

(No Model.)

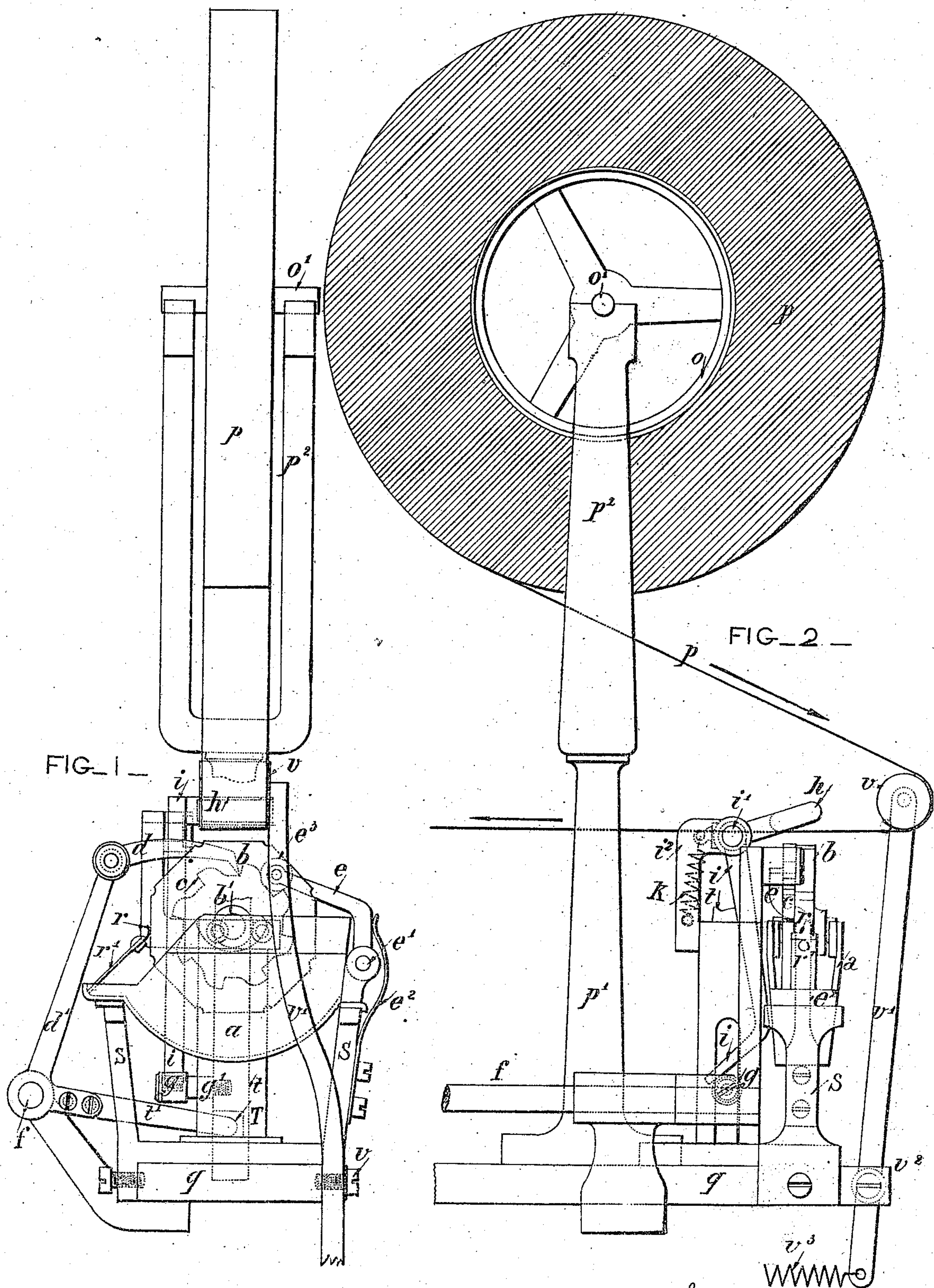
2 Sheets—Sheet 1.

