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1,841,256

MACHINE FOR MARKING FUR BEARING SKINS

Filed March 16, 1928

2 Sheets-Sheet 1

Fig. 1

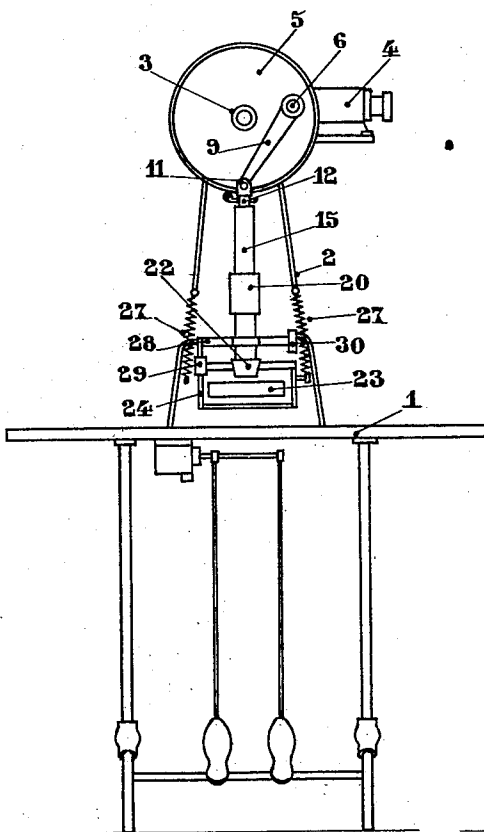
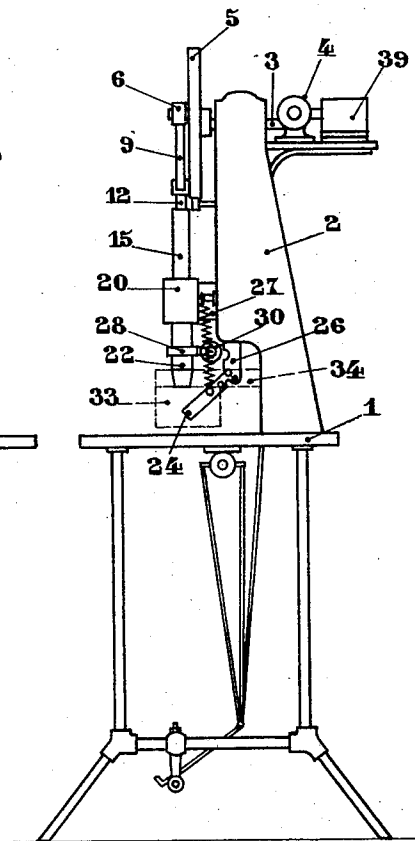


