D. A. & S. T. ARMSTRONG.

Sandpapering Machines.

No. 141,413. Patented August 5, 1873.

Fig 1.

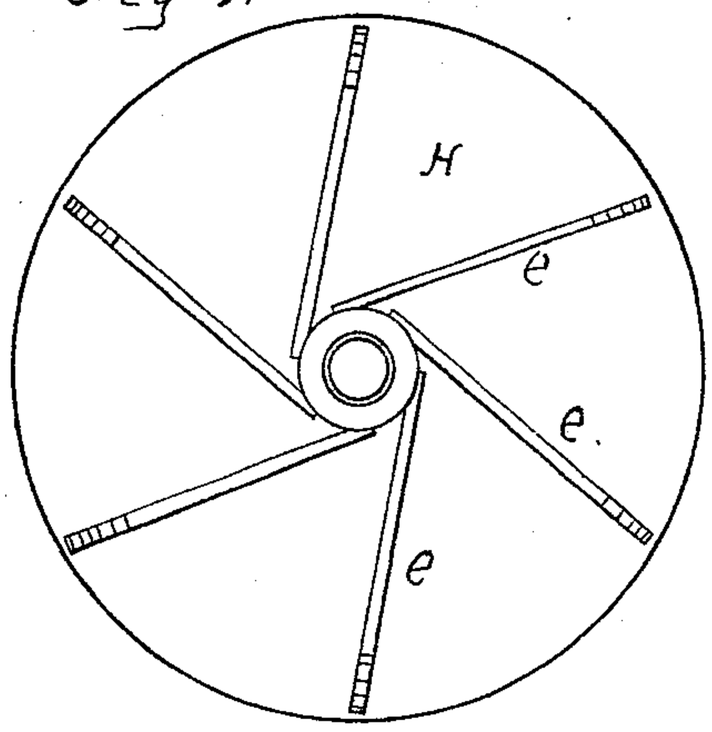


Fig 2.

