

# Scientific American.

THE ADVOCATE OF INDUSTRY, AND JOURNAL OF SCIENTIFIC, MECHANICAL AND OTHER IMPROVEMENTS.

VOL. XIV.

NEW YORK, DECEMBER 11, 1858.

NO. 14.

THE  
SCIENTIFIC AMERICAN,  
PUBLISHED WEEKLY  
At No. 128 Fulton street, (Sun Buildings), New York,  
BY MUNN & CO.

O. D. MUNN, S. H. WALES, A. E. BEACH.

Responsible Agents may also be found in all the principal cities and towns of the United States.

Single copies of the paper are on sale at the office of publication, and at all the periodical stores in this city, Brooklyn and Jersey City.

Sampson Low, Son & Co., the American Booksellers, 47 Ludgate Hill, London, Eng. are the British Agents to receive subscriptions for the SCIENTIFIC AMERICAN.

TERMS—Two Dollars per annum—One Dollar in advance, and the remainder in six months.  
See Prospectus on last page. No Traveling Agents employed.

## Curious Agricultural Notions.

M. D. Urce, a French botanist, assumes that wheat is not an annual but a biennial plant, and he has adopted a new method of cultivating it, so as to bring it to perfection according to his views. The ground for the reception of the seed is first well manured, either before winter or at the beginning of spring, to receive the seed between the 20th of April and the 10th of May, this time being chosen to prevent the chance of blossoming during the year. But the time of sowing may be advanced from year to year. Each grain is sown separately, allowing a large area of ground if the soil is rich, but diminishing according to its sterility. It is deposited in rows, in holes at regular distances, from nine and a half to twenty three and a half inches asunder, in each direction, the holes in one row opposite the spaces in the next. Each hole is to contain four or five grains, two and a half inches asunder. When the plants have attained a height of four inches, all but the finest one in each group are pulled up, and the single one is then left for the harvest of the succeeding year. This curious process is stated to increase the produce greatly, but in our opinion it will not pay the expenses of its three year's cultivation, in comparison with annual cropping.

## New Machine for Addressing Newspapers.

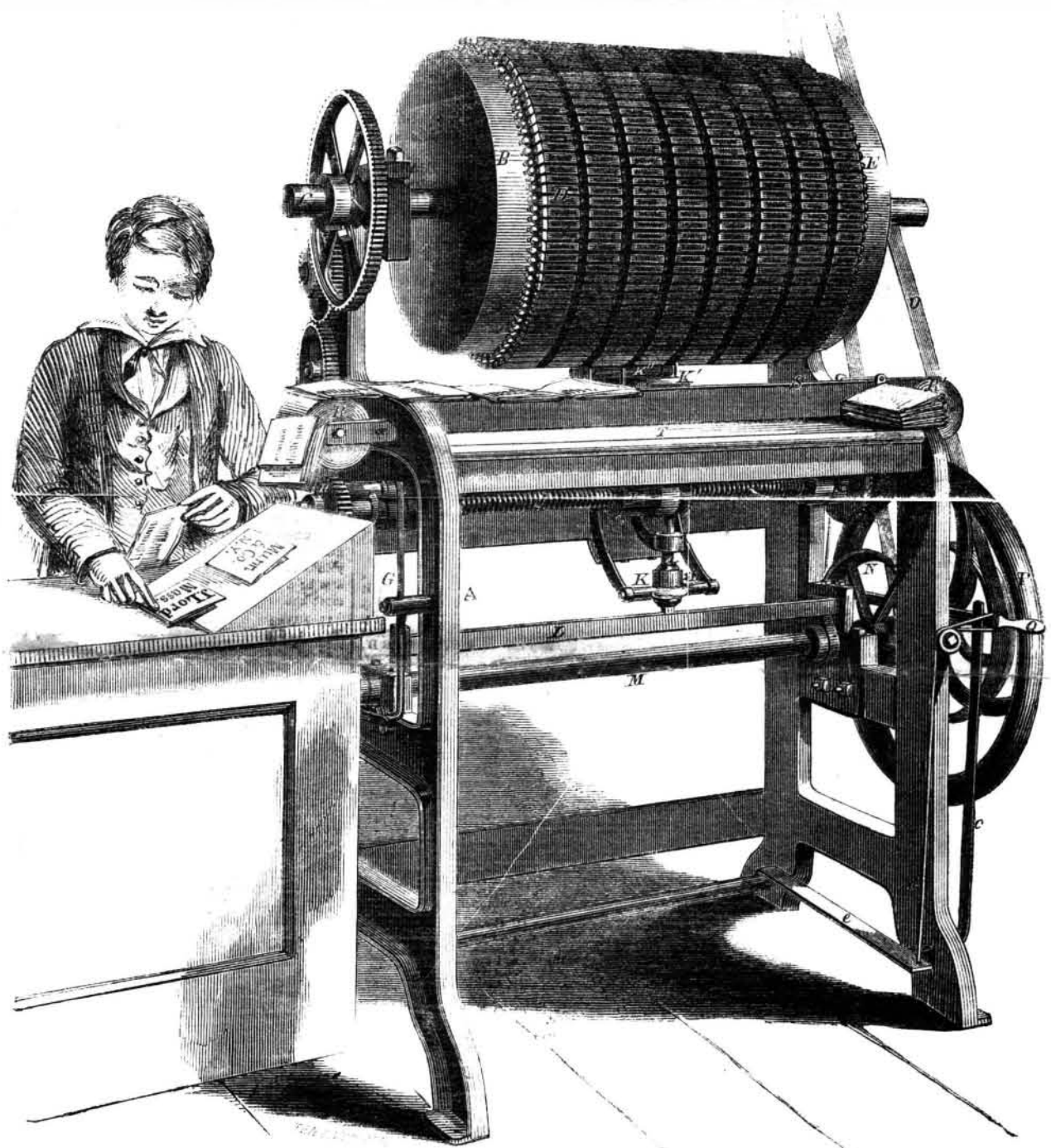
The brown paper wrapper in which the SCIENTIFIC AMERICAN is delivered to its subscribers, has to have the address of the person written upon it in legible characters, so that the postmaster shall know to whom the paper is to be forwarded. This not only costs a large sum, increasing, too, with the popularity of the journal, but often, as the wrapper-writer's hand becomes tired, his writing becomes less and less distinct, and the address is not very legible. To save expense, on the one hand, and to always give a legible address on the other, James Lord, of Pawtucket, Mass., has invented the machine which is the subject of our engraving. Perhaps the best way of concisely giving the reader an idea of the machine will be to describe its operation at once.

