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New Printing Press.

The accompanying engravings represent different perspective views of an improvement in printing presses, invented by J. H. Utter, a practical printer in this city, and for which application for letters patent, is now pending. Too much importance can hardly be attached to any improvement in the "art preservative of all arts." This invention is not of a class designed to expedite what may be called rapid power printing; but to render easier and faster the operation of what is ordinarily termed a hand-press, or one in which the motive power is entirely manual. It is well understood that hand-presses produce the best work, and that fine wood engravings, and the like, when it is necessary to give them the best possible effect, are always worked on some form of this species of press.

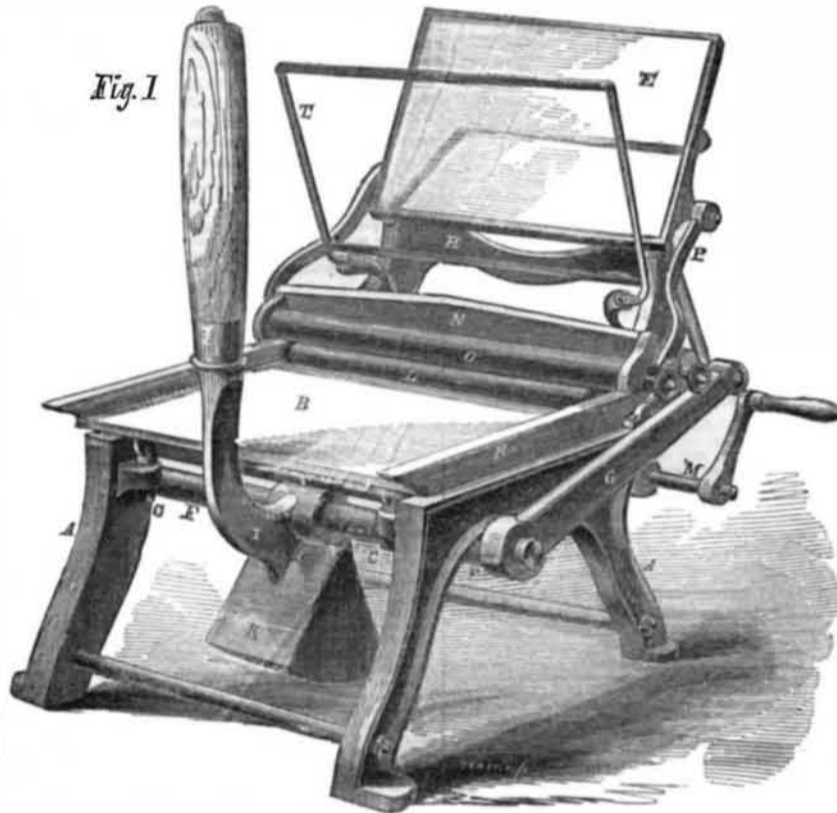
Those familiar with the operation of the common hand-presses, will readily appreciate the importance of this improvement, on learning that the whole operation of rolling the form, flying the frisket, folding down the tympan, moving the bed, and producing the impression, is, with this press, performed by a single movement of the lever or handle I. A is the frame, and B the stationary bed on which the form is supported. C C are screws which serve to regulate the height of either side or the whole of the bed, to produce a perfectly even impression, or to balance any preponderance of type or engraved face which may offer more resistance to the impression on one side than the other. D D are centers, to which are rigidly hinged the platen E, the face of which carries the blankets, which serve their usual purpose of softening and equalizing the impression. F is a stout shaft mounted in suitable bearings beneath the bed. G G represent stout levers, keyed on each extremity of F. H represents a casting which acts as a toggle lever, to transmit the force of the impression to the platen. I is a stout handle fixed on F, by which the motion is imparted. K is a heavy mass, cast on I, and which serves partially to balance the gravity of the other parts. L is an ink distributing roller, mounted in fixed bearings, and which receives both motion and ink, from other rollers, actuated (when commencing to work) by giving a few turns to the crank M. N is a light frame, in which are mounted the soft inking rollers O. The frame N is connected to the platen E by the links P, and is free to travel across the bed on the side bearers R, whenever such motion is imparted by the movement of E. S is a shaft, mounted nearly in the axis of motion of E. It carries a light frisket, I, which is impelled by a coiled spring shown in Fig. 2, into tolerable vigorous contact with the face E, so as to confine a sheet thereon, in the usual manner, by covering its edges.

Fig. 1 represents the press in the proper position to receive a form of type on the bed B, and to receive a sheet of paper on E. The frisket T is held away from the face of E, by its contact with a fixed stop, not represented. On imparting a downward motion to the

handle, the arms G are elevated, and through the medium of the casting H, the platen E is moved forward, claspng the paper between itself and T, and descending into contact with the form, on the bed B, when it assumes the position represented in Fig. 2. Meantime, the