A. C. MARCHAL.

MACHINE FOR APPLYING PARAFFIN TO CIGARETTE PAPER.

No. 528,332.

Patented Oct. 30, 1894.



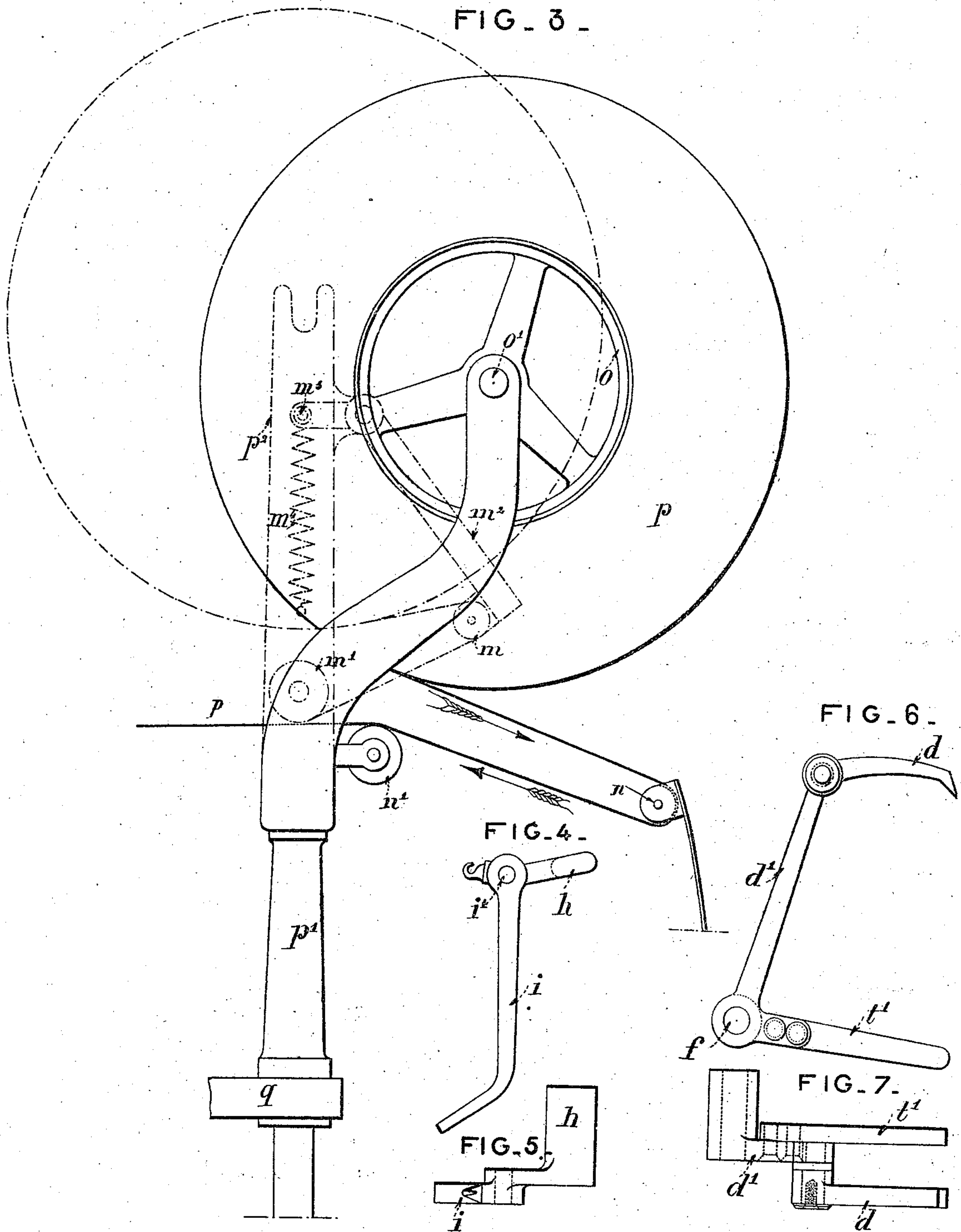
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 his Attorney.