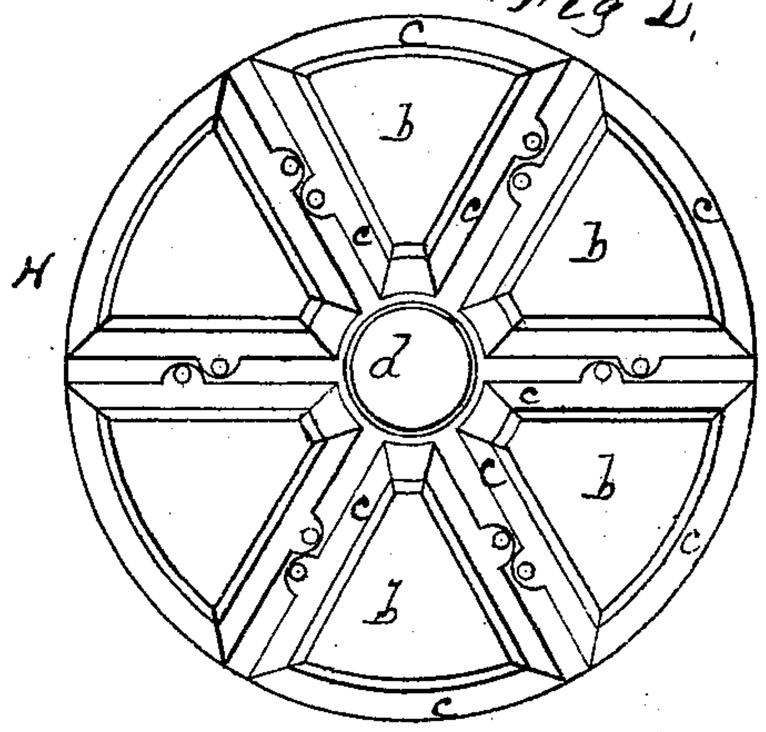


Fig 3

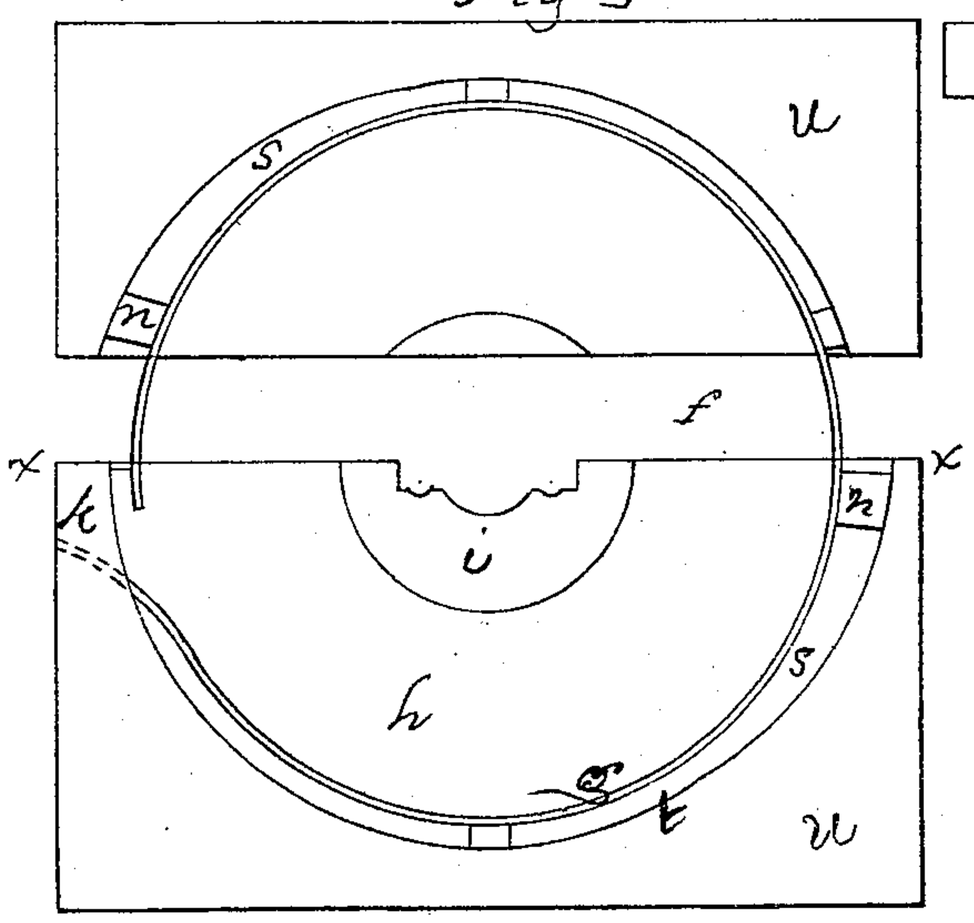


Fig 4

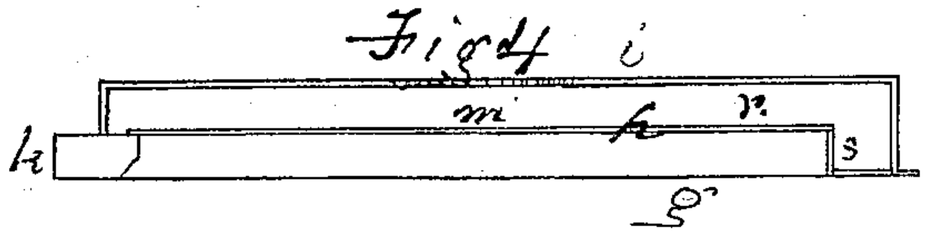
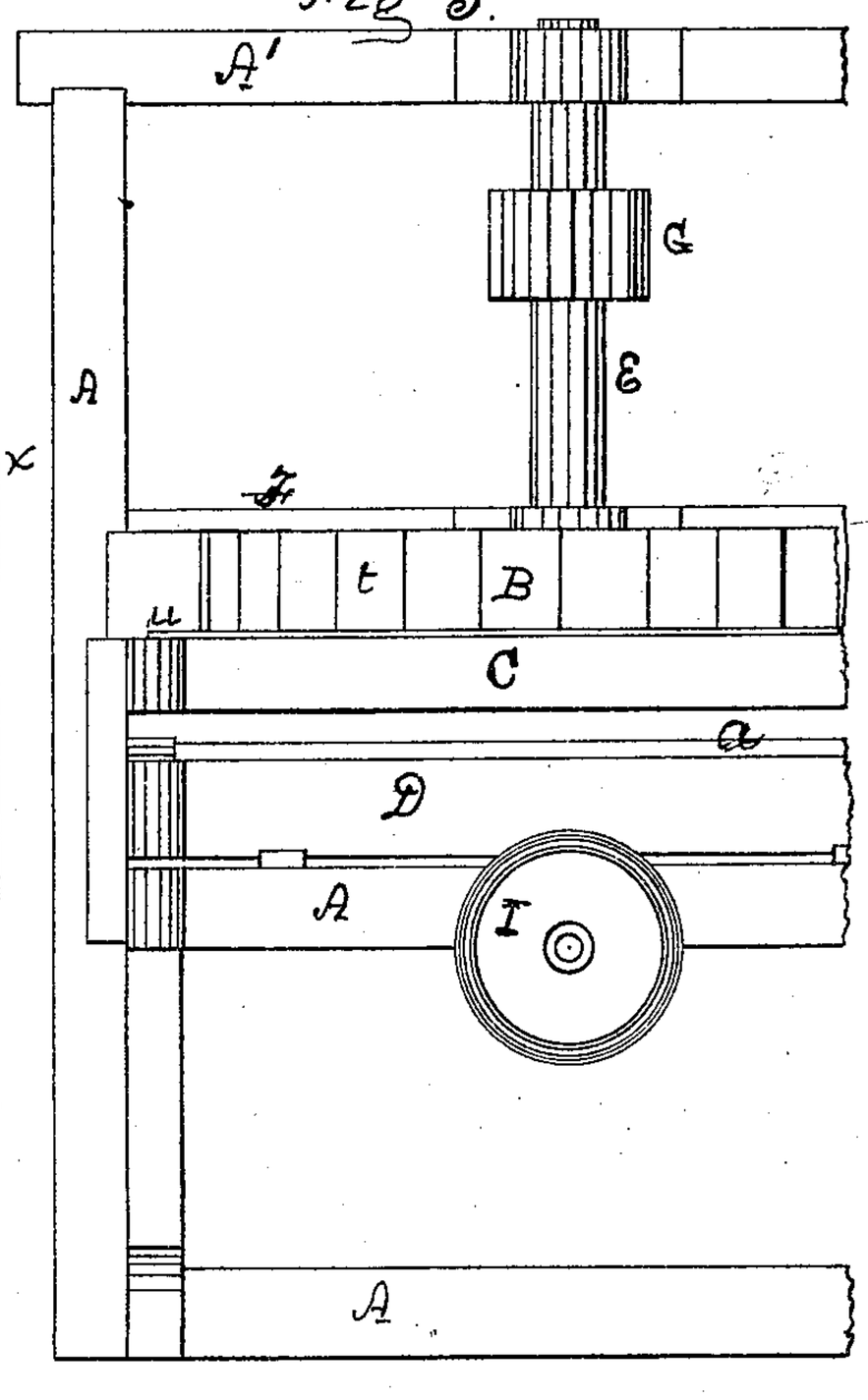


Fig 5.



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UNITED STATES PATENT OFFICE.

DAVID A. ARMSTRONG, OF SANDWICH, AND SHUBAEL T. ARMSTRONG, OF SYCAMORE, ILLINOIS.

IMPROVEMENT IN SAND-PAPERING MACHINES.

Specification forming part of Letters Patent No. **141,413**, dated August 5, 1873; application filed October 11, 1872.

