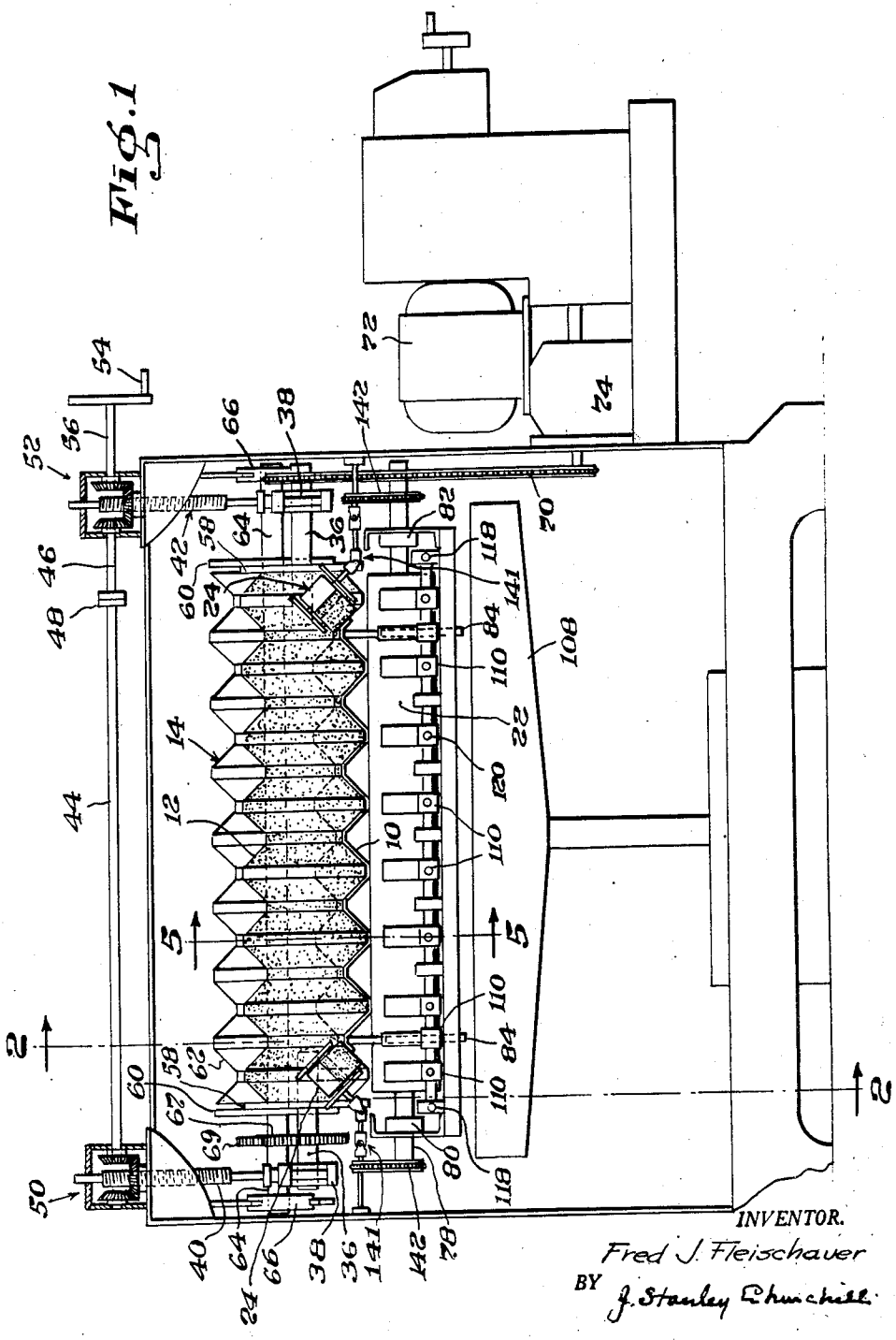
April 23, 1957 F. J. FLEISCHAUER 2,789,530

ROLLER COATING MACHINE

Filed March 5, 1954 6 Sheets-Sheet 1

Fig. 1



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ROLLER COATING MACHINE

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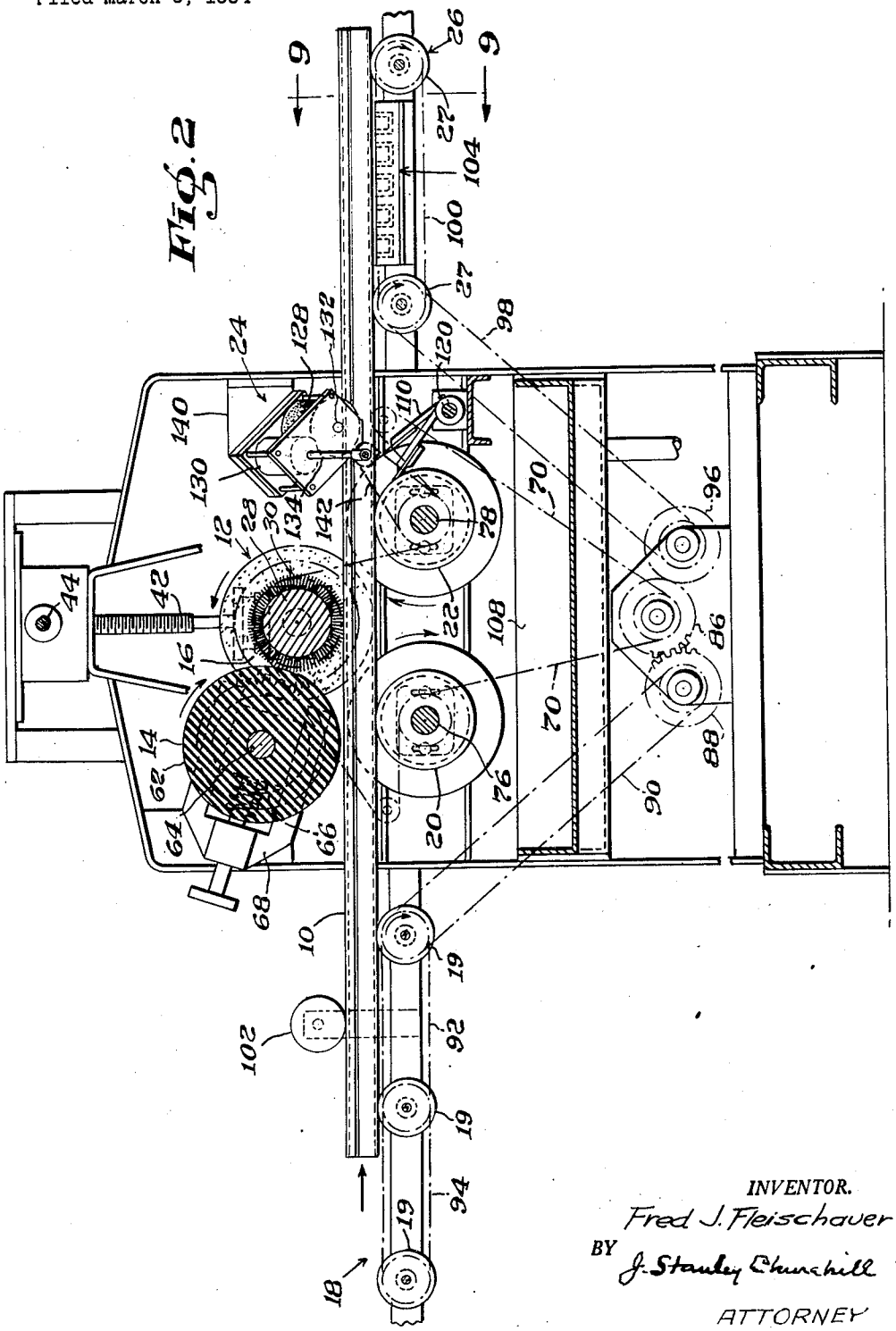
Fig. 2



