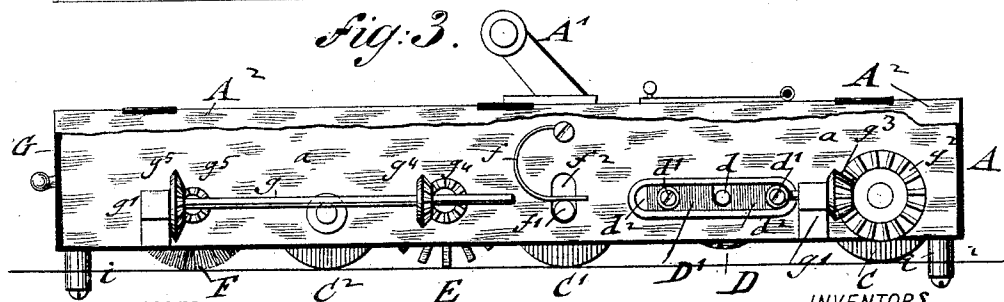
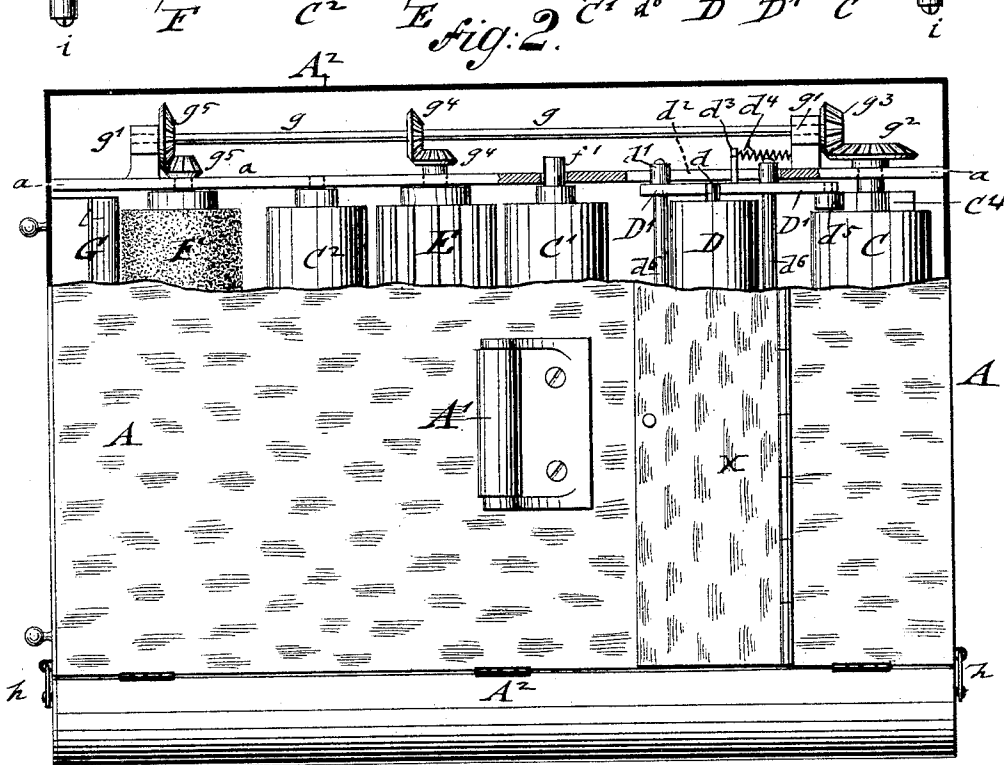
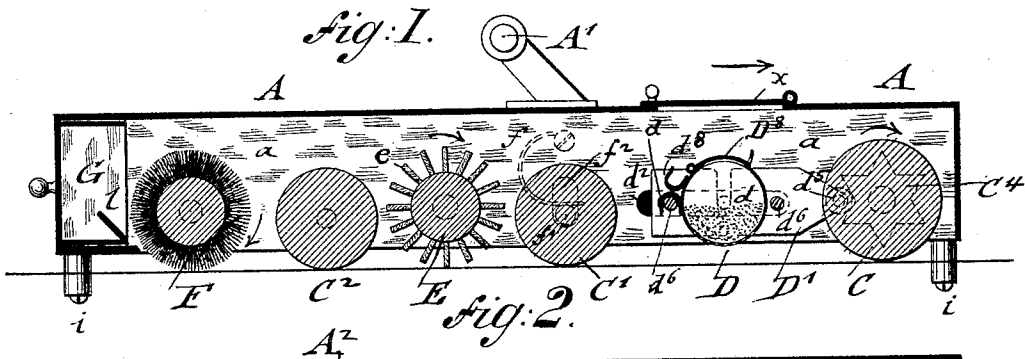


