

T. P. How
Copying Press
N^o 70,457. Patented Apr. 7, 1868.

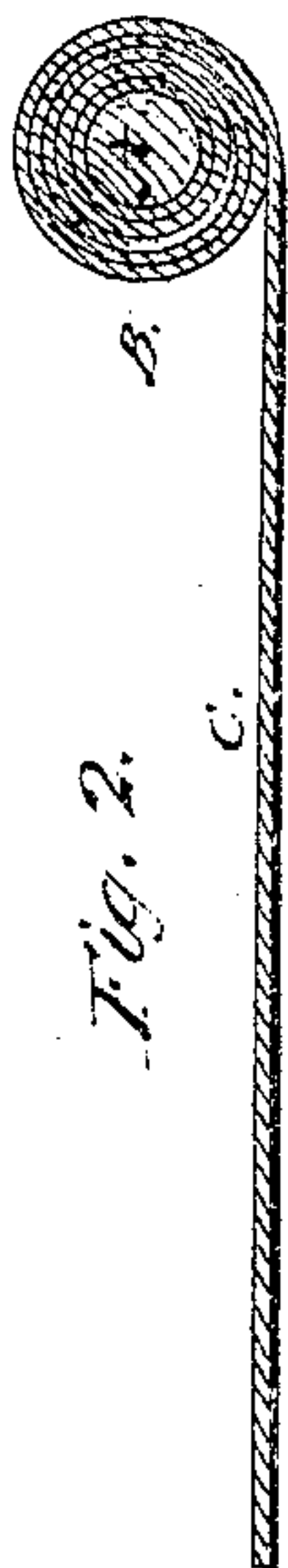
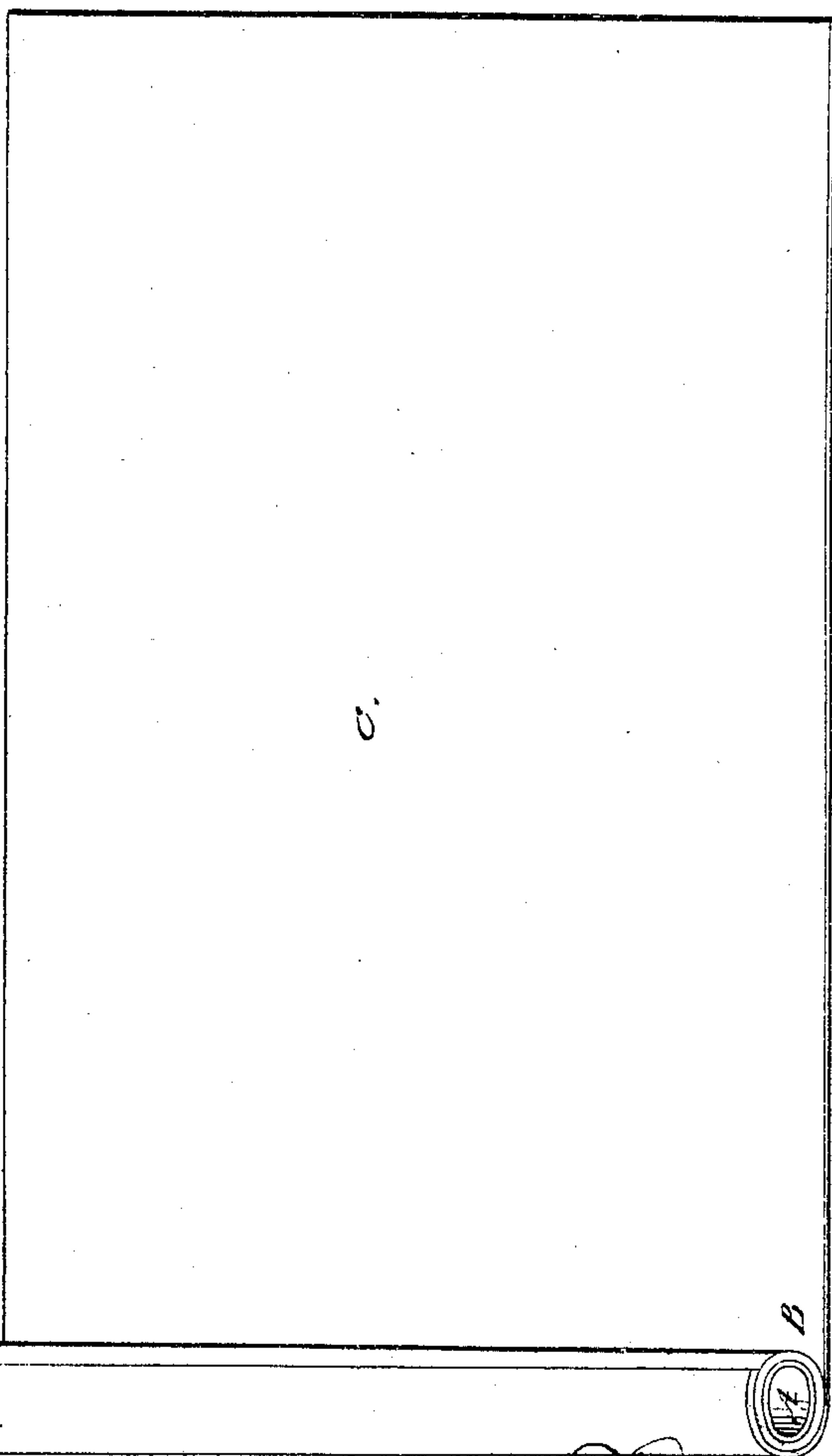


Fig. 1.