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ROLLER COATING MACHINE

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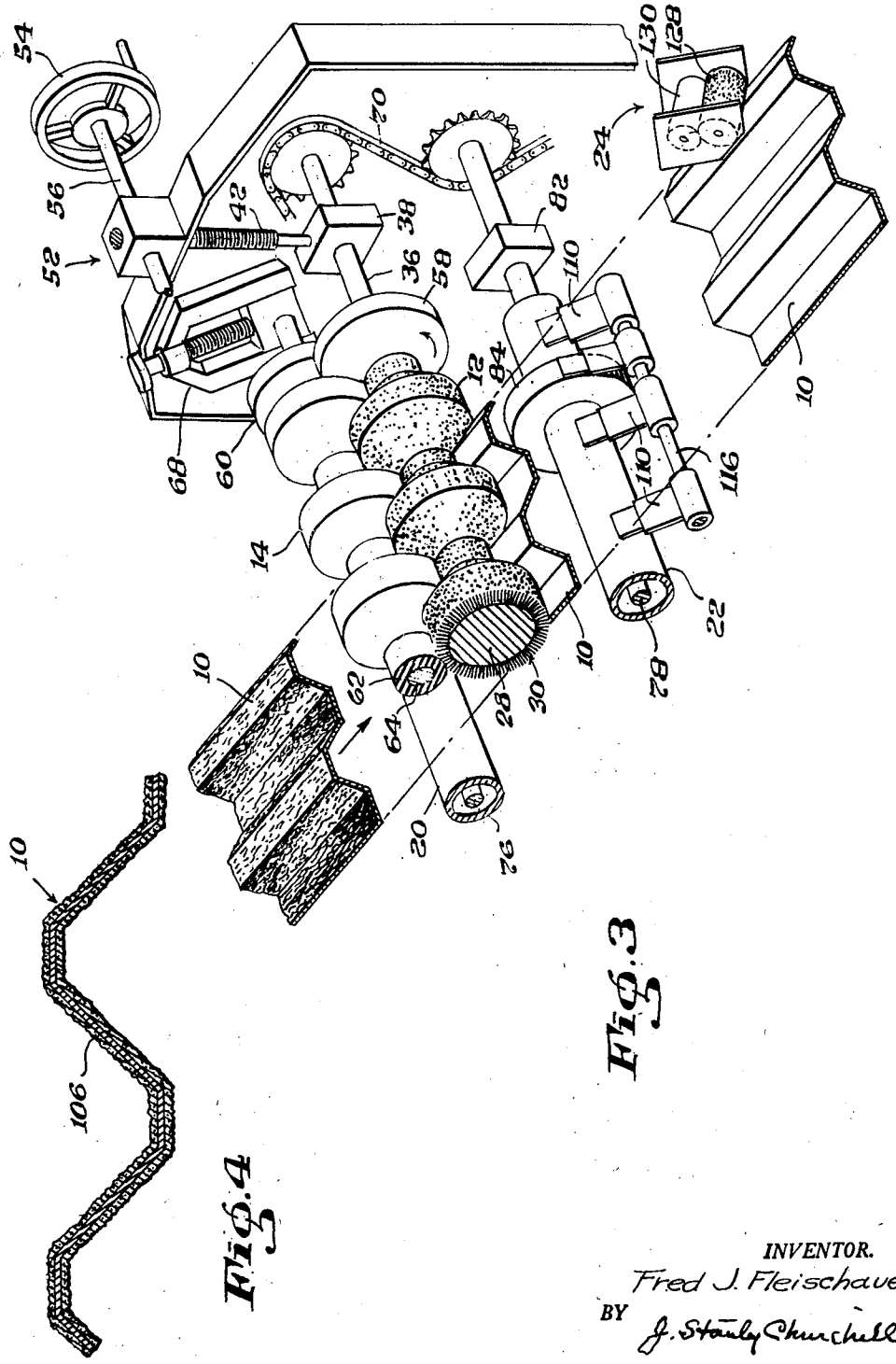