To all whom it may concern:

Be it known that we, DAVID A. ARMSTRONG, of Sandwich, Illinois, and SHUBAEL T. ARMSTRONG, of Sycamore, Illinois, have invented certain new and useful Improvements in Sand-Papering Machines, of which the following is a full description, reference being had to the accompanying drawings making a part of this specification, in which—

Figure 1 is a plan of the disk to which the sand-paper is secured; Fig. 2, a bottom view of the same; Fig. 3, a bottom view of the hoods; Fig. 4, a vertical section on line *x x* of Fig. 3, also showing the position of that part of the hood when connected with the machine; and Fig. 5, a front elevation.

Our invention consists in the mode of securing the sand-paper and blocks to the disk; in providing the center of the disk with a small disk; in providing the upper surface of the disk with flanges to operate as a fan; in the peculiar construction of the hood; and in the combinations and devices hereinafter claimed.

In the drawings, A A A represent the frame of the machine; A′ and F, cross-beams, which hold the vertical shaft E in position, to the lower end of which shaft the sand-papering wheel or disk is secured; G, driving-pulley. To the upper surface of the wheel H are secured a suitable number of flanges, *e*, which produce a suction-blast, and also strengthen the wheel. *b b*, Fig. 2, represent blocks, over which the sand-paper is secured. They may be secured to the wheel H by means of metal frames *c*, one of which surrounds each block, and each frame is secured to the wheel H by means of screws or bolts, or in some other suitable manner. These metal frames also hold the sand-paper firmly in place, and the frames can be removed when the sand-paper is to be replaced. Between the blocks *b* are channels to permit the escape of the dust. In the center of the wheel H is a small disk, *d*, projecting from the wheel the same distance as *b*, to which disk sand-paper is secured by means of a band. The blocks *b* and disk *d* may be cast upon and with the wheel H, leaving the proper channels between them. The present mode of constructing the wheel H and securing the blocks *b* thereto, in other sand-papering machines, is such that, when the machine is in operation, the blocks vibrate, so that the tendency is to round off the edges of the stuff, especially if it is narrow. Our mode of constructing the wheel H and securing the blocks *b* thereto obviates this difficulty. The disk *d* aids in holding short and narrow material in place, and prevents it from striking against the inner extremities of the blocks *b*, which is the case in other machines having a recess in the place of the disk *d*. We use a hood, B, over the wheel H, which is, in fact, double, consisting of the two parts *h* and *i*, one placed within the other, with a space, *r*, between the same. The inner hood *h* has an opening, *m*, at the center for the passage of the dust, and it is connected to the outer hood by strips *n*. The hood is made in two parts vertically, and each part fits closely against the cross-beam F in Fig. 3. The place occupied by this beam F is represented by *f*. The outer hood *i* has a flat portion, *u*, which rests upon the frame C, within which the wheel H is located, and is provided with a flange, *t;* the inner hood *h* has also a flange, *g*, concentric or nearly so with *t*, between which two flanges there is a space, *s*, which space, as shown, is enlarged at two points, for the purpose of increasing the blast. *k* is an outlet for the dust.

In use the flanges *e* produce a suction-blast from the periphery of the wheel H, by which the dust is drawn up into the space *s r*, thence down through the opening *m* in *h* into the space between *h* and the wheel H, and is thrown out at the outlet *k*, from which it may be carried wherever desired, thus preventing the dust from entering the room.

D is a movable frame, in which we place rollers *a*, which frame is made in the usual manner, and can be adjusted by means of the wheel I, and other devices to adapt the machine to different thicknesses of material.

It is advisable to bevel the edges of the blocks *b*, and the metal frames *c* should fit tightly over the edges of the blocks.

When the blocks *b* are permanently secured

or cast upon the wheel H their edges might be straight, or nearly so, and the sand-paper can be held in place by means of suitable bands.

What we claim as new is as follows:

1. The wheel H, when provided with the blocks *b*, in combination with disk *d*, substantially as and for the purposes set forth.

2. The metal frames *c* for the purpose of securing the sand-paper to the blocks *b*, and the blocks to the wheel, substantially as described.

3. The wheel H, when provided with the flanges *e*, in combination with the hoods, constructed and operating substantially as and for the purposes set forth.

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