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Barouh et al.

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[54] **APPARATUS FOR MANUFACTURING CORRECTION MATERIAL**

[76] Inventors: **Victor Barouh,** 935 Plum Tree Rd. West, Westbury; **Robert Glenn,** 70-20 108th St., Forest Hills, both of N.Y.

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Related U.S. Application Data

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[52] **U.S. Cl.** **118/50;** 118/643; 118/67; 118/223

[51] **Int. Cl.** **B05c 9/06**

[58] **Field of Search** 118/67, 50, 50.1, 643, 118/223, 642; 117/119.8, 36.4

[56] **References Cited**

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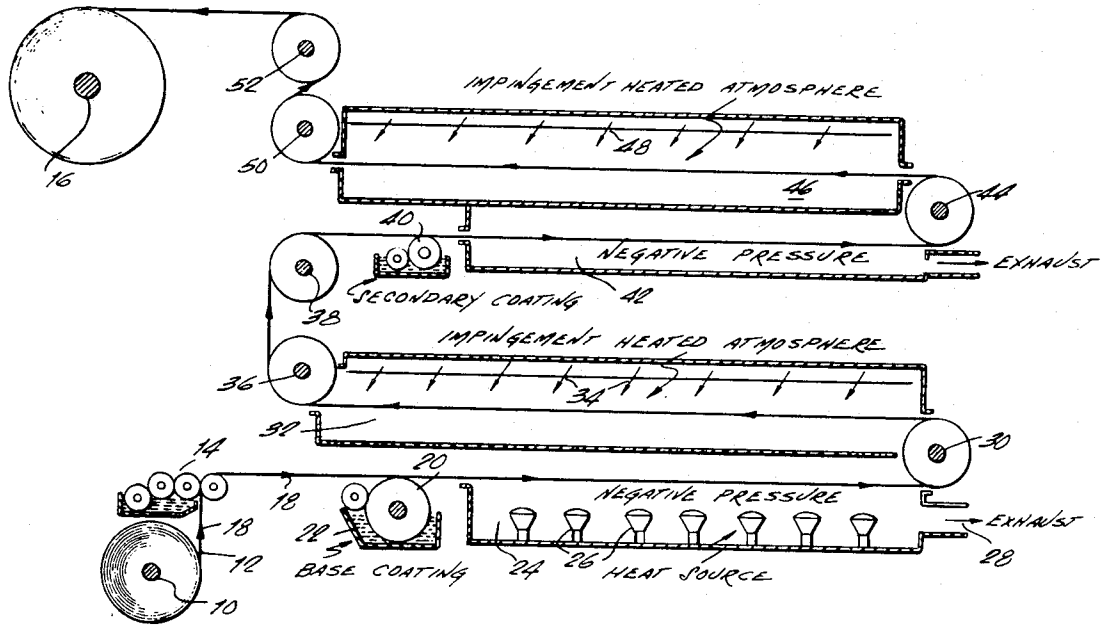
Primary Examiner—John P. McIntosh