Fig. 3

Fig. 4

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ROLLER COATING MACHINE

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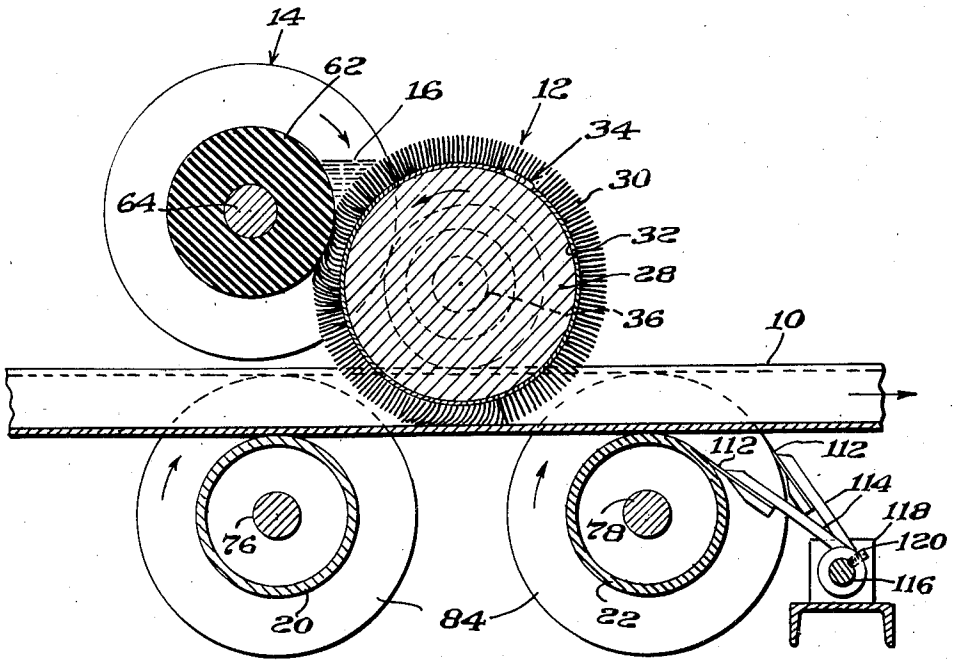

Fig. 5

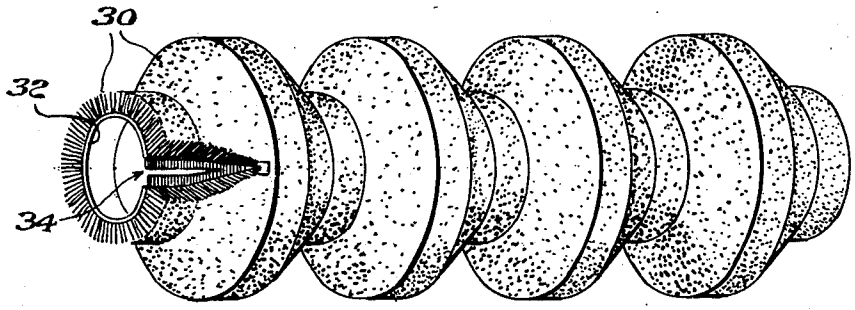

Fig. 6

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ROLLER COATING MACHINE

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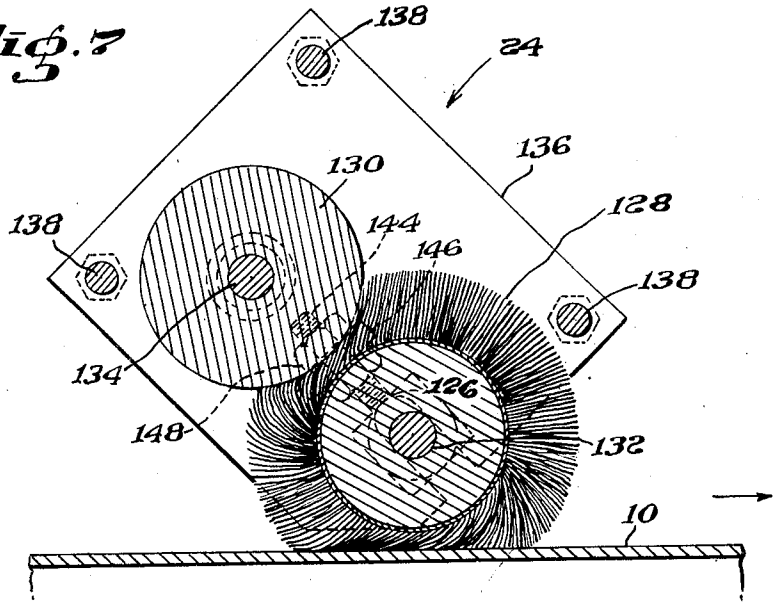
Fig. 7



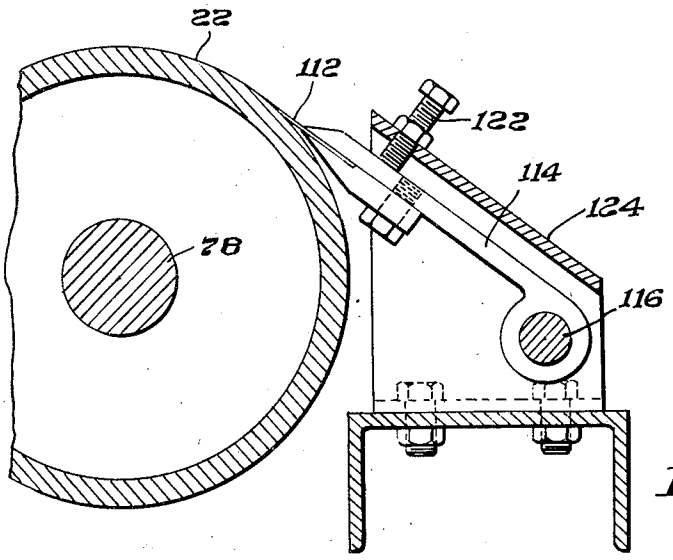


Fig. 8

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ROLLER COATING MACHINE

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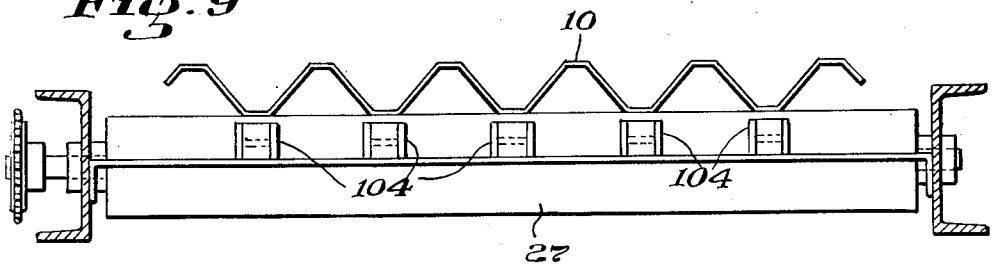
Fig. 9



