PATENT SPECIFICATION

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298,242

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Complete Accepted: Nov. 21, 1929.

COMPLETE SPECIFICATION.

Improvements in or relating to Machines for Goffering Films for use in Colour Photography and Cinematography.

We, SOCIÉTÉ FRANCAISE CINÉCHROMATIQUE (PROCEDES R. BERTHON), a French Société Anonyme, of 24, rue de la Pepinière, Paris, France, as Assignees of SOCIÉTÉ CIVILE POUR L'ETUDE DE LA PHOTOGRAPHIE ET DE LA CINEMATOGRAPHIE EN COULEURS, resident in Neuilly (Seine), France, a French body corporate, do hereby declare the nature of this invention and in what manner the same is to be performed, to be particularly described and ascertained in and by the following statement:—

This invention relates to a machine for goffering films for the R. Berthon process of colour photography, more particularly the films described in Patent Specification No. 10,611/09. According to the present invention the machine comprises two parallel rollers, one an electrically heated embossing roller, the other a compressor roller, characterised by the compressor roller being mounted on a sliding carriage which is adjustable to regulate the pressure exerted by the embossing roller during the goffering, at the same time maintaining strict parallelism between the rollers, the supply of current to the embossing roller being controlled by a regulating device comprising a brush which presses at any desired place on a revolving cylinder divided obliquely into two parts, one part being of insulating material and the other part conducting material.

In order to make the following description as clear as possible, the accompanying drawing shows in elevation, partly in section, a view of the said machine.

In the bottom portion of a suitable casing 1 a roll or spool of film unwinds on a spindle 2. The end of the said film is passed over the spindles 4 and 5, the rollers 6 and 7 exerting a certain pressure on the said film by the action of their own weight. Felt or velvet bearings or pads 8 and 9 adjustable by means of the nut 10, clean the film whilst at the same time contributing to the tensioning of the same.

The film then passes over the copper bobbin 11, it is held on the same by means of the roller 12, the pressure of which is increased by the spring 13. The film travelling towards the compressor roller 14, which is of ebonite, and has ball bearings, is again pressed by another roller 15 which also has a spring 16 tending to ensure good guiding of the film.

The same kind of device is provided with the parts 17, 18, 19; the film then passes successively over various spindles 20, 21, 22, 23, 24 in order to be finally wound in the upper part of the casing 1 on a drum 25. By moving the sliding carriage 31 on a slide rest 32 by means of a control 33, the roller 14 will press the film 3 against the embossing roller 26. The arrangement of the sliding carriage is such that strict parallelism between the rollers is always ensured. Such an arrangement is known per se and does not require description here. The embossing roller is suitably heated by an electric current and operated by a worm 27 which is driven by the pulley 28. This pulley is connected to a motor by a belt 29.

A device 30 enables the electric current which heats the embossing roller 26 to be regulated. This device consists of a cylinder 35 rotated by means of a spindle 34 and a set of gear wheels 36. A brush 39 presses on the cylinder 35, and is carried by the part 40 which slides along the rod 41. A screw 42 screws into the part 40, so that by rotating the screw 42 by hand, the part 40 may be moved in either direction along the rod 41, the brush 39 thereby making contact with the rotating cylinder 35 at any desired point. The cylinder 35 is divided obliquely into two parts 37 and 38, the part 37 being of insulating material, while the part 38 is of copper. The electrical resistance which heats the embossing roller 26 receives electric current only so long as the brush 39 is in contact with the copper part 38 of the cylinder 35, so that when the cylinder 35 is rotated an intermittent current is fed to the heating resistance of the embossing roller 26. The ratio of the time during which the current is passing to the time during which no current passes, and thus the quantity of electric current supplied to the heating resistance per unit time, and

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the temperature of the embossing roller 26 resulting therefrom, may therefore be varied at will by rotating the screw 42 in either direction. In the position shown in Figure 1 the brush 39 makes contact with the insulating part 37 of the cylinder 35 throughout the revolution of the cylinder 35, so that no current passes to the heating resistance of the embossing roller 26.

A thermometer is placed into a tube 43 provided at its end with a block 44 rubbing against the roller 26 by means of a spring 45. A small red lamp arranged in a casing 46 illuminates the divisions of the said thermometer, the work being of course done in the dark.

