(No Model.) 2 Sheets—Sheet 1.

I. A. & B. SCHAEFFER.

MACHINE FOR MARKING PATTERNS.

No. 443,798. Patented Dec. 30, 1890.

Fig. 1.

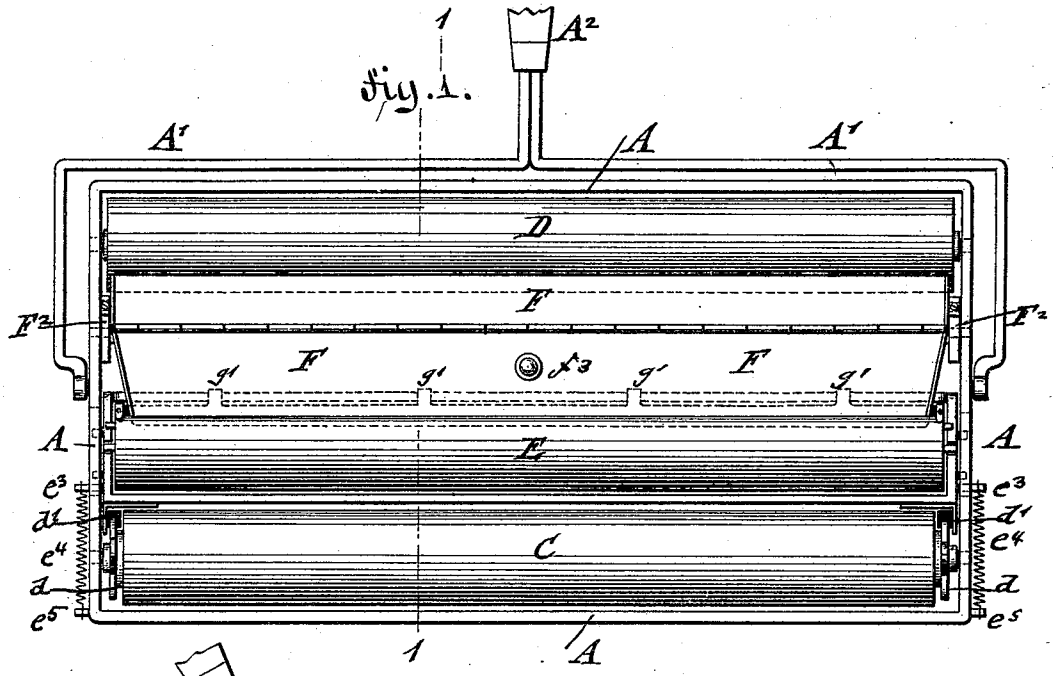
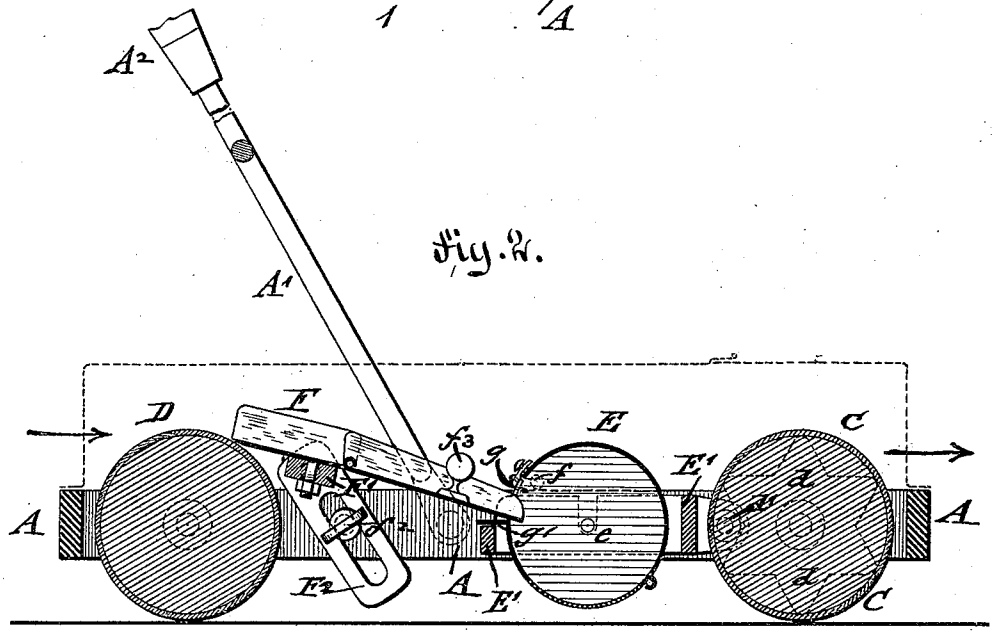


Fig. 2.