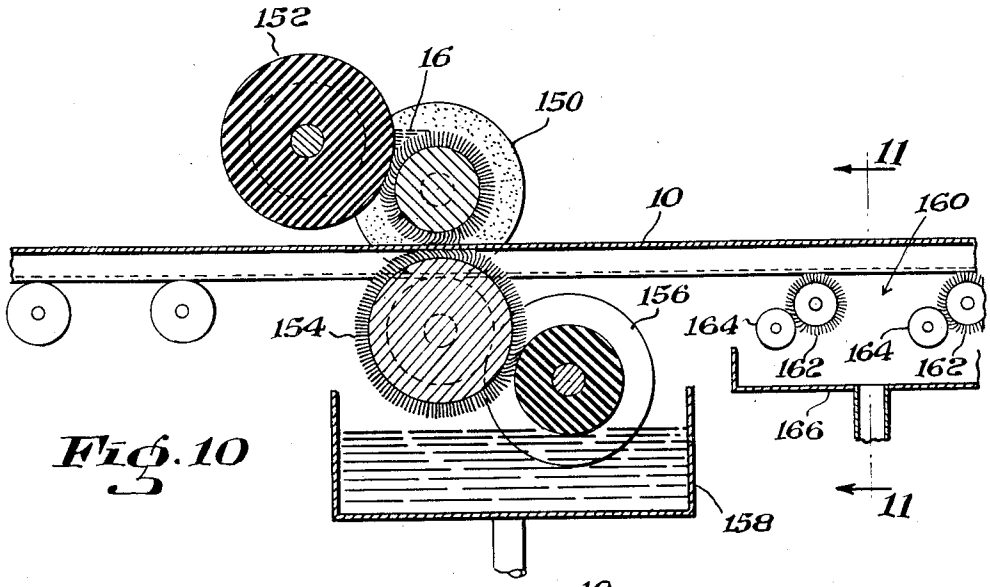


Fig. 10

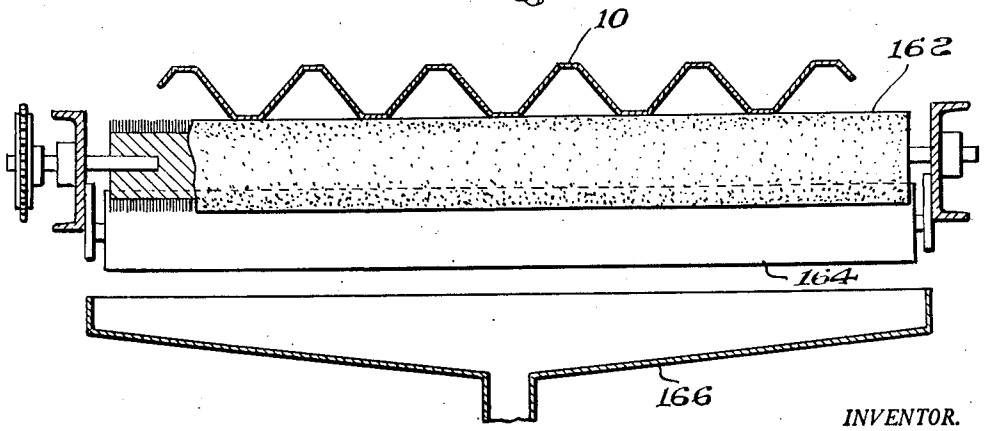


Fig. 11

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United States Patent Office 2,789,530 Patented Apr. 23, 1957

2,789,530

ROLLER COATING MACHINE

Fred J. Fleischauer, Pittsburgh, Pa., assignor to H. H. Robertson Company, Pittsburgh, Pa., a corporation of Pennsylvania

Application March 5, 1954, Serial No. 414,243

11 Claims. (Cl. 118—248)

This invention relates to a roller coating machine for applying fluid coating material, such as paint, to corrugated sheets.

The invention has for an object to provide a novel roller coating machine for applying a fluid coating material, such as paint, to corrugated sheets, such as corrugated building sheets, in an efficient, simple and economical manner.

A further object of the invention is to provide a novel roller coating machine of the type referred to which may also be used with advantage to apply fluid coating material to various articles having an irregular surface.

With these general objects in view and such others as may hereinafter appear, the invention consists in the roller coating machine and in the various structures, arrangements and combinations of parts hereinafter described and particularly defined at the end of this specification.

In the drawings illustrated the preferred embodiment of the invention:

Fig. 1 is an end view of a roller coating machine embodying the present invention;

Fig. 2 is a cross-sectional view taken on the line 2—2 of Fig. 1;

Fig. 3 is a perspective view of a portion of the roller coating mechanism;

Fig. 4 is a cross-sectional view of a portion of a corrugated sheet which may be coated by the present machine;

Fig. 5 is a cross-sectional detail view of the coating mechanism as seen from the line 5—5 of Fig. 1;

Fig. 6 is a perspective view detail of a detachable cover for the coating roller;

Fig. 7 is a detail view in cross section of an edge wiping unit;

Fig. 8 is a detail view in cross section of a scraper unit;

Fig. 9 is a cross-sectional view of a magnetic hold-down device as seen from the line 9—9 of Fig. 2;

Fig. 10 is a side elevation in cross section of a modified form of the present invention; and

Fig. 11 is a cross-sectional view as seen from the line 11—11 of Fig. 10.