The driving of the film is done by means of chains 47—48 connecting together the toothed pinions 49, 50, 50^1 and 51.

Having now particularly described and ascertained the nature of our said invention and in what manner the same is to be performed, we declare that what we claim is:—

1. A machine for goffering films for the R. Berthon process of colour photography, more particularly the films described in Patent Specification No. 10,611/09, comprising two parallel rollers, one an electrically heated embossing roller, the other a compressor roller, characterised by the compressor roller being mounted on a sliding carriage which is adjustable to regulate the pressure exerted by the embossing roller during the goffering, at the same time maintaining strict parallelism between the rollers, the supply of current to the embossing roller being controlled by a regulating device comprising a brush which presses at any desired place on a revolving cylinder divided obliquely into two parts, one part being of insulating material and the other part being of conducting material.

2. The machine for goffering films substantially as described or substantially as illustrated in the accompanying drawings.

Dated this 26th day of September, 1928.

SOCIÉTÉ FRANCAISE CINÉ-CHROMATIQUE (PROCEDES R. BERTHON).

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Chartered Patent Agents.

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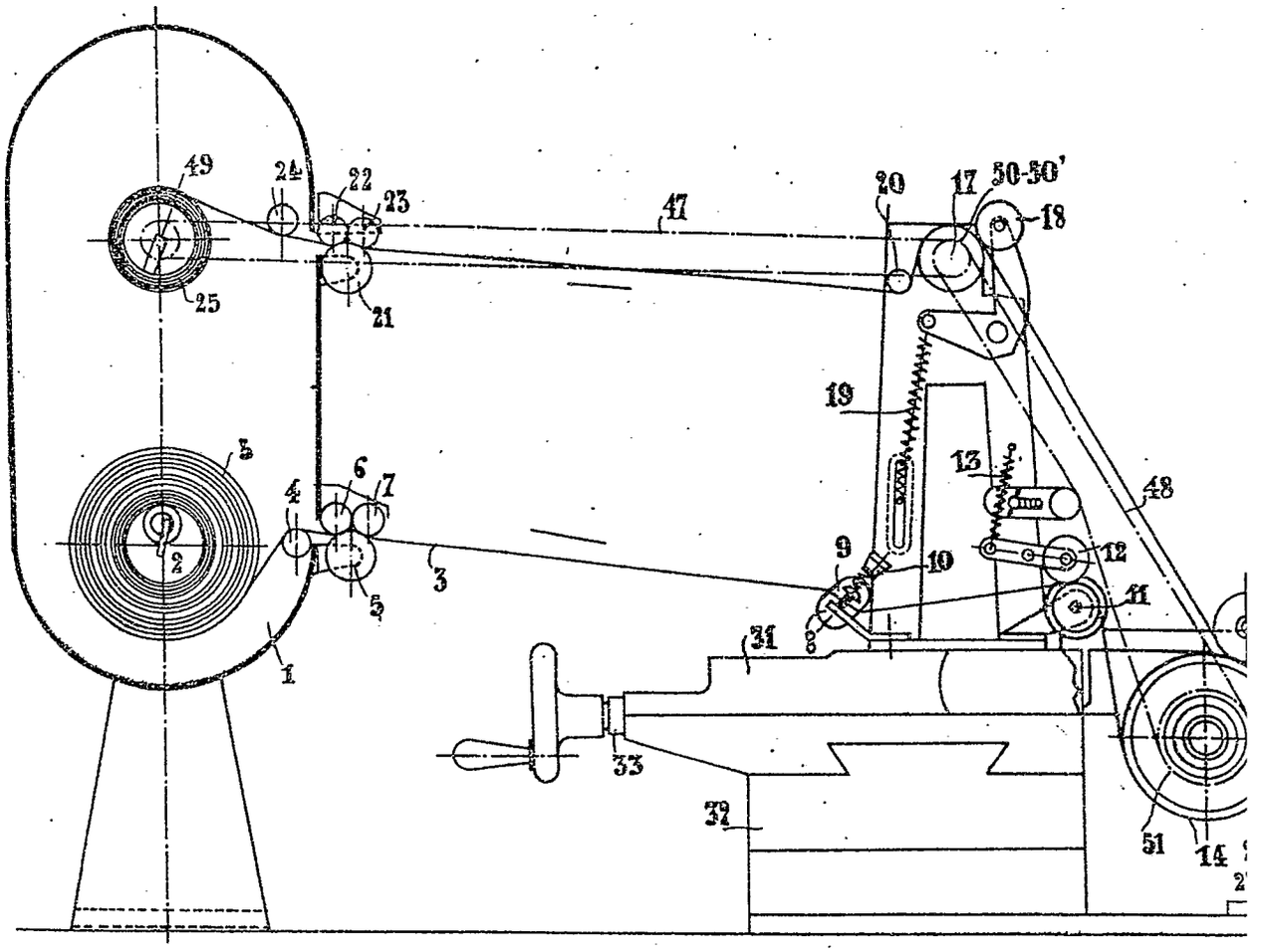