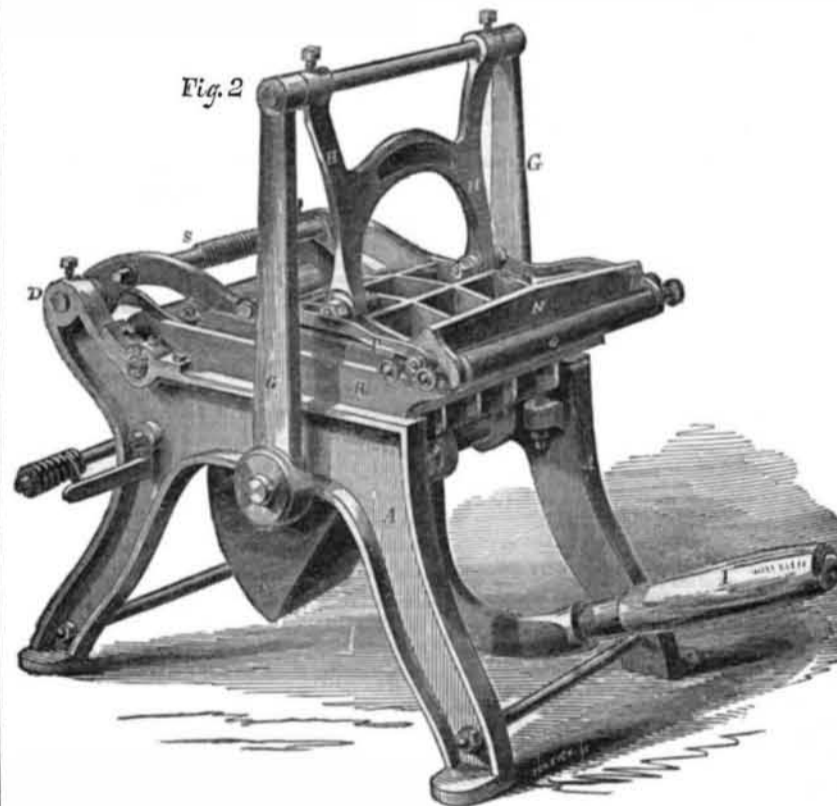
links, P, have pushed the frame N, and with it the inking rollers O, across the form, and laid the ink thereon, in the usual manner. The final termination of the downward motion of I acts, as will be observed, from the position of the parts in Fig. 2, at a great purchase, so

UTTER'S PRINTING PRESS.



as to produce a very powerful impression on the form. On lifting I, all the motions are reversed, the levers G move backward, acting on H, to elevate the platen E, and while these parts are returning to their places, the rollers

O are drawn again across the form, inking it for a new impression. As the platen E recedes into the position represented in Fig. 1, it leaves the frisket T in the position indicated, and allows the printed sheet to be readily



removed, and another to be substituted in its place. It will be observed that the inking rollers O, which are two in number, are compelled by the motion of N to travel twice across the form—once, as the platen is brought down, and again as the platen is elevated—so that the types are liberally and uniformly inked as by the ordinary arrangement, and the whole operation is conducted not only rapidly and easily, but with a very high degree of

perfection. By means of a simple device, not distinctly represented, motion is imparted to the distributing apparatus M L, at each movement of E, so that the crank M does not require to be touched after the operation of printing is fairly commenced, and is only employed to give a suitable distribution of the ink at the commencement. We have seen the press in operation, working very rapidly. There are many points in this machine, among

which may be mentioned the ordinary axial motion of the rollers, &c., which being common to all of the best presses, we have not deemed it necessary to describe. As a whole, the press appears highly efficient and durable, and we predict for it a quite extensive use for printing all moderate sized jobs. For further information the inventor may be addressed at No. 9 Spruce street, this city.

The Benefits of Machinery.

The *British Workman*, a periodical devoted to literature as connected with mechanical pursuits, contains in its number for the past month a very able article on improvements in the "pottery art," in which it very graphically sets forth the benefits conferred upon workmen by improved machinery. It says:—

"Time works many changes both in men and things, and the last thirty years have shown not a few instances which at the time were regarded by the working classes as *injurious*, have, in the course, of time, been found to be 'blessings in disguise.' Within the recollection of many persons, horses and even hand power were in use at the Lambeth potteries for crushing the clay; and the potters all used wheels, called 'kickers,' which were turned by the foot. When Mr. Green determined to introduce the new wheel into his manufactory, the whole of the workmen struck. All the men left, except one, who was allowed to continue at his kicker until his death, a period of fifteen years. He earned 30s. a week, while the man with the improved lathe, who sat next to him, earned double that sum. So much quicker could the potter work at the new wheel than the man at the kicker, that he could make as many stoneware ink bottles for 6d. as the other could throw off by his machine for 1s. 3d. Since the day of the kicker the number of men and boys employed at Mr. Green's pottery alone has increased fivefold. What strikes and riots were witnessed in Lancashire and Yorkshire in bygone years on the introduction of power looms and other machinery. Shortsighted policy said—'These will injure the working classes, and reduce the number of hands employed.' The result, however, has been very different from what the desponding and faint-hearted dreamed of. Those very inventions which were regarded with such bitter hostility, have, in the providence of God, been the means of extending the commerce of our nation to an extent previously unknown.

The old kickers could not possibly have supplied the present demand for pottery, neither could the old hand looms have produced one-half of the cloth now required for the clothing of the people. Men and women are now employed by tens of thousands in the weaving mills throughout the manufacturing districts, and they can produce far more work and earn better wages than under the old system. What was thought to be a national evil has proved a national good."

Iron Churches.

Iron churches, 70 feet long, 40 feet wide, and 20 feet high, capable of accommodating 700 persons, and costing about \$5000 each, have been erected recently in the neighborhood of London. They are lined with wood, and papered. They can be taken down and moved to other locations, if desired. Although more iron houses have been built in New York than in other city in the world, we have never heard of an iron church having been erected in any of our cities.

We learn from the *Lake Superior Journal*, of the 20th ult., that there was plenty of ice in the Lake on that date. This has been the most backward season on record.