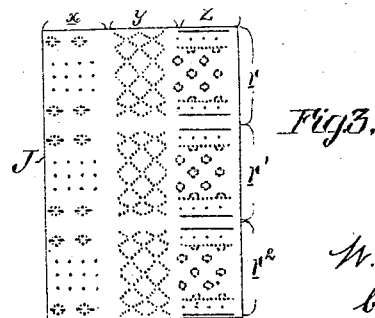
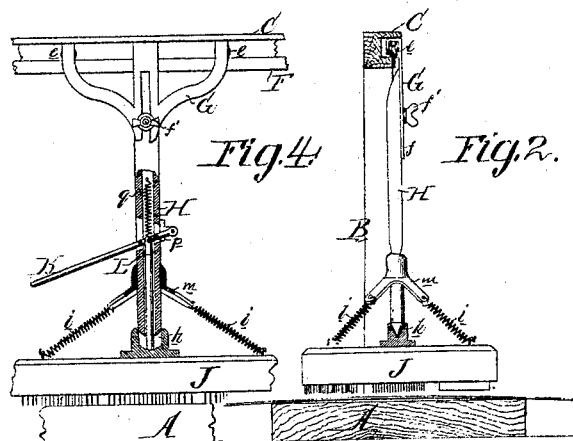
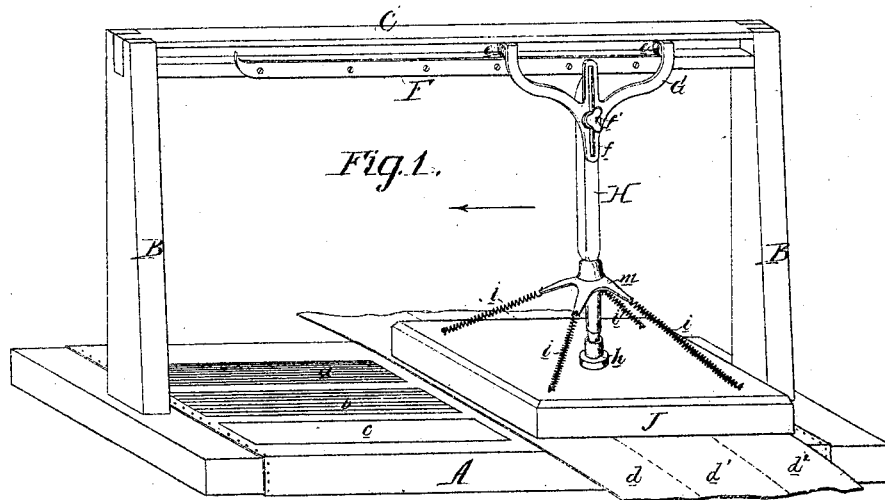


No. 112032.

*Patented Feb. 21. 1871*



Witnesses  
Jno. B. Harding  
John Parker

W. H. Halsey  
by his Attor  
Horsen and Son

# UNITED STATES PATENT OFFICE.

WILLIAM HUDSON HALSEY, OF PHILADELPHIA, PENNSYLVANIA.

## IMPROVEMENT IN OIL-CLOTH-PRINTING MACHINERY.

Specification forming part of Letters Patent No. **112,032**, dated February 21, 1871.

I, WILLIAM HUDSON HALSEY, of Philadelphia, county of Philadelphia, State of Pennsylvania, have invented a Machine for Printing Oil-Cloth, of which the following is a specification.

### *Nature and Object of the Invention.*

My invention consists of a machine, too fully described hereafter to need preliminary explanation, whereby two, three, or a greater number of widths of oil-cloth may be printed simultaneously and with much less labor than is demanded in printing a single width of oil-cloth by the usual hand process.

### *Description of the Accompanying Drawing.*

Figure 1 is a perspective view of my machine for printing oil-cloth; Fig. 2, a transverse sectional view of the same; Fig. 3, an inverted plan view of the printing-block; and Fig. 4 a detached sectional view, illustrating a portion of my invention.

### *General Description.*

A represents a suitable platform or table, having a slightly elastic or padded surface, and made of sufficient length to enable patches of color, *a*, *b*, and *c*, to be spread upon it near one end, and strips of cloth (indicated by the letters *d*, *d'*, and *d''*) to be drawn transversely across its opposite end. From this platform or table project two uprights or posts, *B*, which support a beam, *C*; or the latter may be secured to the ceiling of the room or apartment in which the machine is situated, and the table be secured to the floor, in which case the uprights can be dispensed with.