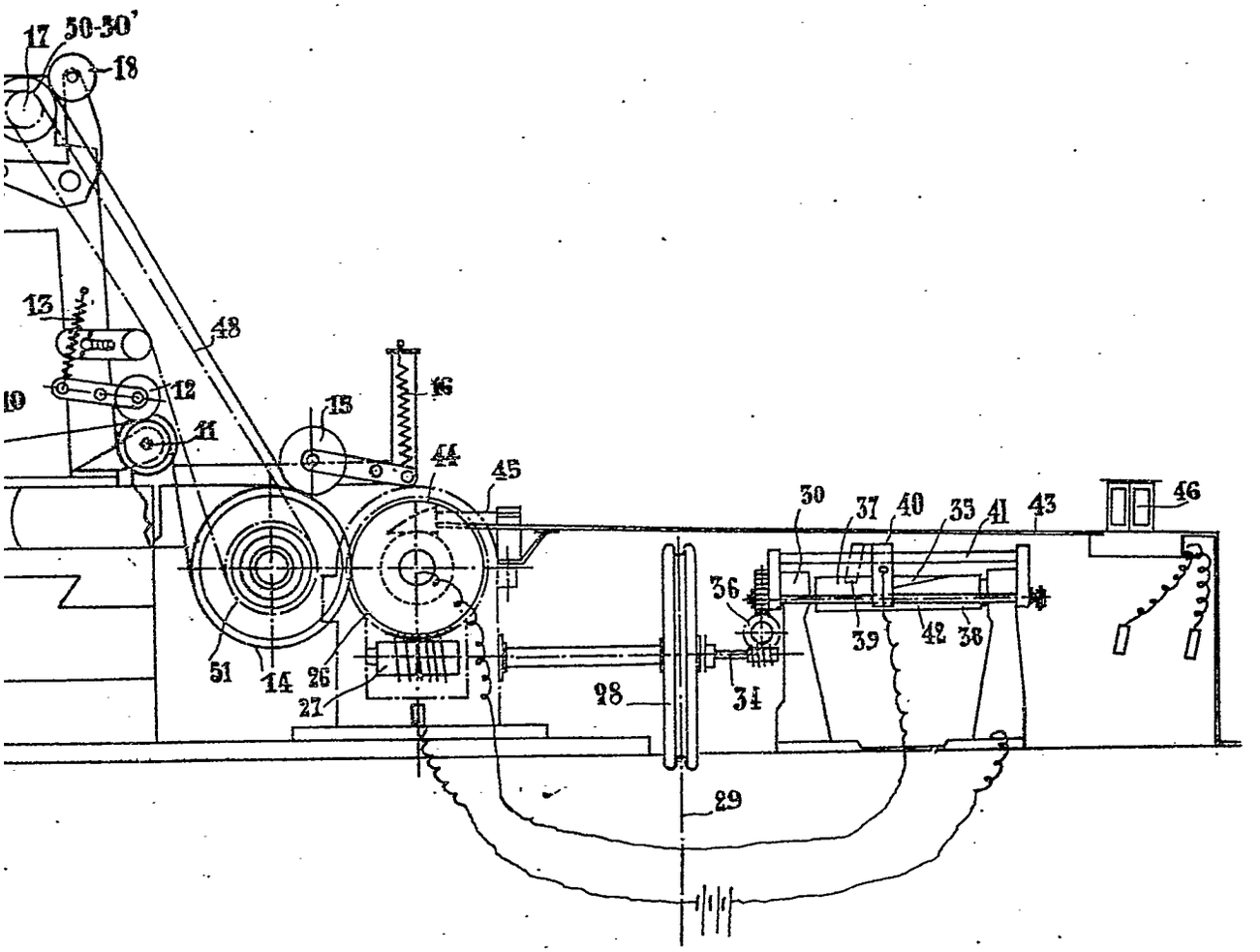

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