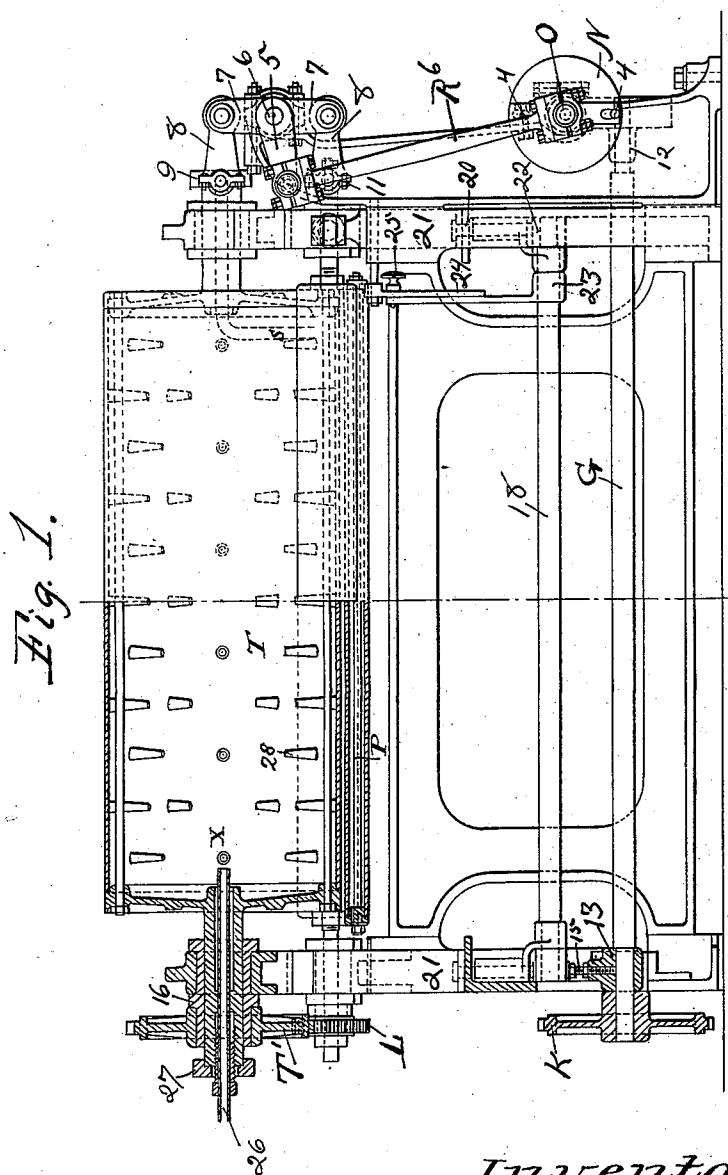


V. COQ.
FELTING MACHINE.

No. 548,183.

Patented Oct. 22, 1895.



Witnesses:

E. R. Bolton
H. van Olden

Inventor:

Victor Coq

By

Reinhardt

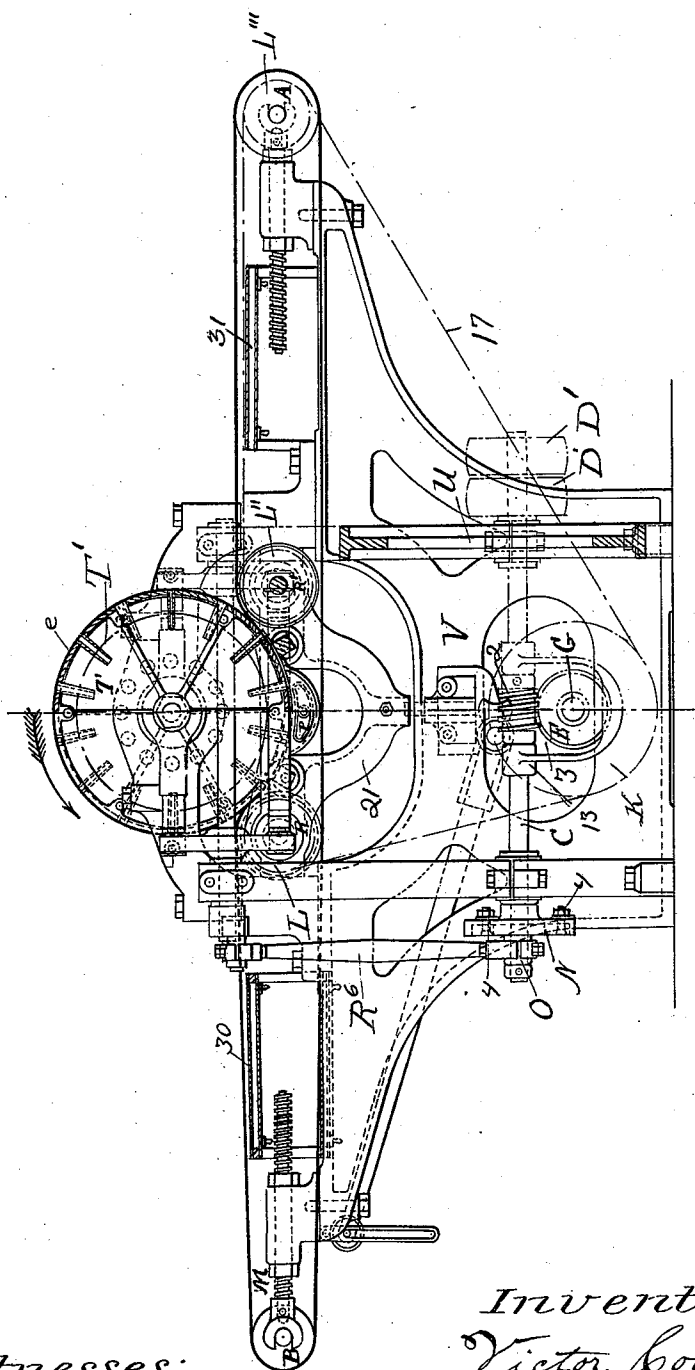
his Attorneys.

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Fig. 2.



Witnesses:

E. B. Bolton

H. Van Oldenryck

Inventor:

Victor Coq

By

Richardson

his Attorneys.

UNITED STATES PATENT OFFICE.

VICTOR COQ, OF AIX, FRANCE.

FELTING-MACHINE.

SPECIFICATION forming part of Letters Patent No. 548,183, dated October 22, 1895.

Application filed October 16, 1894. Serial No. 526,026. (No model.) Patented in France January 17, 1894, No. 235,576, and in England May 29, 1894, No. 10,414.

To all whom it may concern:

Be it known that I, VICTOR COQ, a citizen of the Republic of France, residing at Aix, Bouches-du-Rhône, Republic of France, have
5 invented certain new and useful Improvements in Felting-Machines, of which the following is a specification, and for which I have obtained Letters Patent in France, dated January 17, 1894, No. 235,576, and in Great Britain,
10 dated May 29, 1894, No. 10,414.

Felting-machines as ordinarily constructed consist of two series of cylinders of small diameter surrounded by an endless feed-cloth, said cylinders receiving circular motion and
15 at the same time a to-and-fro or rectilinear alternating motion in opposite direction the one to the other that produce the felting. The contact-line of such cylinders presents a very feeble contact-surface, which necessitates the
20 use of a great number of cylinders. Moreover, the endless feed-cloths always tend to move to the right or to the left of the machine, so that the workman who has charge of operating the same is constantly busy bringing them
25 again in the position they must occupy. It is to remedy these inconveniences that I have constructed the machine which will be described hereinafter.

I have illustrated this machine in the accompanying drawings, in which—

Figure 1 is an end view of the machine, partly in section; and Fig. 2 is a side view with parts in section.