Fig. 2



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Fig. 3

Fig. 4

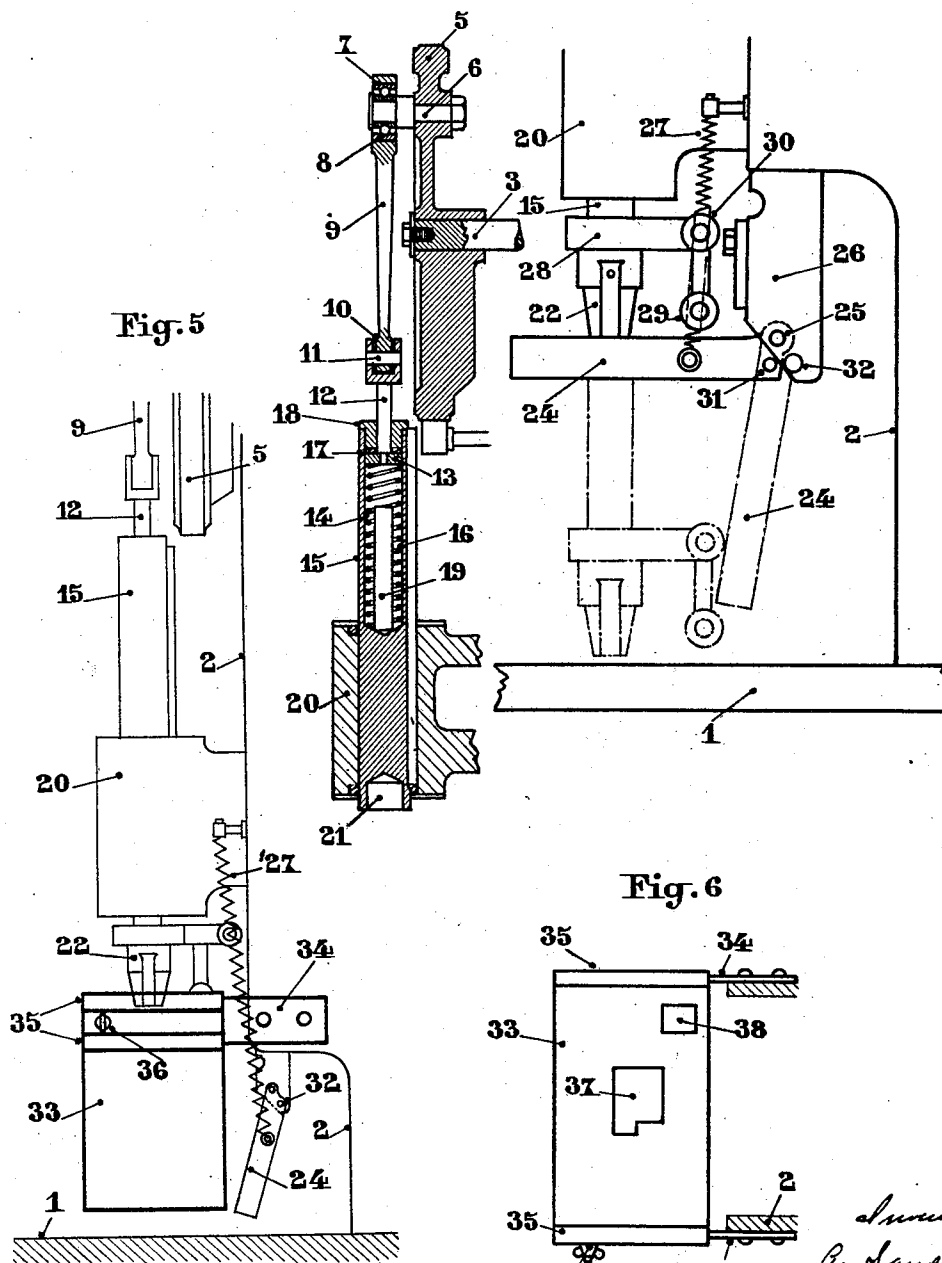


Fig. 6

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UNITED STATES PATENT OFFICE

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MACHINE FOR MARKING FUR-BEARING SKINS

Application filed March 16, 1928, Serial No. 262,294, and in France November 26, 1927.

This invention relates to machines for the numbering, counting and stamp marking of prepared skins and perforation marking of prepared or raw skins.

5 Machines intended for the marking of skins are already known. These machines generally imprint on the skins and in various colours devices or inscriptions carried on a moist stamp which is applied to the skin to be marked; the machines comprise a rigid
10 framework on which the skin is placed, and movable elements carrying the stamp and actuated by an alternating movement either by means of a motor, by the workman, or by
15 means of any suitably transmitted motive force.

In addition the skins are frequently also marked by hand stamping with a simple copper handle, giving very bad results, obtained
20 very slowly.

For marking raw skins only hammers are used, at the end of which a number of points are fixed; the manipulation and the marking are effected by hand and in consequence the
25 blow of the hammer varies in force and generally does not descend uniformly on the skin; this frequently results in the skin being spoilt and in the hairs of the fur being removed; this damage decreases the value of the fur and
30 in addition the operation is necessarily very slow.

The present invention has for its object a machine which may be used indiscriminately for marking prepared skins by stamping and
35 raw or prepared skins by perforating, the switching over from one system to the other being effected by simply replacing a moist stamp by a stamp provided with points arranged according to the desired design; furthermore in both cases the machine according
40 to the invention numbers the marked skins, giving each skin a serial number, indelible when applied by perforation. Simultaneously and finally the machine counts the number
45 of strokes of the stamp which have been executed and thereby permits the number of the skins and the numbering of the same to be effectively checked.

50 In the accompanying drawings:

Fig. 1 is a front elevation of a machine constructed according to the invention;

Fig. 2 is a side elevation of the machine on the same scale.

Fig. 3 is a vertical section on a larger scale through the axis of the stamp carrying member and through the axis of rotation of the driving wheel, of a machine constructed according to the invention.

Fig. 4 shows diagrammatically the driving mechanism of the inking movements.

Fig. 5 is a partial side elevation of a machine constructed according to the invention, provided with guiding and protecting gear casing when marking skins by perforation.

Fig. 6 is a plan view of the same gear casing.

As will be seen from the drawings, the mechanism of the machine according to the invention is supported by a table 1, of any
70 suitable construction, adapted to receive the skins to be marked or in course of being marked and under which are arranged the actuating elements for starting and stopping the machine.

