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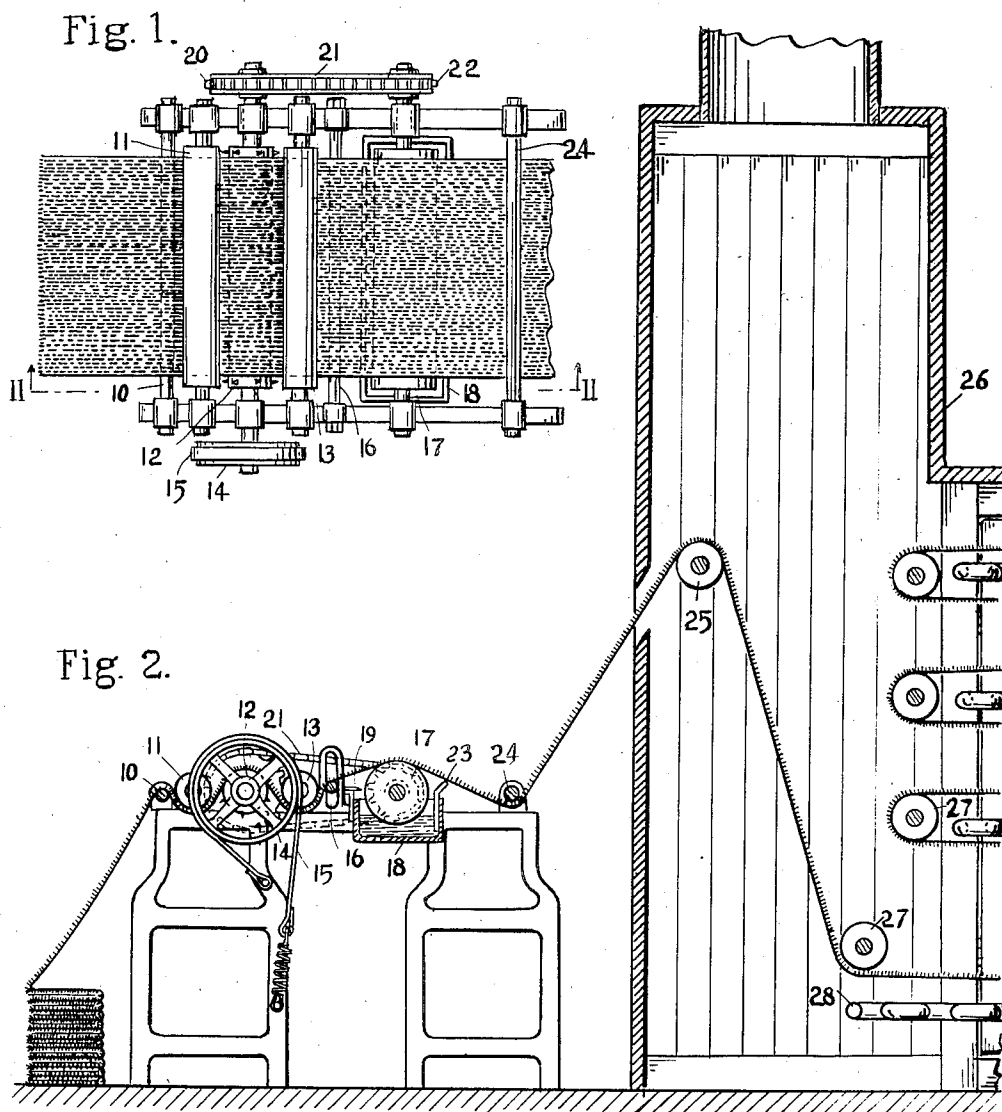
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1,909,482