(No Model.)

I. A. & B. SCHAEFFER.  
MACHINE FOR MARKING PATTERNS.

No. 462,331.

Patented Nov. 3, 1891.



WITNESSES:  
*A. Schehl.*  
*Charles Schroeder*

INVENTORS  
*Ibidor A. Schaeffer*  
*and Burnett Schaeffer*  
BY  
*Joseph Regener*  
ATTORNEYS.

# UNITED STATES PATENT OFFICE.

ISIDOR A. SCHAEFFER AND BARNETT SCHAEFFER, OF NEW YORK, N. Y.,  
ASSIGNORS TO ROSA SCHAEFFER, OF SAME PLACE.

## MACHINE FOR MARKING PATTERNS.

SPECIFICATION forming part of Letters Patent No. 462,331, dated November 3, 1891.

Application filed December 13, 1890. Serial No. 374,533. (No model.)

*To all whom it may concern:*

Be it known that we, ISIDOR A. SCHAEFFER and BARNETT SCHAEFFER, both of the city, county, and State of New York, citizens of the United States and England, respectively, have invented certain new and useful Improvements in Machines for Marking Patterns, of which the following is a specification.

In a patent granted to us on December 30, 1890, No. 443,798, a machine for marking patterns for garments was described, which consisted, essentially, of an exterior supporting-frame, a cylindrical screen containing the marking-powder and having a perforated lower portion, a slide-frame for supporting said screen, said slide-frame being guided in the supporting-frame, and means for imparting intermittent reciprocating motion to the cylindrical screen for producing the dropping of the marking-powder from the same. In addition to these features, an inclined chute was arranged that extended from the upper part of the guide-roller back of the screen into an opening at the top of the same, so as to transfer the surplus powder back to the screen.

Since making the application for the patent referred to we have found that it is necessary for the proper working of the machine by which patterns are transferred, in connection with a perforated pattern sheet or chart to cloth or other fabrics, to provide certain additional elements, inasmuch as the mere dropping of the marking-powder through the holes of the chart was not sufficient to properly affix the same to the cloth. For the purpose of accomplishing this in a more effective manner it is necessary to add to the elements of the machine as heretofore made by us a spring-actuated pressure-roller and rotating fixing-roller, by which the marking-powder is pressed through the perforations of the marking-sheet into the cloth, so as to be retained thereon; and for this purpose the present invention consists in certain improvements on the marking-machine heretofore referred to by arranging, in connection with the same, a spring-actuated presser-roller and a roller provided with brush-like tufts or strips, which roller is rotated by a suitable transmitting-

gearing from the front roller, and, in addition thereto, a quickly-rotating brush at the rear end of the machine, by which the surplus powder is transferred into a box-like receptacle back of said brush, as will be fully described hereinafter, and finally be pointed out in the claims.

In the accompanying drawings, Figure 1 represents a vertical longitudinal section of our improved machine for marking patterns on cloth and other fabrics. Fig. 2 is a plan view of the same with a portion of the inclosing box broken away, so as to show the working parts below the same. Fig. 3 is a side elevation of the gear-wheels by which motion is imparted to the fixing-roller and collecting-brush by which the marking-powder is pressed into the cloth and the surplus powder collected.

Similar letters of reference indicate corresponding parts.