The mechanism is carried by a framework 2, of suitable shape and dimensions; it comprises a shaft 3, rotated by an electric motor 4 through reduction mechanism consisting of an endless screw keyed onto the shaft of the motor and in engagement with a helicoidal
80 wheel fixed on the shaft 3.

On the front end of the shaft 3 is keyed a circular plate 5 constituting a fly-wheel and loaded over 180° to facilitate the lifting
85 of the stamp; this fly-wheel carries an eccentric pin 6 having a projection or trunnion on which is mounted, on a ball bearing 7 (Fig. 3) the head 8 of a connecting rod 9 of which the small end is pivotally connected on the
90 fork pin 11 of a rod 12.

At its lower end the rod 12 carries a piston 13, adapted to move in the cylindrical cavity 14 of the cylindrical member 15 on which the stamp is mounted.

Between the bottom of the cavity 14 and the piston 13 is located a spring 16 which tends constantly to repulse the piston 13 against the lining 17 of the plug 18 which closes the cavity 14 and in which is adapted
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to slide with a slight amount of friction the rod 12; in addition a metallic spindle 19, of suitable length, may be inserted in the cavity 14 and inside the spring 16 for the purpose of acting as a thrust-bearing for the piston 13.

The stamp carrying member 15 slides longitudinally in the sleeve 20 integral with the framework; at its lower end it is formed with a recess 21 in which may be mounted and fixed, in any suitable manner, the shank of the stamp 22, for marking, numbering or dating in ink or perforations.

When the machine is adapted to impose a moist stamp on the skins, the machine is mounted in the manner above described, but the spindle 19 is not placed in the cavity 14; as a result the force of the marking stamp 22 on the skin remains elastic, as the spring 16 is always interposed between the rigid drive of the connecting rod 9 and the stamp carrying member 15; in this manner there is no risk of injuring the skins.

If it is desired to mark the skins by perforations, it is, on the contrary, necessary that after the points of the stamp have come into contact with the skin a rapid and sudden force be imparted to the said stamp to ensure that the perforating is effected freely and cleanly; in this case the spindle 19 is placed in the cavity 14; during the lowering of the stamp and as long as it is not touching the skin to be marked, the piston 13 rests against the plug 18, in the position shown in Fig. 3; at the moment of contact and, in consequence of the resistance of the skin to perforation, the piston descends while compressing the spring 16 and the points of the stamp press elastically on the skin until the piston contacts with the head of the spindle 19; the connection between the piston and the member 15 then becomes rigid and the actual perforating is effected suddenly; owing to the same device, the withdrawal of the points is also sudden and is only effected at the moment when the piston 13, having resumed contact with the plug 18, has established a rigid connection between the member 15 and the movement transmission elements.

The marking stamp 22 is interchangeable; it may, as already stated, be formed and act like an ordinary moist stamp, taking ink from an inking device to which reference will be made later and imprinting on the skin marks of any colour and design, reproducing for example, the initials or the mark of the firm using the machine. It may also comprise an automatic numbering device imprinting consecutive numbers on the skins.

The stamp may also be a perforating stamp, in which case it has, on its lower face, a certain number of points, arranged according to the desired design, at suitable distances from each other and of sufficient length to traverse, in every case, the skins treated; the mark is

then indelible as it consists of perforations made by the points through the skin; likewise in this case the stamp may comprise a numbering device.

When the machine is used for marking skins with moist impression, the stamp 22 comes into contact, at the end of its stroke, with an inker 23 consisting of a container covered with felt, and against which is applied a perforated steel plate possessing a certain elasticity; this plate is itself covered with a Melton cloth pad from which the stamp takes its ink.

This inker works by capillarity and suction; at the moment when the stamp is applied to the upper pad, the pressure which it exerts causes the ink to rise through the perforated plate, and this ink soaks into the pad; on the other hand, when the stamp recedes the metal plate owing to its elasticity resumes its original shape and produces a sudden suction which sucks back into the pad any excess ink.

The inker 23 constructed as above described, is located on a pivotal frame 24; owing to this device a few seconds suffice to change the inker and to switch over, for example, from black inking used for marking white skins, to white inking necessary for stamp marking black skins such as astrakan; in addition any other colours may be selected for marking skins of different shades.

As will be seen from Figs. 1, 2 and 4, the frame 24 is pivoted by its rear part, on a pivot 25 integral with rigid clamps 26 fixed at one end to the framework and at the other end to the frame constantly tend to raise the said frame and apply it in consequence against the stamp.