Witnesses

Isaac H. How
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Inventor

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United States Patent Office.

THOMAS P. HOW, OF BROOKLYN, NEW YORK.

Letters Patent No. 76,457, dated April 7, 1868.

IMPROVEMENT IN COPYING-PRESSES.

The Schedule referred to in these Letters Patent and making part of the same.

Specification of an Improved Copying-Press, invented by THOMAS P. HOW, of Brooklyn, in the county of Kings, and State of New York.

Nature and Object of the Invention.

My invention has for its object the furnishing of a copying-press, which shall be of such a form and size as to be conveniently carried in travelling, and by means of which an exact and legible copy may be obtained of letters or other writings of which copies may be desirable; and consists in combining in a copying-press a rigid cylinder, of suitable size, with a piece of gum-elastic tubing, and with a sheet of rubber cloth, or other equivalent material, as hereinafter more fully described.

Description of the Drawings.

Figure 1 is a perspective view of the press nearly unrolled.

Figure 2 is a cross-section of the same partially unrolled.

General Description.

A is a rigid cylinder, which I prefer to make of a piece of gas-pipe or iron tubing, about three-quarters of an inch in diameter and a foot in length. The dimensions of this pipe may vary from those above given, without materially impairing the efficiency of the press, but I prefer those given, as most convenient for ordinary purposes. Upon this pipe is drawn, and secured thereto by rubber cement, a piece of elastic tubing, B, of the same length as the pipe, and of such a size as to closely fit the pipe, and yet it should not be drawn on so tightly as to diminish the elasticity of the tubing, as that is essential to the success of the operation of copying. To the outer surface of the elastic tubing there is attached, by rubber cement, or its equivalent, a sheet of rubber cloth, C, of a breadth equal to the length of the tubing, and somewhat longer than the length of the sheets of manuscript in copying which the press is designed to be used. I suggest eighteen inches as a suitable length for ordinary purposes. Although cloth with rubber upon only one side will answer the purpose; I prefer to use cloth with rubber upon both sides, as better adapted to the purpose, and that known as India-rubber-cloth packing I consider preferable to any other, and it should be quite thin. A fine article of oil-cloth will answer, but it is not so good.

Operation.

For copying, manilla paper or ordinary copying-paper may be used, and it may be dampened in the ordinary way, by using a brush or sponge, or it may be dampened in the press itself, by the following process: Lay a piece of dry cloth, (I prefer cotton cloth, but other cloth may be used,) of about the size of the rubber cloth C, upon the rubber cloth C, when unrolled; then place upon the dry cloth a sheet of copying-paper, and upon said sheet lay another piece of cloth, wet in water and squeezed out, but not too dry; then place another sheet of copying-paper upon the wet cloth, covering it with a piece of dry cloth, and so on, until you have the required number of sheets; then roll up the whole in the press, applying a strong pressure by pressing it down upon a table or other plane surface while rolling it up, and leave the press rolled up for five or ten minutes, in order that the copying-paper may acquire a uniform dampness. When the copying-paper has become sufficiently damp, unroll the press and remove the cloths and interlying paper; then place a sheet of the dampened copying-paper upon the unrolled rubber cloth C, and place upon it a sheet of the manuscript, and cover them with a piece of oiled paper (not too thick;) then place thereon another sheet of dampened copying-paper, another sheet of manuscript, and another sheet of oiled paper, and so on. When the dampened copying-paper is to come in contact with the oiled paper, in the process of taking the impression, the oiled paper should be previously moistened to prevent its abstracting the moisture from the dampened copying-paper, and a very convenient way of moistening it is to insert it between the dampening-cloths when the copying-paper is put in to be dampened. An indefinite number of sheets may be copied at once, but it is not usually advisable to undertake to copy more than four or five at the same operation.

After the required number of sheets have been arranged, as above described, the press should be rolled up tightly, by firmly pressing it against the table with the hands while rolling. This will slightly compress the rubber of the tubing B and of the rubber cloth C, the elasticity of which, when the rolling is completed, will hold the manuscript and copying-paper closely in contact between the sheets of oiled paper, and, if good copying-

ink and water that acts quickly have been employed, a copy will be obtained almost instantaneously, though it is usually advisable to allow the press to remain rolled up a few minutes before removing the copies.

The paper may also be moistened and the impression taken at a single operation, with light dampening-cloths, care being taken that the moisture contained in them shall not be too great or unevenly distributed. A very good way, in this case, is to have as many as three or four of these cloths, and after wetting thoroughly, to wring them out together, so as to expel as much of the water as possible, when the impression may be taken in the same manner as before described, care being taken to give the impression sufficient time to allow the moisture to strike through the paper and take up the proper portion of ink.

In the selection of ink, I prefer the copying-ink manufactured by Antoine, Father & Sons, at Paris, France, though any good copying-ink will answer.

If desirable, both the manuscript and the copy may be partially dried by placing them between sheets of blotting-paper, and rolling them in the press, as before, and this is advisable when particular neatness is required, as it prevents the ink from spreading after the copy is taken, and leaves the paper in better condition.

Claim.

I claim, as an article of manufacture, the improved copying-press, hereinbefore described, made by combining the rigid cylinder A, the elastic tubing B, and the blanket or cloth C, substantially as hereinbefore set forth.

THOS. P. HOW.

Witnesses:

WALTER E. SMITH,
LUCAS W. HOW.