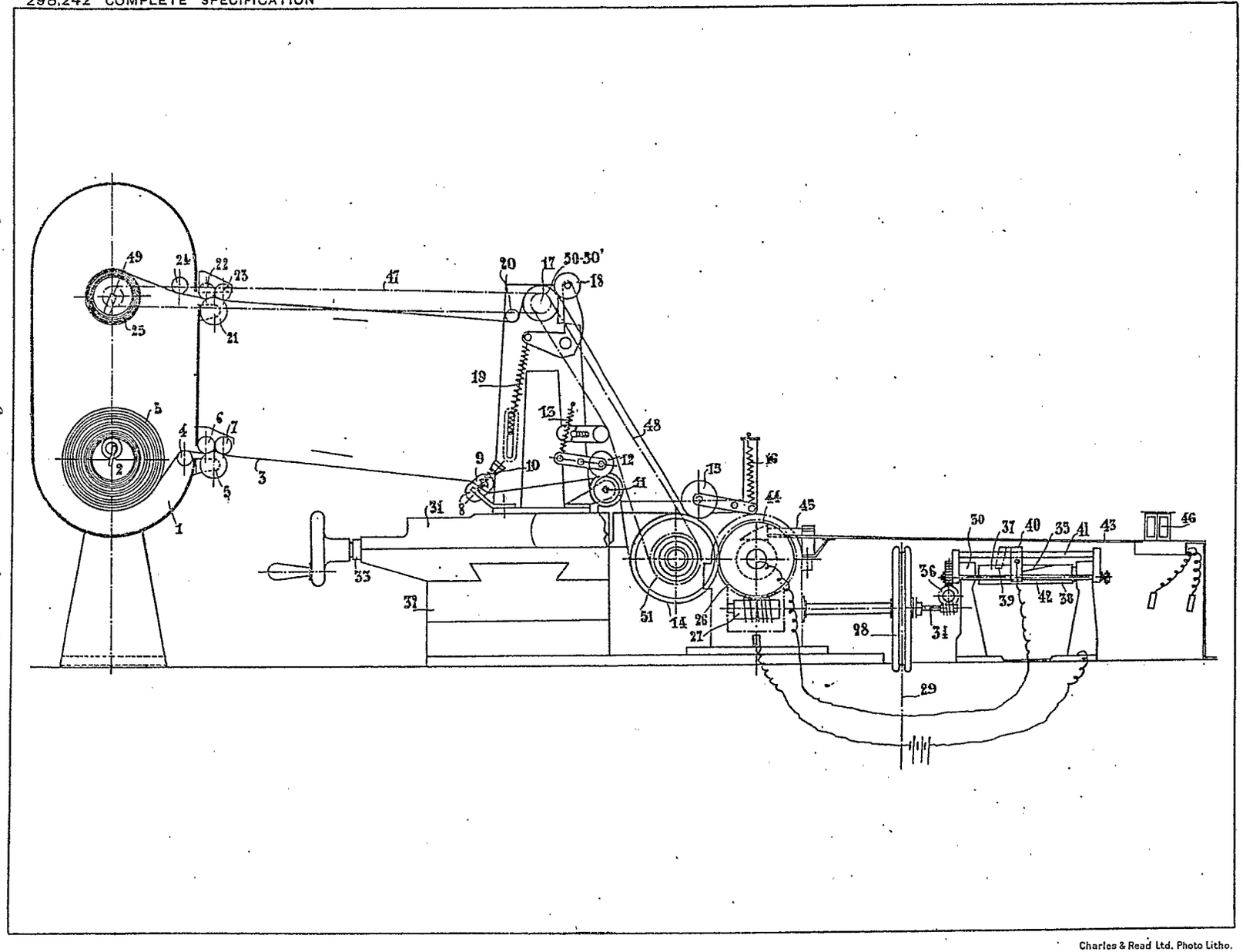

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