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(No Model.) 2 Sheets—Sheet 2.

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MACHINE FOR MARKING PATTERNS.

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Fig. 3.

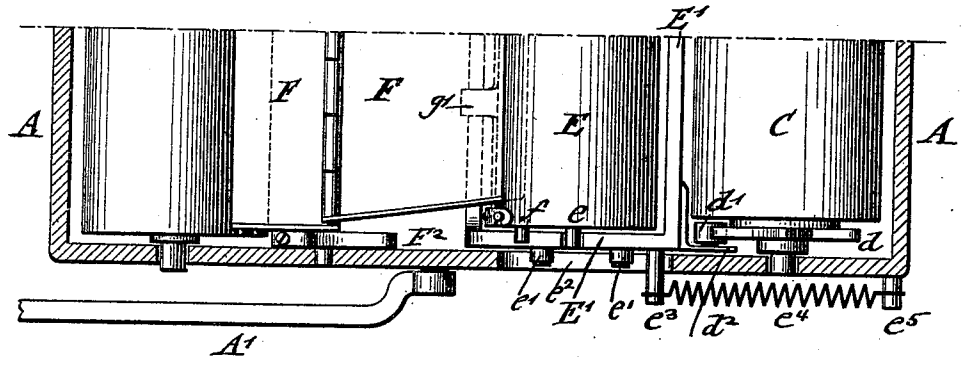
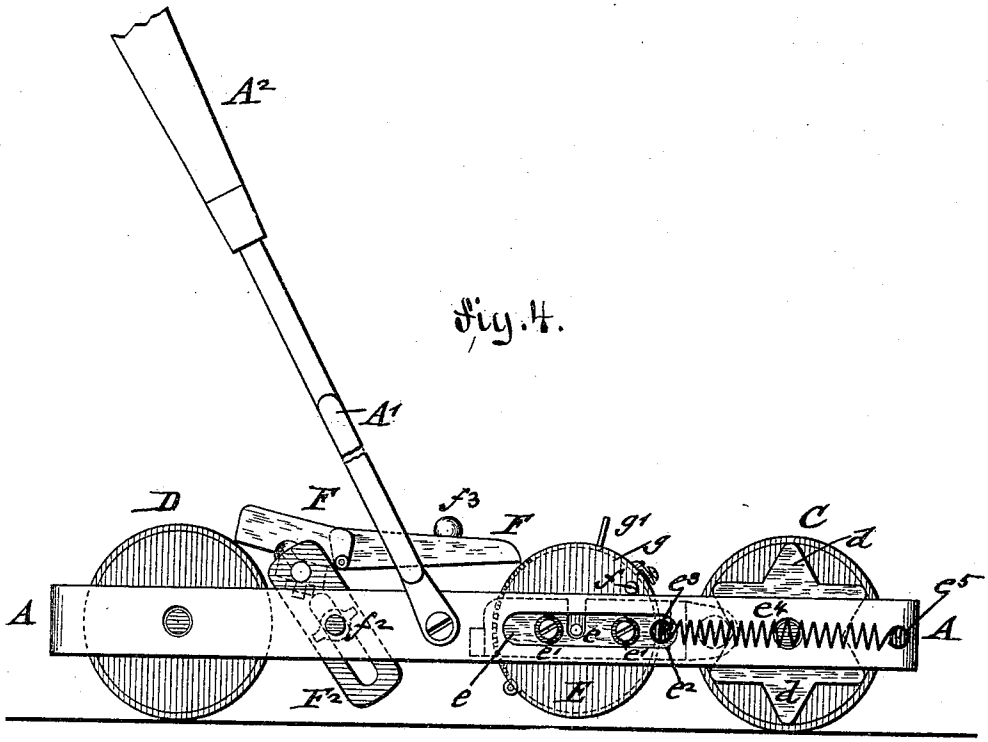


Fig. 4.