The beam *C* is parallel with the surface of the table, and extends longitudinally over the same, and to one side of the said beam is secured a plate or rail, *F*, on which grooved wheels or pulleys *ee* of a forked plate or yoke, *G*, are arranged to run freely.

A vertical bar, *H*, is attached to the slotted arm *f* of the yoke *G* by a set screw or screws, *f'*, in such a manner that it can be readily adjusted thereon, and to the lower end of this bar is hung a large block, *J*, on the under side of which the pattern to be printed upon the oil-cloth is formed in the usual manner by metal

pins and strips projecting from the surface of the block.

The method of hanging the block to the bar *H* forms an important feature of my invention, and is as follows: The lower end of the bar extends into a correspondingly-shaped socket formed in a plate, *h*, secured to the upper side of the block, and is retained therein by means of four spiral springs, *i*, which are hooked onto the block close to its opposite corners, and attached to a four-armed plate, *m*, which is secured to the bar. This method of connection prevents any swaying of the block and holds it firmly in a horizontal position, while at the same time it permits it to be depressed vertically until brought in contact with the surface of the table.

For the purpose of depressing the block I use an arm or lever, *K*, Fig. 4, which passes through a transverse opening in the bar *H*, is hung to one side of the latter at the point *p*, and is attached to a rod, *L*, which extends downward through an opening in the center of the bar and enters the socket *h*, the upper end of the said rod being also connected to a spiral spring, *q*, contained within the hollow bar.

When the outer end of the lever *K* is lowered, as shown in Fig. 4, the rod is forced downward against the top of the block *J*, and the bar *H* upward against the fixed beam *C*, so that the block must necessarily descend until brought in contact with the surface of the table, and when the said lever is released the block will be raised by the action of its spring-connections, and the rod *L* by means of its spring; but the latter is not essential, and may in some cases be dispensed with.

The pattern on the under surface of the block *J*, as will be observed on reference to Fig. 3, is divided into three sections, *r*, *r'*, and *r''*, each intended for a single width of cloth, and each of about the size of the blocks in common use for printing oil-cloth by hand. These sections are intended to print in three colors, and are accordingly divided into three portions, *x*, *y*, and *z*, each of which prints its own part of the pattern in one color.

The operation of the apparatus is as follows: The suspended block is first moved in the di-

rection of the arrow, Fig. 1, until it is brought directly over the patches of color spread upon the table, when it is depressed by means of the lever K, in order to take up a portion of this color, and is again permitted to rise by the action of its spring-connections. The block is then moved along the table until it is brought to a proper position above the cloth to be printed upon, when it is pressed vertically downward by the action of the lever, and the several widths of cloth receive their first impressions. After the block has been raised and again replenished with color, the cloth is moved across the table to the extent of one-third of the width of the block, when it is printed upon a second time, and it receives a third impression after being again moved beneath the block to the extent of one-third of the width of the latter. It will thus be seen that where three colors are employed each portion of the cloth receives three impressions, as in ordinary hand-printing, and then passes from beneath the block, the operation being continuous so long as the block is supplied with color and the cloth moved across the table.

My invention is of especial service for printing two or more widths of cloth simultaneously in several colors, as above described; but it can be used to advantage in printing single widths of cloth, as no lifting or carrying of the block is required, as in ordinary hand-printing, the operation being, therefore, much more rapid and less laborious than by the latter method.

I am aware that blocks used for printing wall-paper have been suspended from a traversing frame or carriage by a single spring-connection; but the spring-connection has

never been arranged as in my invention for supporting the block firmly and in a horizontal position.

It is not essential that the lever K and devices connected therewith should be employed, as the block can in some cases be depressed by hand. Neither is it essential that spiral springs should be used for connecting the block to the bar H, as strong gum or other springs would answer the purpose. The arrangement and number of these springs can also be altered without departing from my invention, it being only necessary that the said springs shall hold the block firmly and in a horizontal position.

*Claims.*

1. The block J of an oil-cloth-printing machine, when secured to a traversing bar or frame, H, by elastic or spring connections arranged substantially in the manner described, so as to maintain the block in a horizontal position and prevent it from swaying.

2. The bar H, attached to the printing-block as described, and arranged to be adjusted vertically on the traversing frame G.

3. The combination of the lever K and rod L with the bar H and printing-block J, the whole being arranged and operating substantially as described, for the purpose specified.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

W. H. HALSEY.

Witnesses:

WM. A. STEEL,

JNO. B. HARDING.