The stamp carrying member 15 is integral with a member 28 of suitable construction on which are journaled wheels 29 and 30 mounted in the vertical planes of the upper sides of the frame; after inking, when the member 15 is forced downwards by the above described mechanism, the wheel 29, carried along in the same movement comes into contact with the frame, causes it to oscillate in a downward direction and gradually separates it from the stamp; when on arriving at the end of the side of the frame 24, the wheel 29 is no longer in contact therewith, the wheel 30 maintains the frame in a substantially vertical position; inversely, when the stamp ascends the frame of the inker, brought back by the springs and guided by the wheels 29 and 30, effect an oscillation in the inverse direction, until the moment when, released from the action of the wheel 29, it comes to bear against the stamp 22.

When it is desired to effect perforated marks, it is necessary to immobilize the inker in a position which permits the free passage of the stamp. For this purpose the frame 24 is pierced by a hole 31 which may be moved

to a point opposite to a screw 32 engaged in the clamp 26; the frame being brought into the vertical position, the screw is acted on, which engages in the hole 31 and the frame is immovably fixed in this position.

When the machine is used for making perforation marks in raw skins or prepared skins, the lower mechanism is enclosed in a metal box or framework 33 (Figs. 5 and 6), which is fixed onto the machine by means of arms 34, integral with the framework 2, engaging in guides 35 in the box 33; a nut 36 permits the fixing of the box on the arms.

On its upper and lower faces the box has an opening 37 to permit the passage of the stamp and an opening 38 permitting the passage of the wheel 29; the bottom of the box is located at a suitable distance from the table 1 to permit the passage of the skins, but suitable for preventing the passage of the workman's hands. Owing to this device the skin to be marked is rendered immovable during the operation and cannot follow the stamp in its vertical reciprocating movement; at the same time all danger of accidents is avoided, the workman's hands being unable to reach the points of the stamp; the front face of the box may comprise a transparent part, of glass or mica, so as to facilitate the positioning of the part of the skin to be marked under the stamp.

The machine is supplemented by a counter 39 (Fig. 2) mounted on the shaft 3, which registers each rotation made by the said shaft and in consequence each stroke of the machine; finally, a brake device, acting on the fly-wheel 5 enables the inertia of the fly-wheel to be instantaneously overcome when the electric motor is stopped after a marking operation.

It is easy to conceive that such a machine permits the marking, numbering and counting, either by stamping in any selected colour, or by perforation, of raw skins and prepared skins, and that the transition from one method of marking to the other may be effected with the greatest rapidity. For example for changing over from stamp marking to perforation marking it is sufficient to introduce the spindle 19 into the member 15, immobilize the inker, change the stamp and fix the guiding and protecting box, all of which operations take but a minute to effect.

The application of the devices described thus permits, with one single machine, the marking of skins, either by stamping or perforation with great rapidity; in addition the marks impressed, having been always effected under identical mechanical conditions, are perfectly clear, the impressions being as distinct as those obtained by printing, and the perforation of the raw skins does not cause any deterioration of the fur.

It will be understood that the machine above described and which is shown in the

accompanying drawings, may be subject to such modifications as required by the object in view, and in particular the actuating devices for starting and stopping the motor may be either pedals, or levers of any kind; the guide sleeve of the stamp carrying member may be single or double and of variable dimensions; the position of the spindle and the selection and regulating of its length may be of any kind as also the position and method of drive of the shaft by the electric motor; likewise the positions and arrangement of the actuating means for the counter may be modified without these modifications affecting the characteristics of the invention.

What we claim is:

1. In a marking assembly, a fixed bed, a reciprocable support having a bore therein, marking means mounted on said support, a piston slidably mounted in the bore of said support, a spring tending to force said piston out of said bore, means operative to prevent said piston from leaving said bore, means for reciprocating said piston, an inking pad, a frame movably supporting said pad, and means operative by the reciprocation of said support to move said frame out of the path of said marking means.

2. In a marking assembly, a fixed bed, a reciprocable support having a bore therein, marking means mounted on said support, a piston slidably mounted in the bore of said support, a spring tending to force said piston out of said bore, means operative to prevent said piston from leaving said bore, means for reciprocating said piston, an inking pad, an oscillatable frame supporting said inking pad, a spring connected to said frame and operative to oppose displacement thereof, and means operative by reciprocation of said support to oscillate said frame.

3. In a marking assembly, a fixed bed, a reciprocable support having a bore therein, marking means mounted on said support, a piston slidably mounted in the bore of said support, a spring tending to force said piston out of said bore, means operative to prevent said piston from leaving said bore, means for reciprocating said piston, an inking pad and a fixed, enclosed frame positioned in the path of said reciprocable support, said frame having an opening formed therein permitting movement of said marking means towards said fixed bed.

In testimony whereof we have signed our names to this specification.

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