COATING MACHINE

Filed March 28, 1932

2 Sheets-Sheet 1



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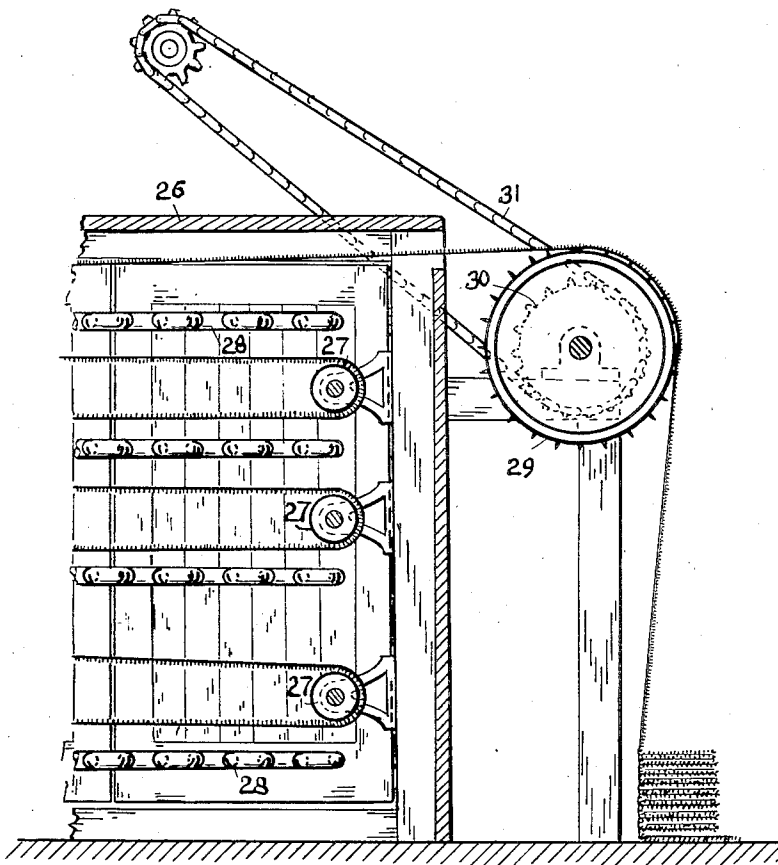
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Fig. 3.



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UNITED STATES PATENT OFFICE

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COATING MACHINE

Application filed March 23, 1932. Serial No. 601,541.

The object of this invention is to provide a machine for evenly and effectively applying a coating in liquid form to one side of a flexible strip, and more particularly for applying latex to the backs of strips of carpets or rugs.

In the accompanying two sheets of drawings which form a part of this description, Figure 1 is a top view of that part of the machine by which the coating is applied. Fig. 2 is a longitudinal section through this part of the machine on the line II—II of Fig. 1, and through the end of the drying chamber at which the strip enters. Fig. 3 is a similar section through the end of the drying chamber at which the strip leaves together with the part of the machine which draws the strip through and delivers it.

As shown, a strip of carpet enters over a guide roll 10, thence it passes under a tension roll 11, over a drag roll 12 and under a tension roll 13. The two tension rolls insure an arc of contact with the drag roll so that this roll will be turned by the carpet passing over it. On the shaft with the drag roll is a brake drum 14 and brake strap 15 to maintain tension on the carpet as it passes through the rest of the machine. Next the carpet passes over a guide bar 16, the height of which is adjustable, and a coating roll 17 which dips into a trough 18 containing the latex or other liquid coating material. A doctor blade 19 is adjusted to scrape from the roll surplus coating material and to permit the desired amount to be carried by the roll to the carpet. A sprocket wheel 20 on the shaft of the drag roll, a chain 21 and a sprocket 22 on the shaft of the coating roll are means for driving the coating roll at a greater peripheral speed from the drag roll. On leaving the coating roll the carpet passes over a scraper 23 by which surplus coating material is removed and drains back to the trough. The carpet next passes under a guide roll 24, over a guide roll 25 in the dry-

ing chamber 26, back and forth several times over rolls 27, and thence out at the other end of the drying chamber. The chamber contains steam pipes 28. The carpet, after leaving the drying chamber, is conducted around a delivering roll 29 on the shaft of which is a sprocket 30 over which passes a chain 31 by which power is transmitted to the machine. The power is transmitted from this delivering roll by the carpet to the drag roll. These two rolls are spike rolls to insure driving contact with the back of the carpet. As the coating material has not been applied at the time of contact with the drag roll and has been dried at the time of contact with the delivering roll, the spikes will not carry the coating material through the carpet into the face yarn.

In applying latex by means of a roll in sufficient quantity it is desirable that the roll have a peripheral speed greater than the carpet. The carpet bears down against the coating roll and the amount of latex picked up depends on the arc of contact which may be adjusted by raising or lowering the guide bar 16. As the back of the carpet is rendered slippery when the latex has been applied, the carpet is therefore drawn through the machine only by the delivering roll with which the carpet comes in contact only after it has passed through the drying chamber. As the coating roll derives its power from the travel of the carpet, the speed must at all times be proportional to that of the carpet and an even application of the coating material is thereby assured.

I claim:

1. A coating machine for a flexible strip consisting of a drag roll, a coating roll, means for driving the coating roll from the drag roll, a drying chamber, and a delivering roll to which power is applied, the strip being passed successively over the drag roll, over the coating roll, through the drying chamber and over the delivering roll, whereby

power is transmitted by the strip from the delivering roll to the drag roll.

2. A coating machine for a flexible strip consisting of a drag roll, a coating roll, means
5 for driving the coating roll at a greater peripheral speed from the drag roll, a drying chamber, and a delivering roll to which power is applied, the strip being passed successively over the drag roll, over the coating
10 roll, through the drying chamber and over the delivering roll, whereby power is transmitted by the strip from the delivering roll to the drag roll.

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