Motion being given to the shaft, M, with its fly wheel, P, by the band, O, an oscillating motion is given to a lever and pawl, G, to force them upon a ratchet wheel and so move the screw shaft, I, and wheel, H, with which the ratchet wheel is connected, sufficiently to bring a type box, D, on the printing cylinder, B, containing the name and address desired to be imprinted, immediately over the platen, K'. The drum, B, is mounted on an axle, C, and supported in the frame, A; and spirally around the periphery of the drum are placed a number of boxes, D, containing types, each forming a separate subscriber's name. The types are secured in the boxes by set screws, E, and the

drum is rotated by the wheels, F, from the shaft, I, in such a ratio between the motions of each that the drum, B, is rotated just the width of one box, while the platen and inking rollers are moved enough to give each separate address a firm and level bed. This is done by attaching them to a nut, J, that is placed upon I, from which also projects the bars, K, carrying a small piece with a hole through it, through which passes the small spindle, a, that can be secured in any position by the set screw, b. a bears upon a level bar, L, and as a is moved higher or lower, the pressure of the inking rollers and platen is regulated; J acting as a fulcrum between them.

One of the inking rollers has a slot in it, and is placed on a shaft provided with a rebate running the whole length of the machine. This shaft is rotated from N, and this distributing inking roller can slide along it with the others, still be rotated, giving the ink from the "doctor" to the roller that inks the type. An endless band, S, passes

## LORD'S MACHINE FOR ADDRESSING NEWSPAPERS.



over two rollers, R and R, and across the machine, on to one end of which the papers to be addressed are fed, and as they come under the type box a separate name is printed on each, and they are passed away by the endless band on to a table, where they are gathered up and folded by a boy. The endless band, S, is raised above the table, T. By a simple signal arrangement, and having the subscribers' names grouped together in Post-offices, the last name in a list for any Post-office will give a signal to the attendant. The arm, Q, is used to keep a ratchet attached to the driving wheel and that on the shaft in gear, to move or stop the machine, the piece, c, tending to keep it out; and by the cord, d, and treadle, e, the motion of the machine can be controlled by the foot.

The only trouble is setting up the subscribers' names and address, and then fixing them in the type boxes, after which, the endless band has only to be fed with wrappers or newspapers and it carries them one by one under a shield, in which there is a hole th

size of the platen, so that only one name is printed at once, and the rest of the paper is kept clean, and the addressed papers or wrappers are then carried away to be folded and mailed. The number of cylinders will of course depend on the number of subscribers and the number of editions published at the office, but the one machine will do for all. In our view many of the parts which aid in attaining these results are not to be seen, but there is enough shown to give a general impression of what the machine is like, and any further and technical particulars can be obtained by addressing the inventor.

It was patented Sept. 7, 1858, and noticed on page 11 of the present volume of the SCIENTIFIC AMERICAN.

A FORTUNATE INVENTOR.—We have just learned, says the New York Observer, by a private letter from Paris, that Professor Morse has received in Paris the first instalment (100,000 francs) of the testimonial of the ten European Powers.