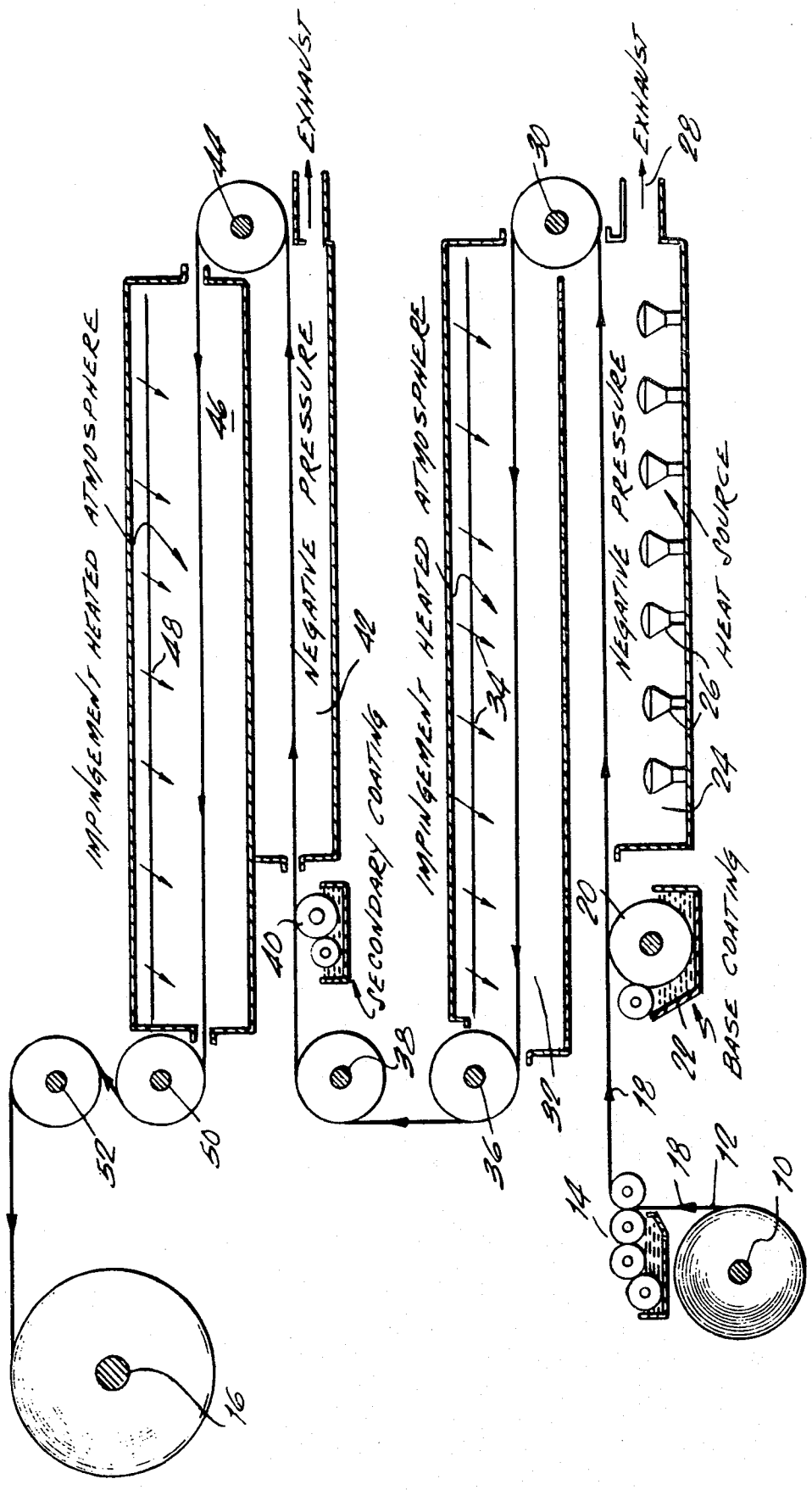
Attorney, Agent, or Firm—Kenneth S. Goldfarb

[57] **ABSTRACT**

An apparatus for manufacturing correction material comprising a first coating roller for applying a base coating on strip material, a first subatmospheric pressure drying chamber, a first treatment chamber for impinging heated air at atmospheric pressure onto the strip material received from the first drying chamber to harden the base coating, a second coating roller for applying a release coating over the base coating on the strip material, a second subatmospheric pressure drying chamber for vacuum drying the release coating after the release coating has penetrated the base coating and a second treatment chamber for impinging heated air at atmospheric pressure onto the strip material received from said second drying chamber.

1 Claim, 1 Drawing Figure




EXHAUST
IMPINGEMENT HEATED ATMOSPHERE
NEGATIVE PRESSURE
SECONDARY COATING
EXHAUST
IMPINGEMENT HEATED ATMOSPHERE
NEGATIVE PRESSURE
HEAT SOURCE
BASE COATING
10
12
14
16
18
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22
24
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APPARATUS FOR MANUFACTURING CORRECTION MATERIAL

This application is a division of Ser. No. 222,538, filed Feb. 1, 1972, now U.S. Pat. No. 3,776,756.

BACKGROUND OF THE INVENTION

1. Field of the Invention

The present invention relates to an apparatus for manufacturing a new correction material which corrects typewritten errors made on typewriters using silk, nylon, mylar, polyethylene, cotton or paper ribbons.

2. Description of the Prior Art

In the past there have been several ways of coating a carrier sheet for use as a correction device, which includes using a formula of pigment, solvent and small amount of binder. This substance will adhere to the carrier sheet and will transfer when struck by a typewriter key perfectly but will need two typeovers to make a good correction because the corrected letter is being typed on the titanium pigment and therefore comes grey.

Further, there already is a process of putting release coat on first and then a solid or opaque ink formula. This is used in letter transfers or image transfers. It is not adaptable for use with typewritten errors because the break away is uneven when struck by a key. It only works when a pre-printed impression is desired to be transferred.