In its broader aspects the present invention contemplates a novel roller type coating machine for applying fluid coatings, such as paint, to irregular surfaced articles moved therethrough. In the illustrated embodiment of the invention the article to be coated comprises a corrugated building sheet having a sheet metal core provided with a protective covering which forms an irregular surface, specifically a so-called "feathered" surface having small ridges and troughs over the surface thereof. Prior to the present invention attempt has been made to apply a fluid coating, such as paint, to such "feathered" surfaces by use of conventional rubber or like yieldable coating rollers. These attempts have not been successful because in practice if the pressure of the roller against the work was too light the ridges would be coated and the troughs would be missed, and conversely, if more pressure was applied the troughs would be coated while the concentrated pressure on the ridges would squeeze the coating off the ridges so that a coating of non-uniform thickness and irregular appearance resulted.

In accordance with the present invention a uniform fluid coating, such as paint, may be successfully applied to such irregular surfaces by the use of a roller having a high pile fabric covering. In practice the individual fibers of the high pile fabric conform to the irregular surface of the sheet and operate to apply thereto a uniform coating. As herein illustrated, the coating roller is preferably shaped to conform substantially to the shape of the corrugated sheet to be fluid coated. However, in practice successive corrugated sheets may vary considerably in width and in the formation of the corrugations. The present high pile fabric coating roller is adapted to maintain contact with the corrugated surfaces despite substantial variations in contour and in overall width. Provision is also made in the illustrated embodiment of the invention for supporting the weight of the sheet in a novel manner as it is advanced through the machine and for maintaining a uniform coating along the marginal edges of the sheet. Provision is also made for maintaining the underside of the sheet substantially free of the fluid coating when only one side is to be coated, and in a modified form of the invention, provision is made for applying a uniform coating to both sides of the sheet in a simple and practical manner.

Referring now to the drawings and particularly to Figs. 1 and 2, **10** represents an elongated corrugated metal building sheet to be painted, and **12** represents a coating roller shaped substantially to conform to the contour of the corrugations of the sheet. The roller **12** is arranged to cooperate with a similarly shaped doctor roll **14** and forms with the latter a trough into which a supply **16** of the fluid coating or paint may be deposited. Briefly, in the operation of the coating machine, the corrugated sheet **10** is placed on a roller conveyer **18** at the entrance or left hand side of the machine as viewed in Fig. 2 and is advanced on the conveyer into operative engagement with the coating roller to receive the fluid coating, such as paint, on the upper surface of the sheet as it passes through the machine. As herein shown, the sheet is supported on its underside as it passes under the applying roller **12** by a pair of buck-up rolls **20**, **22**, the rolls being equally spaced on either side of a vertical center line passing through the applying roller. The marginal edges of the sheet are then engaged by wiping mechanisms indicated generally at **24**, and the coated sheet then passes out of the machine onto the exit conveyor **26**, as indicated in Fig. 2.

As shown in Figs. 5 and 6, the applying roller **12** may comprise a wooden or metal core member **28** grooved to form corrugations and to receive a coating applying covering, herein illustrated as comprising a layer of a relatively deep high pile fabric **30**, preferably a synthetic fabric, and having a rubber or rubber-like backing **32**. The covering is preferably made detachable, and as indicated in detail in Fig. 6, may be formed from individual strips of fabric sewn together to form a corrugated cylinder with an opening along one side, the free edges of the covering being provided with a slide fastening device **34**, such as a zipper. In practice the covering may be fitted over the core member **28** and the free edges drawn together by the slide fastener, the latter being sewn on the underside of the fabric so that the high pile material will butt together at the marginal edges to completely conceal the seam. The core member **28** is provided with metal shafts **36** extended from each end and is rotatably and adjustably supported in bearing members **38** attached to parallel adjusting screw devices indicated at **40**, **42** connected for parallel ad-

justment by shafts 44, 46, coupling 48, and bevel gear units 50, 52. Adjustment is effected by a hand wheel 54 fast on a shaft 56 connected to one of the bevel gear units, and individual adjustment may be effected by disconnecting the coupling 48.

The coating roller 12 is further provided with metal end disks 58 arranged to be overlapped by similar end disks 60 carried by the doctor roll 14 to form a dam at each end of the trough formed between the cooperating rolls 12 and 14. The doctor roll 14 may comprise a solid roll grooved to nest into the grooves of the applying roller and may be made of any suitable material, such as wood or metal, or as herein illustrated, may comprise a rubber corrugated section 62 applied or molded over a steel shaft 64. The doctor roll 14 is also rotatably mounted in bearings 66 slidingly supported in adjusting brackets 68 attached to the machine frame and is arranged to be driven from the coating roll 12 by intermeshing spur gears 67 and 69 as shown.

The roller 12 may and preferably will be rotated in a direction so that the engaging surface of the roller travels in the direction of movement of the sheet being coated. The driving mechanism may include a chain and sprocket drive 70 connected to a variable speed motor 72 and gear reduction unit 74 arranged to rotate the applying roller at an average surface speed substantially equal to the linear speed of advance of the sheet. The buck-up rolls 20, 22 may comprise chrome plated and polished cylinders carried on shafts 76, 78 supported in bearings 80, 82 adjustably mounted in the machine frame and are provided with chrome plated disks 84 adjacent each end thereof arranged to support the end lips or marginal edges of the corrugated sheet. The buck-up rolls are also rotated through the chain and sprocket drive 70, as indicated in Fig. 1, and assist in feeding the sheet through the machine. The buck-up rolls are preferably adjusted so that their upper surfaces are in horizontal alignment with the conveyer rolls.

In the operation of the coating machine as thus far described, the fluid coating material, such as paint 16, is poured into the trough between the doctor roll 14 and the applying roller 12 to saturate the high pile fabric, and the doctor roll may then be adjusted relative to the applying roll to squeeze the high pile material to control the amount of paint remaining in the high pile fabric and which is to be applied to the sheet. The corrugated sheet is fed into the machine on the roller conveyer 18 and is advanced into the machine by the conveyer rollers 19 which may be rotated from the main drive through intermeshing spur gears 86, 88 and chain and sprocket drive 90. Successive conveyer rolls 19 may be connected by individual chain and sprocket drives 92, 94, as indicated in Fig. 2. The exit conveyer rolls 27 may be similarly driven through spur gear connections 86, 96 and chain and sprocket drives 98, 100, as indicated in Fig. 2. In practice all of the rolls are preferably driven at the same surface speed to advance the sheet through the machine.