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UNITED STATES PATENT OFFICE.

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MACHINE FOR MARKING PATTERNS.

SPECIFICATION forming part of Letters Patent No. 443,798, dated December 30, 1890.

Application filed April 26, 1890. Serial No. 349,604. (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 Great Britain, respectively, have invented certain new and useful Improvements in Machines for Marking Patterns, of which the following is a specification.

This invention has reference to an improved machine for marking patterns on cloth and other fabrics in connection with a perforated pattern sheet or chart, so that clothing manufacturers and others are enabled to mark quickly the different sizes and patterns of garments on the fabrics to be cut or used for other purposes; and the invention consists of a pattern-marking machine composed of an oblong supporting-frame, presser-rollers at the front and rear ends of said frame, a cylindrical screen supported in a slide-frame and containing the marking-powder, means for actuating said screen so as to drop the marking-powder, and an inclined transfer-plate or chute that extends from the upper part of the rear presser-roller into the screen, so as to take up the surplus powder from the rear roller and return it into the screen.

The invention consists, further, of the special construction of the screen and inclined transfer-plate or chute, so that the screen can be refilled and replaced in position.

In the accompanying drawings, Figure 1 represents a plan of our improved machine for marking patterns on cloth and other fabrics. Fig. 2 is a vertical longitudinal section of the same on the line 1 1, Fig. 1, drawn on a larger scale. Fig. 3 is a sectional plan of one end of the machine, and Fig. 4 is a side elevation of the same.

Similar letters of reference indicate corresponding parts.

Referring to the drawings, A represents an oblong open frame of wrought-iron or other suitable metal, which is provided at its side parts with openings that form bearings for the different parts of the machine. A U-shaped bail A is pivoted to the sides of the frame A and provided with a handle A^2, so that the machine can be readily moved in either direction. At the front end of the frame A is arranged a presser-roller C and at the rear end a second presser-roller D of the same size. The rollers C and D are preferably made of wood and heavy enough to exert a certain pressure on the fabric to be marked. Immediately back of the front roller C is arranged a cylindrical screen E, which is supported by pivots e at its ends in a slide-frame E′, which is guided by means of rollers e' in elongated slots e^2 in the sides of the supporting-frame A. From the slide-frame E′ extend pins e^3 through the slots e^2, which pins are connected by spiral springs e^4 with the fixed pins e^5 near the front corners of the frame A, as shown clearly in Figs. 1 and 4.

To each end of the front or presser roller C is applied a fixed star-wheel d, which engages an anti-friction roller d', that is applied to a forward-extending stud d^2 at each front corner of the slide-frame E′, the teeth of said star-wheels imparting an intermittent reciprocating action to the screen E when the marking-machine is moved forward over the fabric. The reciprocating screen E is formed of two semi-sections, which are hinged together at one side and connected by suitable fastening devices at the opposite side. A portion of one section of said screen E is perforated or formed of wire-gauze, while the remaining part is made of imperforated sheet metal. The screen E turns by its pivots in bearings of the slide-frame E′, the heads of the screen being each provided with a laterally-projecting pin f, as shown in Fig. 4, which abuts against the upper edge of the frame A, so that the screen may be turned in one or the opposite direction until stopped by the pins. In one position of the screen E the perforated part is at the lower part of the screen, while in the other position of the screen the imperforated part of the screen is at the lowermost part of the same, as shown in Fig. 2. In the latter position of the screen no powder is dropped from the same, and the screen is therefore placed into this position whenever the dropping of the marking-powder is to be suspended.

The screen E is provided at its rear part above the perforated portion with a longi-

tudinal opening g and with rearwardly-bent lugs g', which latter rest on the rear part of the slide-frame E′, as shown in Figs. 1 and 3. The backwardly-bent lugs g' support the screen in position in the slide-frame E′, where the perforated portion is at the lower part of the same, while the longitudinal opening g next adjoining the lugs serves for inserting an inclined plate or chute F, which is supported on a transverse bar F′, that is applied to inclined adjustable brackets F^2, attached to the frame A by means of clamping-screws f^2, as shown clearly in Fig. 2. The inclined plate or chute F extends from the upper part of the rear roller to the screen, and is provided with upwardly-bent flanges at the ends and formed of two sections, of which the upper one is attached to the supporting-bar F′, while the lower one is hinged to the fixed section, so as to be adapted to swing on its hinge-connection and be readily removed from the opening of the screen when the same is turned on its axis into a position for discontinuing the dropping of the marking-powder. For this purpose the hinged section of the chute F is provided with a handle f^3 at the middle part, by means of which the hinged section can be lifted out of its position in the opening g of the cylindrical screen.