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Witnesses:
L. M. Hachschlager,
S. O. Munn

Inventor
Alfred Charles Marchal,
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UNITED STATES PATENT OFFICE.

ALFRED CHARLES MARCHAL, OF PARIS, FRANCE.

MACHINE FOR APPLYING PARAFFIN TO CIGARETTE-PAPER.

SPECIFICATION forming part of Letters Patent No. 528,332, dated October 30, 1894.

Application filed March 2, 1894. Serial No. 502,034. (No model.) Patented in France January 18, 1894, No. 235,610.

To all whom it may concern:

Be it known that I, ALFRED CHARLES MARCHAL, residing at the city of Paris, France, have invented a new and useful Improvement in Machines for Applying Paraffin to Cigarette-Paper in Cigarette-Making Machines, (for which I have obtained Letters Patent of France for fifteen years, No. 235,610, dated January 18, 1894;) and I do hereby declare that the following is a full and exact description thereof, reference being made to the accompanying drawings.

The object of this invention is to apply the paraffine to the cigarette paper in cigarette making machines as the manufacture of the cigarettes goes on.

The invention consists of special arrangements of mechanism whereby the automatic and absolutely regular application of the paraffine is effected to each and every cigarette manufactured.

The mechanism, when applied to what is known as the Decouflé machine for making cigarettes without adhesive material, may be operated by the mechanism, which actuates the printing stamp of the controlling mark; but it may also be applied to Decouflé or other cigarette machines, whether the cigarette tubes are pasted or not, and it may be operated directly or indirectly from the cam shaft or any other suitable moving part of the machine.

In the drawings hereto annexed Figure 1 is an elevation of the mechanism for applying the paraffine adapted to the entering end of a Decouflé cigarette machine for making cigarettes without paste or other adhesive material. Fig. 2 is a side view—being a projection of Fig. 1. Fig. 3 is a side view showing in full and dotted lines two arrangements of support for the paper bobbin, and Figs. 4, 5, 6, and 7 are detail views of the paraffining pad and of parts connected therewith.

In the well known Decouflé machines the support p' of the fork p^2 in which the bobbin of paper p is mounted is usually fixed on a prolongation q of the table on which the stamping and other devices are placed. On the prolongation q I fix the support s of a cistern a containing the paraffine inside of which is an octagonal rotating drum b . This drum b is carried by an axis b' on which is

fixed a ratchet wheel c of eight teeth into which takes a pawl d mounted on a lever d' . (Figs. 6 and 7.) The lever d' is secured on an axis f having a rocking or oscillating motion which transmits the well known movements to the controlling or other distinctive stamp.

The ratchet wheel c is held in proper position by the retaining pawl or lever e pivoted at e' and acted on by the flat spring e^2 . The acting end of the lever e is furnished with a roller e^3 to reduce as much as possible the friction of the pawl e on the teeth of the ratchet wheel c .

The printing stamp is mounted on the upper end of the slide t which has in it a recess or mortise T , into which takes the end of a lever t' secured to the above mentioned axis f . Figs. 1, 6, and 7 show that the lever d' of the pawl d is riveted to the lever t' of the stamp but it will be understood that these levers d' and t' may be made separate and both fixed on the same shaft f .

The vertical slide t of the stamp is provided at its lower part with a stud g' carrying a roller g which comes in contact with a lever i pivoted on the stud i' fixed to the part i^2 . Connected with the lever i is the lever arm h which forms the paraffining pad and which is covered with indiarubber on its acting face. A spring k acts on the lever i so as to press its lower end constantly against the roller g and to raise the pad h when it is to remain out of action.