As illustrated, the buck-up rolls 20, 22 are preferably spaced apart equidistantly on either side of the applying roller 12 in order to prevent accumulation of paint thereon by drippings from the applying roller when there is no sheet between the rolls and so that such drippings will not be transferred to the underside of a succeeding sheet passed over the buck-up rolls. In practice the forward end of the sheet first engages buck-up roll 20 which advances the sheet into operative engagement with the coating roller 12 whereupon the sheet is advanced onto buck-up roll 22. In operation when the forward edge of the sheet passes beyond buck-up roll 20 and under the applying roller but has not yet advanced onto buck-up roll 22, the pressure of the applying roller 12, although slight, may tend to rock the forward edge of the sheet downwardly using buck-up roll 20 as a fulcrum. Unless the sheet is of sufficient length and weight to counteract this tendency an insufficient coating pressure is applied, and as a result an

unsatisfactory coating of paint may be applied to the forward edge of the sheet. In order to prevent this occurrence the back end of the sheet may be held down by a hold-down roll 102 rotatably supported above the sheet, as shown in Fig. 2. When the forward end of the sheet passes onto buck-up roll 22 the sheet will be balanced so that uniform pressure of the applying roll against the sheet is maintained. However, when the trailing end of the sheet passes off buck-up roll 20 the trailing end of the sheet may tend to be rocked downwardly in a similar manner. Such rocking of the trailing end of the sheet may be overcome by holding down the forward end of the sheet magnetically. As shown in Figs. 2 and 9, permanent magnet assemblies 104 may be supported between the conveyer rails and in a position in alignment with the ridges on the underside of the corrugated sheet, as shown.

As illustrated in Figs. 3 and 4, the corrugated metal sheet 10 has bonded thereto a protective weatherproof covering 106 which has an irregular or feathered surface characterized by ridges and troughs, and in order to apply thereto a uniform fluid coating, such as paint, the applying roller 12 is adjusted to maintain a selected pressure between the applying roller and the sheet. In practice if the roller 12 is adjusted to produce too great a pressure, excess paint will be squeezed out of the roller onto the rear portion of the sheet which may flow off the end of the sheet onto the buck-up rolls during the advance of the sheet, and if insufficient pressure is maintained between the roller and the sheet, not enough material will flow off the fibers to produce a complete and uniform covering coating. Also, since successive corrugated sheets may vary in contour, if too light a pressure is maintained the high pile material may not touch the sheet at certain points on some sheets. In practice when the roll is adjusted to maintain a selected average pressure, the fibers of the high pile fabric will contact the sheet at all points of the surface despite variations in contour of successive sheets. As illustrated in Figs. 1 and 2, a catch-all receptacle 108 may be supported beneath the applying mechanism to collect any paint which may drip from the applying roller or from adjacent portions of the machine.

When the forward edge of a sheet being coated approaches the applying roll 12 the edge actually butts into the saturated fibers which may cause some paint to be applied to the front edge of the sheet as well as to the top surface, and in practice sufficient drops of paint may accumulate so that when the front edge of the sheet meets buck-up roll 22 a small amount of the paint may be deposited on the chrome plated surface of the roll 22. Such deposits may also be similarly collected by the trailing end of the sheet and transferred to the buck-up roll. In order to avoid transfer of such deposits of paint from the buck-up roll to the underside of the sheet a plurality of scrapers 110 are provided, preferably in alignment with the ridges on the underside of the corrugated sheet and which may be held firmly against the polished chrome surfaces of the buck-up roll to remove such excess paint. As shown in Figs. 2 and 5, a scraper 110 is also provided for each edge supporting disk 84, and each scraper may comprise a relatively thin blade 112 clamped in an arm 114 adjustably mounted on a shaft 116 supported in bearings 118 attached to the machine frame. The arm 114 may be held firmly against the buck-up roll by set screws 120, as shown in Fig. 5, or in a modified form of adjustment the arm may be pivotally supported on the shaft 116 and held in engagement with the buck-up roll by an adjusting screw 122 carried by a bracket 124, as shown in Fig. 8. While the scrapers 110 are herein shown in engagement with the buck-up roll 22, similar scrapers may be employed for the buck-up roll 20 if found necessary.

In practice the paint deposited on the marginal end lips or edges of the sheet tends to run down the slanted

surfaces and form droplets along the marginal edges. In order to remove such excess paint from the marginal edges the wiping units **24** are provided, and as illustrated in Figs. 2 and 7, each wiping unit **24** comprises a cylindrical core member **126** covered with a high pile fabric **128** which is arranged to cooperate with a squeeze roll **130**. The wiping roll and the squeeze roll are carried by shafts **132**, **134** respectively which are rotatably mounted in bearings formed in end plates **136** of a framework connected by tie rods **138**, and the framework may be supported by a bracket **140** attached to the machine frame in a position to dispose the surface of the wiping roll at an angle corresponding to the angle formed by the marginal lips of the sheet. The squeeze roll shafts **134** of each unit may be driven through universal joint connections **141** by chain and sprocket drives **142** from the buck-up roll shaft **78**, as shown in Fig. 1. The squeeze roll may comprise rubber or metal having a roughened surface for frictional driving engagement with the wiping roll. In operation the high pile material absorbs the excess paint along the marginal edges to prevent the formation of droplets on the edges, and the squeeze roll **130** compresses the high pile fabric of the wiping roll to remove the paint which may run down the trough between the two rolls into the catch-all receptacle **108**. As illustrated in Fig. 7, the wiping roll bearings may be adjustably mounted in slots formed in the end plates **136** for adjustment relative to the squeeze roll **130**. Each bearing is provided with a threaded stud **144** extended through an opening in a lug **146** and is held in its adjusted position by nuts **148**.