Before commencing the marking operation the cylindrical screen E is removed from the machine, opened, and filled with a suitable marking-powder. The screen is then closed by the fastening devices and replaced in position in the slide-frame E′, with the imperforate portion of the same at the lowermost part of the downward position. As soon as the marking-machine is to be started the position of the marking-screen is changed so that the perforated portion is at the lower part, as shown in Fig. 2, in which position the powder can be dropped through the screen onto the pattern-sheet that is placed on the cloth or other fabric to be marked. The marking-machine is then moved over said pattern-sheet in the direction of the arrow shown in Fig. 2, so that by the rotating motion of the presser-roller C, the screen is intermittently reciprocated by the star-wheels that engage the anti-friction rollers on the slide-frame E′ in connection with the spiral springs attached to said slide-frame, so that the marking-powder is shaken from the screen and dropped on the perforated pattern-sheet and through the holes of the same onto the fabric to be marked. The rear roller D presses the powder into the fabric and takes up the surplus powder that is deposited on the imperforated portions of the pattern-sheet and transfers it to the upper edge of the inclined plate or chute F, from which it is transferred back into the cylindrical screen E.

The pattern-sheet used with our marking-machine is preferably of any suitable length and has patterns of garments or other articles marked thereon, the outlines of the pattern being provided with perforations of sufficient size to permit the ready dropping of the marking-powder onto the fabric. We prefer to use slotted openings in the pattern-sheet instead of holes, which openings are punched out by suitable tools, as thereby a better marking of the patterns on the cloth is obtained.

The marking-cloth may be used in the manner shown in Fig. 1 without a covering-box, or a suitable covering-box may be arranged in connection with the same and attached to the frame A, as shown in dotted lines in Fig. 2, said box being provided with the hinged lid above the cylindrical screen for the convenient removing and replacing of the same.

By our marking-machine the patterns, which are drafted on a pattern-sheet and perforated, can be quickly transferred to the fabrics to be cut up into garments, so that a considerable saving of time and labor is obtained as compared to the cutting of the patterns from paper and transferring them to the fabrics, which method required considerable skill and was conducted with considerable loss of time.

Having thus described our invention, we claim as new and desire to secure by Letters Patent—

1. A machine for marking patterns, which consists of an exterior supporting-frame, a front presser-roller, a rear presser-roller, a cylindrical screen having a perforated portion, a slide-frame for supporting said screen, said slide-frame being guided in the supporting-frame, and means for imparting an intermittent reciprocating motion to the cylindrical screen for producing the dropping of the marking-powder in the same, substantially as set forth.

2. A machine for marking patterns, composed of an exterior supporting-frame, a front presser-roller and a rear presser-roller, both turning in bearings of said frame, a cylindrical screen having a perforated portion, a slide-frame guided in the main frame and supporting said screen, means for intermittently reciprocating the slide-frame and screen, and an inclined plate or chute extending from the upper part of the rear roller into an opening of the screen for transferring the surplus powder back to the screen, substantially as set forth.

3. A machine for marking patterns on cloth, composed of an exterior supporting-frame, a front presser-roller, a rear presser-roller, a cylindrical screen having a perforated portion, a longitudinal opening and backwardly-bent lugs extending from said opening, a slide-frame guided in the main frame for supporting the screen, and an inclined plate or chute formed of a stationary section and a hinged section, said chute extending from the rear roller into the opening of the screen, substantially as set forth.

4. A cylindrical screen for dropping marking-powder, formed of two hinged sections

connected by fastening devices, one of said sections being of imperforate material, while a portion of the other section is perforated and provided with a longitudinal opening and backwardly-extending lugs at the lower edge of said opening, 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 GOEPEL,
MARTIN PETRY.