The cylinder T and hollow counter-plate P
35 have a to-and-fro motion, which is rapid and in opposite directions. The felting-cylinder T and the feed-cloth operating-cylinders A B R R' have also a continuous rotary motion. These motions are imparted by means of the
40 following mechanism: The driving-shaft C, which carries the loose and fixed pulleys D and D', turns in bearings fixed on the framework U, which in its turn is fixed in the framework V of the machine. The driving-shaft carries at
45 its extremity a disk N, which carries in a groove made in its face a bar or support O, fixed to the disk by means of two bolts 4, sliding in elongated holes and having a bearing
50 or trunnion. It will be easily understood that by adjusting the bar or support of the trun-

nion in its groove a greater or less eccentricity can be given to the bar O, and consequently a greater or less amplitude to the oscillating motion of the cylinder and of the counter-plate. That motion is transmitted to these
55 parts by the connecting-rod R², operating the handle 5, wedged upon the shaft 6, which also carries the double levers 7, connected with the cylinder and the counter-plate by means of connecting-rods 8 and cross-beams 9 and
60 11. The cross-beam 11 carries square rods, which support the counter-plate P and also the trunnions of the cylinders R and R'. The driving-shaft C transmits, also, the continuous motion to the cylinders R, R', and A, as
65 well as to the large cylinder T, in the following manner: It carries worm 2, engaging with a worm-gear E, wedged upon a transverse shaft G, turning on one side in the socket 12 of the support 3 and on the opposite side in
70 the socket 13, which slides vertically in the support 14. A chain-wheel K is wedged upon the shaft G, around which the chain 17 winds, which chain passes over the pinion L on cylinder R, and thence under pinion T', wedged
75 upon the socket 16, which by means of a key sliding with a soft friction actuates the hollow shaft of the cylinder T, and finally to the pinions L'' and L''' of the cylinders R' and A. My stretchers M M' enable me to stretch on
80 one side the chain of the chain-wheel K and on the other side the endless apron. The following arrangement enables me to give more or less pressure to the bat to be felted by
85 regulating the distance of the counter-plate P and the cylinder T. Two supports 21, placed in the empty space left to that effect in the frame V and sliding vertically, support the rods, which at their turn support the counter-plate P and carry, also, the shafts of the cyl-
90 inders R and R'. The supports 21 themselves bear upon rods 20, which bear upon the extremity of two small levers 22, wedged at each end of the shaft 18. Upon the same shaft is
95 also wedged the lever 23, the extremity of which slides against the slide 24, to which it can be fixed by means of the thumb-nut 25.

In order to prevent the chain-wheel from becoming too loose or too tight during the adjustment of the wheel K, tension-screw 15 is pro- 100

vided, by means of which the shaft G is caused to follow the motion of lever 22 during their adjustment.

5 The manner in which the cylinder T is heated is clearly shown by the sectional view of that cylinder. The steam comes through the tube 26 and passes into the cylinder, while the water of condensation, which always remains at the bottom of the cylinder, escapes
10 through the curved tube S, which reaches lower than the upper part of the tubes 28, which are fitted into the cylinder. It will be seen that by this arrangement the water of condensation can never reach the orifices of
15 those tubes which serve to vaporize the felt fitting covering the cylinder. The tubes 26 and S are provided with supports 27, fixed upon the cross-beams 9, in order that they may not revolve with the cylinder T. They
20 are provided with stuffing-boxes for preventing the escape of the steam. As the heat is a condition that cannot be dispensed with in

the felting of bats, it is very necessary to heat, also, the endless apron. To that effect I place in front and behind the machine hollow tubes 25 30 and 31 under that apron.

I claim as my invention—

In combination with the endless belt with means for driving it, the revolving cylinder and the counter plate with means for reciprocating them at right angles to the belt, the open ended tubes projecting inwardly from the face of the cylinder, the axial steam inlet pipe at one end of the cylinder, and the axial water outlet pipe at the other end having its
35 inner end depending down to the bottom of the cylinder, substantially as described.

In testimony whereof I have hereunto set my hand, at Paris, in the Republic of France, this 17th day of May, A. D. 1894.

VICTOR COQ.

In presence of—

EUGÈNE DUBUIL,

CHARLES BOUTVILLE.