Referring now to Figs. 10 and 11, as illustrated more or less schematically therein, a modified form of the machine embodying the present invention is adapted to apply a uniform fluid coating, such as paint, to both sides of a corrugated sheet advanced therethrough. In the modified form of the machine the arrangement for applying paint to the upper surfaces of the sheet may include an applying roller **150** and a doctor roll **152** which may be similar in all respects to the rolls **12** and **14** previously described. Directly below the upper applying roller **150** and in vertical alignment therewith a lower applying roll **154** may be rotatably and adjustably supported and arranged to cooperate with a lower doctor roll **156**, both rolls being similar in structure to the upper rolls. Paint may be supplied to the lower applying unit by depositing the paint in the trough formed by and between the two rolls as is done in the upper unit, or as herein illustrated, the doctor roll may run in a supply of the paint contained in a receptacle **158** supported therebelow. In operation paint is picked up by the doctor roll **156** and transferred to the applying roller **154**, the amount of paint retained by the high pile fabric for application to the underside of the sheet being controlled by adjustment of the doctor roll relative to the applying roller as previously described.

In order to convey the painted sheets out of the machine without removing or marking the painted undersurface thereof, the conveyer rolls of the exit conveyer **160** may comprise cylinders covered with high pile fabric **162** which may and preferably will be driven in a manner similar to that shown in Fig. 2. Squeeze rolls **164** are arranged to cooperate with the high pile fabric roll **162**. In operation the paint which may run down the slanted sides of the corrugations may form droplets on the bottom of the sheet. The fabric roller **162** operates to convey the sheet out of the machine and also effects wiping of the bottom of the sheet to remove the excess paint and prevent the formation of such droplets. The squeeze rolls **164** operate to compress the fabric to remove the excess paint which may drain into the receptacle **166** disposed therebelow.

From the above description it will be seen that the present paint applying machine is particularly adapted to apply fluid paints or other coatings to irregular surfaces in a manner such as to provide a uniform coating irrespective of such irregularities and is also adapted to accommodate itself to variations in contour of successive articles being painted. The term "fluid paints" as used in the description may include such relatively thin coatings wherein the viscosity ranges from approximately sixteen seconds to thirty-five seconds on the #4 Ford Cup. The depth of the high pile fabric employed in the illustrated machine is preferably at least three-quarters of an inch deep. In practice the use of a synthetic fabric, such as a nylon fabric, was found to be of advantage in resisting the action of the paint ingredients.

It will also be observed that novel provision is made for supporting and holding the article as it is fed into and through the machine and for preventing transfer of paint to the underside of the sheet when one side only is to be painted. In the modified form of the machine both sides of the sheet are provided with a uniform coating, and novel provision is made for delivering the sheets from the machine in a manner such as to prevent marking of the underside of the sheet. Although the present description relates particularly to painting of a corrugated sheet it will be understood that sheets of other cross-sectional shape may be painted in a similar manner.

As heretofore described, the applying roller **12** is arranged to be rotated at an average surface speed substantially equal to the linear speed of the advancing sheet. Since the applying roller **12** is corrugated in shape the surface speed at the ridges of the roller is greater than the surface speed at the troughs of the roller so that the surface speed of the applying roller at any point depends on the radius of the roller at that point. In practice it is preferred to adjust the speed of the applying roller so that the surface speed at the radius substantially midway between the radius at the troughs and the radius at the ridges is equal to the linear speed of the advancing sheet, although speeds slightly faster or slower than such preferred speed may be used.

In practice the use of the present paint applying machine was found to be more economical than the conventional spraying operation in that the amount of paint applied may be efficiently controlled. In practice it is also possible to reduce the amount of the solvents used in the paint applied by the present paint applying machine, as compared with the amount of solvents used in paint applied by spraying. The reason this is the case is that, in the spraying process considerable solvent is lost by evaporation into the air as the atomized paint passes from gun to sheet, so that only a part of the original solvent content of the paint mix is available, when the paint makes contact with the sheet, to create a consistency thin enough so that the paint will flow out to give uniform and complete coverage. Since the paint applied by the present coating machine is deposited directly on the sheet, only sufficient solvent is needed in the original mix to produce a consistency of paint which will flow to give uniform coverage. In operation the present machine was found to be capable of speeds up to sixty lineal feet a minute, resulting in a high rate of production while maintaining uniform coating performance.

While the preferred embodiment of the invention has been herein illustrated and described, it will be understood that the invention may be embodied in other forms within the scope of the following claims.

Having thus described the invention, what is claimed is:

1. In a roller coating machine of the character described, in combination, means for supporting and advancing an article having an irregular surface to be coated with a fluid coating, said supporting means including means for supporting the marginal edges of the sheet, a coating roller having a high pile fabric covering mounted to rotate in engagement with the article as

it is advanced, a doctor roll cooperating with said coating roller and forming therewith a trough for holding a supply of the coating material, means for adjusting the doctor roll relative to the applying roller to control the amount of paint retained by said fabric covering to be applied to the article, and means for adjusting the applying roller relative to the article, said high pile fabric being adapted to yield in engagement with the article to effect application of a substantially uniform coating of the fluid coating on all portions of said irregular surface.

2. In a machine for applying a fluid coating to the upper surface only of a plurality of elongated sheets successively conveyed through the machine, in combination, a coating roll for engaging the upper surfaces of the sheet, two sheet-supporting rolls engaging the bottom surface of the sheet, and conveying means for feeding the sheet to be coated horizontally between said coating and supporting rolls, each of the supporting rolls being disposed a sufficient distance away from the vertical plane through the axis of the coating roll to permit the fluid coating to drip from the coating roll between the forward and rear ends of successive sheets passing between the coating and supporting rolls without being deposited on the supporting rolls to thereby minimize the accumulation of coating upon the rolls and the transfer of coating to the undersurface of the sheet.

3. In a roller coating machine of the character described for coating both sides of a sheet, in combination, means for supporting and advancing an elongated corrugated sheet, upper and lower paint applying rollers grooved to fit into the corrugations of the sheet and each having a relatively deep high pile fabric covering, each applying roller being mounted to rotate in engagement with the corrugations as the sheet is advanced, upper and lower doctor rolls cooperating with their respective applying rollers, each being shaped to nest into the grooves of its applying roller and forming therewith a trough for holding a supply of the fluid coating material, said applying rollers being arranged in vertical alignment above and below the sheet, said high pile fabric being adapted to yield in engagement with the sheet to effect application of a substantially uniform coating on the upper and lower surfaces of the sheet, and means for preventing rocking of the sheet when the sheet is being supported by one only of the supporting rollers.