A scraper r fixed on the end of a flexible blade r' bears constantly against the flat faces of the drum b to equalize the paraffine thereon before the same is applied to the paper.

The cigarette paper p is rolled up as usual round the bobbin o , the axis o' of which turns in the branches of the fork p^2 . This paper is unrolled by the ordinary well known feeding mechanism and is led over the guide roller v before passing between the faces of the drum b and the pad h .

The arrangement of the support p' , shown in Figs. 1 and 2, has the advantage of reducing the space occupied by the cigarette machine. The support p' and its fork p^2 are straight and are placed immediately behind the stamping and paraffining devices. In this case the paper, on leaving the bobbin,

passes round the guide roller v which is mounted at the end of the lever v' pivoted at v^2 to the prolongation q . A spring v^3 acts on the lever v' to impart the requisite tension to the paper p .

In the arrangement shown in Fig. 3 the paper passes in unrolling over the guide rollers $n n'$ and the support p' of the fork p^2 is fixed at the end of the prolongation q in front of the stamping and paraffining devices.

In the arrangement shown by dotted lines in Fig. 3 the fork p^2 is a straight prolongation of the support p' and the paper, in unrolling from the bobbin passes over the guide rollers $m m'$ before entering between the drum b and the pad h . The guide roller m is carried by a bell crank lever m^2 pivoted at m^3 to the fork p^2 and is acted on by the spring m^4 to secure the tension of the paper.

It will now be understood that after each movement forward of the paper the stamping and paraffining mechanism is brought into action in the following way: When the slide t of the stamp is raised by the lever t' the roller g rises at the same time and causes the lever i of the paraffining pad h to oscillate on its pivot i' . This pad h is thereby lowered and presses the paper p against that face of the drum b which happens to be uppermost. The paper is thereby paraffined and when the slide t descends the paper rises with the pad h . In the downward movement of the parts t and t' the lever d' operates the ratchet wheel c by means of the pawl d and turns it one-eighth of a revolution so that a fresh face of the drum is brought uppermost for the next paraffining operation. During the partial rotation of the paraffining drum b the paper is moved forward by the usual feeding devices.

The cutting off of the paper, when it is formed into a tube, is effected either at the edge of the transverse band of paraffine, or at the middle thereof according as the cigarettes are to be paraffined at one or both ends.

It is obvious that the automatic paraffining devices above described may be modified to suit any other kind of machine for manufacturing cigarettes whether with pasted or non-pasted tubes besides that known as the Decouflé which I have referred to more especially by way of example. Hence I do not wish to be understood as limiting myself to the specific structure described.

I claim—

1. In a cigarette making machine, mechanism for applying paraffine to the cigarette paper consisting of a paraffine cistern a , a polygonal drum b contained in the said cistern, a pad h for pressing the paper against the faces of the said drum, a rock-shaft f , pawl and ratchet mechanism actuated by the rock-shaft and connected to the drum for imparting step by step rotary movement thereto, a stamp mechanism, a connection between the stamp mechanism and the rock-shaft for actuating the stamp, and a connection between the stamp mechanism and the pad h for actuating the same by the movement of the stamp mechanism, substantially as described.

2. A paraffining mechanism for paper, the same consisting of a paraffine cistern, a polygonal drum dipping into said cistern, said drum having a ratchet connected thereto to move the same, a pad for pressing the paper against the drum, a rock-shaft f having an arm d' carrying a pawl d co-operating with the ratchet to impart a step by step movement thereto, an arm t' also connected to the rock-shaft and engaging the stamp mechanism to move the same, a stud g on the stamp mechanism, and an arm i carried by the pad and projecting into the path of the stud g , substantially as described.

In witness whereof I have hereunto set my hand in presence of two witnesses.

ALFRED CHARLES MARCHAL.

Witnesses:

GEORGES LAURENT,
EUGÈNE WATTER.