Referring to the drawings, A represents an oblong box, of sheet metal or other suitable material, which is provided with partitions *a*, having openings that form bearings for the different rotating parts of the machine. A handle *A'* is applied to the top of the box A, by which the machine is readily moved in either direction. At the front end of the frame A is arranged a presser-roller C, and back of the same, at proper distances from each other, two additional rollers *C'* and *C''* are arranged, which are preferably made of wood and of sufficient weight to exert a certain pressure on the fabrics to be marked. Immediately back of the front roller C is arranged a cylindrical screen D, which is supported by pivots *d* at its ends in a slide-frame *D'*, which is guided by anti-friction rollers *d'* in slots *d''* of the partitions *a* of the box A. A pin *d'''* in each side of the slide-frame *D'* is connected by a spiral spring *d''''* with a fixed support on the partition *a*, as shown in Fig. 2, which springs serve to move the slide-frame *D'* in forward direction. To the ends of the front or presser roller C are applied fixed star-wheels *C'*, which are engaged by anti-friction rollers *d''''* at the front ends of the slide-frame *D'*, so that the teeth of said star-wheels impart an intermittent reciprocating motion to

the slide-frame  $D'$  and screen  $D$  when the machine is moved forward over the fabric and the presser-roller  $C$  rotated thereby. The reciprocating screen  $D$  is formed of two sections, a main section  $D$  and a lid  $D^8$ , which is hinged thereto and attached by suitable locking devices to the main section. The lower part of the main section of the screen  $D$  is imperforate, while the remaining part of the same and the lid are made of perforated sheet metal. The cylindrical screen  $D$  is filled with a marking-powder by opening its lid  $D^8$ , said marking-powder being dropped through the lower part of the screen on the marking-sheet that is placed on the top layer of cloth and through the perforations of the sheet onto the cloth. The screen  $D$  is provided with two spring-hooks  $d^8$ , which are arranged close to each other, but so as to extend in opposite direction, as shown in Fig. 1. These spring-hooks serve to lock the screen  $D$  either in its normal position with the perforated portion at the lower part or with the imperforate lid  $D^8$  at the bottom, in which position no marking-powder can be dropped. The spring-hooks  $d^8$  engage transverse connecting-rods  $d^6$  of the slide-frame  $D'$  and permit in connection therewith the ready locking of the screen in a position so as to drop the marking-powder and in a position in which the dropping is interrupted.

The marking-machine rests on the front presser-roller  $C$  and the rear roller  $C^2$ , the intermediate roller  $C'$  being acted upon by strong springs  $f f$ , that press on its pivots  $f'$ , guided in vertical slots  $f^2$  of the partitions  $a$ , so as to keep the roller  $C'$  in contact with the marking-sheet, but permit it to "give" for any unevenness of the perforated sheet. The spring-pressed roller  $C'$  serves to press the powder dropped from the screen into the perforations of the marking-sheet onto the top layer of cloth preparatory to the fixing of the same by a brush-roller  $E$ , which is located between the rollers  $C'$  and  $C^2$  and rotated in the same direction as the guide-roller  $C'$  by motion-transmitting mechanisms, which are arranged at each side of the machine and operated by the presser-roller  $C$  and longitudinal shafts  $g$ , that are supported in bracket-bearings  $g'$  of the partitions  $a a$ .

Bevel-wheels  $g^2$  on the shaft of the presser-roller  $C$  mesh with bevel-wheels  $g^3$  on the front ends of the side shafts  $g$ , which by two sets of additional bevel-wheels  $g^4 g^4$  and  $g^5 g^5$  transmit rotary motion to the brush-roller  $E$  and a collecting-brush  $F$  at the rear end of the machine. The bevel-gears  $g^4$  and  $g^5$  are so arranged that a greater speed is imparted to the fixing-roller  $E$  and a still greater speed than that of the presser-roller  $C$  to the collecting-brush  $F$ , which is accomplished by increasing the size of the gear-wheels  $g^4 g^5$ , as shown in Figs. 2 and 3. The roller  $E$  is provided with a number of strips or tufts  $e$ , of felt or other like material, which strips serve to press the powder that is dropped through the holes of

