers revolve the teeth R. on the under edge of their frame give to the roller a partial revolution a catch which checks the pinion being lifted by a pin on the arm N. At the moment the teeth are to engage with the pinion. This catch is shown separately at figure 4. Contrivances similar to these now in use may be employed to regulate the portion of ink which shall be brought round by the roller. This however may be in a great measure effected by the distance of its revolution, every time the inking rollers pass over it. The catches S. S. catch upon pins T. T. and hold the cylinder D. in its place. These cause alternately when the frame of the inking rollers comes in contact with them, and thus allow it to pass. When the form is to be examined or removed both these catches are to be raised and the cylinder D. with them turned on its shaft so as to allow the form to be brought into a horizontal position. In some Engravings of this machine to print with on separate sheets in the ordinary way it is usual to have one sheet of any length that can be conveniently wound upon a roller. The mode of feeding or laying on the sheets must of course be adapted to this different purpose. A continuous sheet may be wound upon a roller U. immediately above the form and be conducted down between the feeding rollers V. V. the sheet may be fed from a board or shelf W. as it comes in. A cylinder perforated with holes and having a pipe X. and hollow roller Y. Y. the sheet

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heads are kept in their places against the endless apron by cords or strings in a manner well known in other presses. Fig. 3. shows the manner in which the motion is communicated from the shaft C. to the feeding rollers and to the endless apron D. a is a segment wheel on the shaft C. the teeth on which take into the wheel a. having on it a groove in which to receive a band. This band may be round a whit. with graduating grooves on the roller b. which is the same as D. in figs 1 & 2. The roller C. round which it is also shown as passing carries the endless apron D. d is a pulley for tightening the band. whilst the blank part of the segment wheel b. is passing round the feeding roller, endless apron, and holding cords remain at rest. and the impression is then given by the advancing of the frame against the platten, this receiving motion from the crank on the shaft C. one towards the frame. The inking rollers pass over the form. when the cranks are in the reverse position the faces of the type then most nearly coinciding with the surface of the cylinder D. When I print upon a continuous sheet. I intend to divide the same as it is delivered from the frame by means of a knife or of perforating points which may be arranged in various ways to operate at the right time. This however being a thing of arrangement only and not affecting the general principles upon which the machine operates I do not deem it necessary to designate any particular mode of effecting this object. It will readily be perceived that although I have represented this Press as operating upon one form only a second may be added on the opposite side. and furnished with all the appendages required for its action, as in that described. This second form will receive its ink from the same rollers as the first and the two may be worked by a power considerably less than that which would be required for the single form. What I claim as my Invention and for which I ask a patent is the general construction of the before described machine. Many of the separate parts of which it consists are similar to those heretofore employed in printing and other machines. and these therefore I do not claim as my invention. But I claim as the inking cylinder with the inking rollers receiving round it in the manner with the form as herein set forth. I also claim the manner of fixing and operating upon the form by the crank & pin on the shaft which passes through the centre

J?

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28.

of the inking cylinder. It likewise shows the general arrangement of the whole machine from which it receives that peculiar character by which it is distinguished from all others intended for a similar purpose

Witnesses

Thos P. Jones
Jos. Chaverus

Charles F. Voorhees

Drawing

1500 wds

C. C.
Ch. f. W.