4. A roller coating machine as defined in claim 3 wherein the lower doctor roll is arranged to extend into a receptacle provided with a supply of the fluid coating.

5. A roller coating machine as defined in claim 3 wherein the advancing means includes an entrance conveyer and an exit conveyer, and wherein the exit conveyer includes supporting rolls covered with a high pile fabric.

6. In a roller coating machine of the character described, in combination, means for supporting and advancing an elongated corrugated sheet, a paint applying roller grooved to fit into the corrugations of the sheet and having a relatively deep, high pile fabric covering, said roller being mounted to rotate in engagement with the corrugations as the sheet is advanced, a doctor roll shaped to nest into the grooves of the applying roller and forming therewith a trough for holding a supply of the fluid coating material, means for adjusting the doctor roll relative to the applying roller, means for adjusting the applying roller relative to the surface of the sheet, said high pile fabric being adapted to yield in engagement with the sheet to effect application of a substantially uniform coating on all portions of said irregular surface, said sheet supporting means including a pair of driven supporting rolls disposed beneath and in equally spaced offset relation to said applying roller to permit any fluid coating dripping from the applying roller after the sheet has passed through the machine to pass between and out of contact with said supporting rolls, at least one of said supporting rolls provided with scrapers for removing any coating which may be deposited onto said roll whereby to prevent transfer of the coating to the underside of the sheet.

7. In a roller coating machine of the character described, in combination, means for supporting and advancing an elongated corrugated sheet, a paint applying roller grooved to fit into the corrugations of the sheet and having a relatively deep, high pile fabric covering, said roller being mounted to rotate in engagement with the corrugations as the sheet is advanced, a doctor roll shaped to nest into the grooves of the applying roller and forming therewith a trough for holding a supply of the fluid coating material, means for adjusting the doctor roll relative to the applying roller, means for adjusting the applying roller relative to the surface of the sheet, said high pile fabric being adapted to yield in engagement with the sheet to effect application of a substantially uniform coating on all portions of said irregular surface, said sheet supporting means including means for supporting the marginal edges of the sheet, and wiping means engaging said marginal edges for removing any surplus coating whereby to provide a uniform coating along said marginal edges.

8. In a roller coating machine of the character described, in combination, means for supporting and advancing an elongated corrugated sheet, a paint applying roller grooved to fit into the corrugations of the sheet and having a relatively deep, high pile fabric covering, said roller being mounted to rotate in engagement with the corrugations as the sheet is advanced, a doctor roll shaped to nest into the grooves of the applying roller and forming therewith a trough for holding a supply of the fluid coating material, means for adjusting the doctor roll relative to the applying roller, means for adjusting the applying roller relative to the surface of the sheet, said high pile fabric being adapted to yield in engagement with the sheet to effect application of a substantially uniform coating on all portions of said irregular surface, said sheet supporting means including means for supporting the marginal edges of the sheet, wiping means engaging said marginal edges for removing any surplus coating whereby to provide a uniform coating along said marginal edges, said wiping means including a roller having a core member provided with a high pile fabric covering, and a squeeze roll cooperating with said wiping roll for removing the surplus paint picked up by said wiping roller.

9. In a roller coating machine of the character described, in combination, means for supporting and advancing an elongated corrugated sheet, a paint applying roller grooved to fit into the corrugations of the sheet and having a relatively deep, high pile fabric covering, said roller being mounted to rotate in engagement with the corrugations as the sheet is advanced, a doctor roll shaped to nest into the grooves of the applying roller and forming therewith a trough for holding a supply of the fluid coating material, means for adjusting the doctor roll relative to the applying roller, means for adjusting the applying roller relative to the surface of the sheet, said high pile fabric being adapted to yield in engagement with the sheet to effect application of a substantially uniform coating on all portions of said irregular surface, said sheet supporting means including a pair of driven supporting rolls disposed beneath and in equally spaced offset relation to said applying roller to prevent any fluid coating dripping from the applying roller after the sheet has passed through the machine to pass between and out of contact with said supporting rolls, and means for preventing rocking of the sheet when engaged by the applying roller while the sheet is being supported by one only of said supporting rolls including a roller engageable with the upper surface of the sheet being advanced through the machine.

10. In a roller coating machine of the character described, in combination, means for supporting and advancing an elongated steel core corrugated sheet, a paint applying roller grooved to fit into the corrugations of the sheet and having a relatively deep, high pile fabric covering, said roller being mounted to rotate in engagement with the corrugations as the sheet is advanced, a doctor roll shaped to nest into the grooves of the applying roller and forming therewith a trough for holding a supply of the fluid coating material, means for adjusting the doctor roll relative to the applying roller, means for adjusting the applying roller relative to the surface of the sheet, said high pile fabric being adapted to yield in engagement with the sheet to effect application of a substantially uniform coating on all portions of said irregular surface, said sheet supporting means including a pair of driven supporting rolls disposed beneath and in equally spaced offset relation to said applying roller to permit any fluid coating dripping from the applying roller after the sheet has passed through the machine to pass between and out of contact with said supporting rolls, and means for preventing rocking of the sheet when engaged by the applying roller while the sheet is being supported by one only of said supporting rolls, including a plurality of magnets disposed with relation to the underside of the sheet to hold the same down as it is being advanced through the machine.

11. In a roller coating machine of the character described, in combination, means for supporting and advancing an elongated corrugated sheet, a paint applying roller grooved to fit into the corrugations of the sheet and having a relatively deep, high pile fabric covering, said roller being mounted to rotate in engagement with the corrugations as the sheet is advanced, a doctor roll shaped to nest into the grooves of the applying roller and forming therewith a trough for holding a supply of the fluid coating material, means for adjusting the doctor roll relative to the applying roller, means for adjusting the applying roller relative to the surface of the sheet, said high pile fabric being adapted to yield in engagement with the sheet to effect application of a substantially uniform coating on all portions of said irregular surface, said doctor roll and said applying roller being provided at each end with overlapping disks defining the ends of said trough.

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