the marking-chart into the cloth or other fabric to be marked, so as to affix it thereto. The marking-powder that still remains on the perforated transfer sheet or chart is then taken up by the collecting-brush  $F$ , which is located back of the roller  $C^2$  and transferred into a box-like receptacle  $G$  at the rear end of the machine. The bristles of the collecting-brush  $F$  also assist in fixing the marking-powder passed through the holes of the marking-sheet on the top layer of cloth. The receptacle  $G$  is provided with an inclined ledge  $l$  at its lower front part, along which the marking-powder is moved by the brush  $F$ , so as to be deposited in the box  $G$ . The marking-powder is transferred from time to time from the collecting-box  $G$  to the screen  $D$ , from which it is again dropped on the perforated transfer-sheet.

The sheet-metal inclosing box  $A$  is provided with a hinged top lid above the screen  $D$ , as shown in Fig. 1, and with hinged rounded-off side boxes  $A^2$ , that inclose the transmitting mechanisms at each side of the machine, as shown in Figs. 2 and 3. The side boxes  $A^2$  are locked in position by hooks  $h h$ , which permit the ready opening of the side boxes when it is necessary to gain access to the transmitting devices for repairing or lubricating the same. By moving the marking-machine over the perforated sheet or chart, by means of which the patterns are marked on the cloth or other fabric, the screen  $D$  is intermittently reciprocated by the action of the front presser-roller and the intermediate actuating mechanism between it and the screen  $D$  and by the sudden motion imparted to the screen the marking-powder dropped into the holes of the sheet and then passed into the cloth by the fixing-roller  $E$ , so that the lines of the patterns are clearly affixed to the cloth or other fabric. The surplus marking-powder is transferred by the collecting-brush into the box-like receptacle  $G$  at the rear end of the machine. The machine is guided along the cutting-table on which the layers of cloth to be marked are supported by means of downwardly-extending rollers  $i i$  at one side of the machine, which rollers act as guiding and steadying devices for the machine in its motion over the cloth to be marked. The machine transfers the patterns from the perforated sheet in a quick and reliable manner to the fabrics that are to be cut into garments, so that a considerable saving in time and labor as compared to the methods heretofore in use is obtained.

Having thus described our invention, we claim—

1. The combination, with an exterior supporting-box and frame having guide-rollers, of a screen having a perforated lower portion, means for imparting an intermittent reciprocating motion to said screen, a fixing-roller arranged back of said screen and having radial felt strips in its face, a collecting-brush at the rear part of the machine, and a box-like

receptacle back of the brush for collecting the surplus marking-powder, substantially as set forth.

2. The combination of an exterior box and 5 frame, a number of guide-rollers for supporting the same, a cylindrical distributing-screen having a lower perforated portion, a slide-frame for supporting said screen, means for 10 imparting an intermittent reciprocating motion to said screen, a fixing-roller arranged between the guide-rollers back of the screen, a collecting-brush at the rear of the machine, a box-like receptacle for collecting the surplus marking-powder back of the brush, and 15 transmitting mechanism for imparting rotary motion from the front guide-roller to the fixing-roller and collecting-brush, substantially as set forth.

3. The combination of an exterior support- 20 ing-box and frame having a front and rear guide-roller, an intermediate spring-pressed guide-roller, an intermittently-reciprocating screen between the front and intermediate guide-roller, a rotary fixing-roller between the 25 intermediate and rear guide-roller, a collect-

ing-brush back of the rear guide-roller, and a collecting-box back of the collecting-brush at the rear end of the machine, substantially as set forth.

4. In a pattern-marking machine, the com- 30 bination of a reciprocating slide-frame having transverse rods, with a cylindrical screen pivoted to said frame and having a perforated portion and a hinged lid, and spring- 35 hooks attached to said screen and extending in opposite directions to each other, said hooks being adapted to engage one or the other of the transverse rods, according as the screen is to be set with the perforated portion 40 at the lower or at the upper part of the same, substantially as set forth.

In testimony that we claim the foregoing as our invention we have signed our names in presence of two subscribing witnesses.

ISIDOR A. SCHAEFFER.  
BARNETT SCHAEFFER.

Witnesses:

PAUL GOEPFEL,  
CHARLES SCHROEDER.