SUMMARY OF THE INVENTION

The present invention differs from these previous apparatus for coating a carrier sheet by coating a base coat formula having a large percentage of binder on a carrier sheet. The carrier sheet then becomes coated with a thin non-transferable coating. When a top coat formula comprised mainly of a solvent which dissolves or breaks down the binder, and talc or clay or stearates which absorb the ink from the ribbon, and a release substance like silicon or quilon which permits the opaquing substance to release from the carrier sheet and be transferred evenly and completely, a now usually effective transferable coating will be attained. The release coat substance works its way between the base coat and carrier sheet. However, the results are different from prior art letter transfer formulas and unexpected in that the material that is transferred is in the shape of the desired key impression. There is no flaking. It is therefore the concept of the present invention to provide an apparatus for manufacturing correction material comprising a first coating roller for applying a base coating on strip material, a first subatmospheric pressure drying chamber, a first treatment chamber for impinging heated air at atmospheric pressure onto the strip material received from the first drying chamber to harden the base coating, a second coating roller for applying a release coating over the base coating on the strip material, a second subatmospheric pressure drying chamber for vacuum drying the release coating after the release coating has penetrated the base coating and a second treatment chamber for impinging heated air at atmospheric pressure onto the strip material received from said second drying chamber.

BRIEF DESCRIPTION OF THE DRAWING

These and other features of the invention as will become apparent as the following description proceeds, are attained by this apparatus for manufacturing correction material, a preferred embodiment being shown in the FIGURE which is a schematic diagram of the apparatus employed.

DETAILED DESCRIPTION OF THE INVENTION

With continuing reference to the FIGURE wherein there is shown schematically the apparatus for manufacture of correction material, reference numeral **10** designates a drum or roll about which elongated substrate strip material **12** is wound, the substrate material preferably being in the form of paper but may be of any other suitable material or a flexible coated material. The substrate material is passed through a series of moisturizing rolls **14** and is then passed through the balance of the apparatus and wound finally on roll **16.**

The substrate material **12** passes in direction of arrows **18** over a base coating roller **20** which revolves in a drum **22** having a solution in accordance with the formulas for the base coat. The substrate with the base coat thereon is then passed into a first drying chamber **24** which is under a negative or subatmospheric pressure. An initial drying occurs in the chamber **24** which is augmented by heat lamps or other suitable heating means **26,** the atmosphere being exhausted from the chamber **24** in the direction of arrow **28.** The substrate is then wound around roll **30** and passed into a first treatment chamber **32.** Heated air is directed into the chamber **32** in the direction of arrows **34.**

This heated air will serve to treat, harden and finish the base coating, after which it passes about a roller **36** and then about roller **38,** and over the coating roller **40** which applies the top coat. This top coat includes solvent which, as applied on the base coat, will penetrate the base coat carrying with it the other ingredients of the top coat and insinuating such between the substrate and the base coat. This is enhanced by the initial drying action in the second drying chamber **42** which is under sub-atmospheric pressure. Heat is not applied at this time so as to assure against undue evaporation of the solvent in the top coat, and to provide for adequate insinuation thereof between the base coat and the substrate, while assuring that at least some of the top coat will dry in overlying relationship on the base coat. The elongated sheet material is entrained about roller **44** and then passes into a second treatment chamber **46** in which heated air is impinged on the coated material in the direction of arrows **48** and at atmospheric pressure, and the sheet material is then entrained above rollers **50** and **52** and wound up on the drum or roll **16.** Any of the rolls or drums may be powered in any desired manner to insure continuous operation.

A latitude of modification, change and substitution is intended in the foregoing disclosure, and in some instances some features of the invention will be employed without a corresponding use of other features.

We claim:

1. An apparatus for manufacturing correction material comprising means for continuously feeding strip material, first coating means for applying a base coating on said strip material, a first subatmospheric pressure drying chamber provided with heating means said chamber being adjacent said first coating means for feeding the strip material through said first drying chamber, a first treatment chamber adjacent said first drying chamber for impinging heated air at atmospheric pressure onto the strip material received from said first drying chamber to harden said base coating,

a second coating means adjacent said first treatment chamber for applying a release coating over said strip material, a second subatmospheric pressure drying chamber devoid of heating means and adjacent said second coating means for vacuum drying said release coating aftersaid release coating has penetrated said base coating to said strip material, and a second treatment chamber adjacent said second drying chamber for impinging heated air at atmospheric pressure onto said strip material received from said second drying chamber, said apparatus having means for transporting said strip material sequentially through said first coating means, drying chamber and treatment chamber and said second coating means, drying chamber and treatment chamber.

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