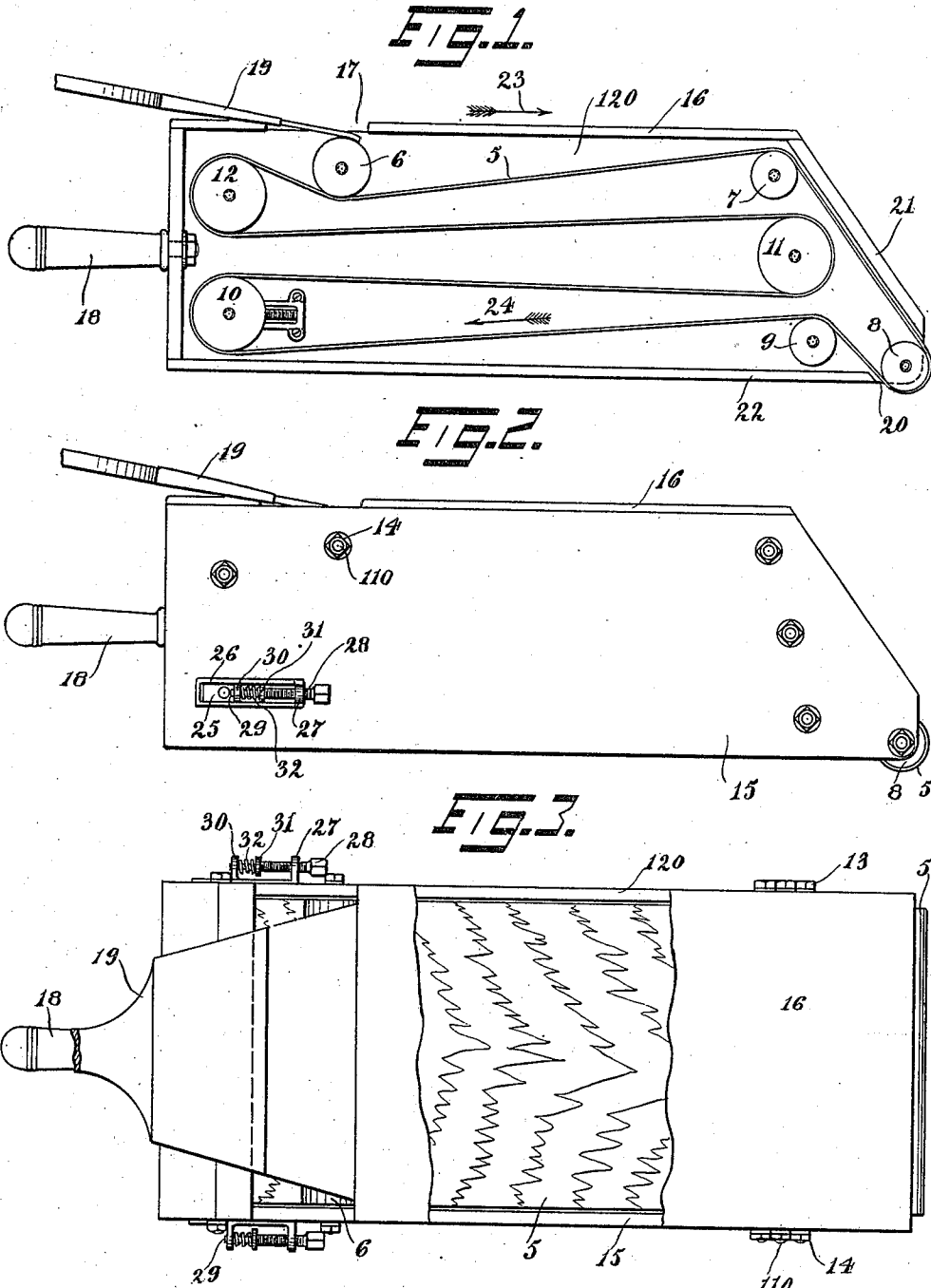


G. A. CARLSON.
GRAINING MACHINE.
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963,989.

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Witnesses:

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UNITED STATES PATENT OFFICE.

GUSTAF A. CARLSON, OF NEW YORK, N. Y.

GRAINING-MACHINE.

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Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, GUSTAF A. CARLSON, a subject of the King of Sweden, residing in the borough of Brooklyn, city of New York, county of Kings, and State of New York, have invented certain new and useful Improvements in Graining-Machines, of which the following is a specification.

This invention relates to and has for an object to provide an improved graining machine for applying the representation of graining and other ornamentation to surfaces. The graining will be applied by means of an endless belt which is carried by a suitable framing or casing in such a manner that the belts will be interchangeable and so that the slackness of the belt will be taken up during the working of the device.

In the drawings accompanying and forming a part of this specification Figure 1 is a side elevation of the device with the removable side of the casing removed. Fig. 2 is a similar view showing the device with the removable side in position, and Fig. 3 is a top plan view of the device illustrated in the other views showing the operation of the casing broken away to reveal the surface of the graining belt.

The pattern applying surface of the device is carried by an endless belt 5, which will be made of some suitable material, as for instance rubber carried by a fabric backing. The belt is mounted upon a series of rollers. In the present instance there are illustrated rollers 6, 7, 8, 9, 10, 11 and 12. Each of the rolls is mounted upon a roller spindle in the form of a bolt, designated without preference by the reference character 110, which bolts with the exception of that for the roller 10 are carried by the side 120 of the case, or the framework casing which houses the major portion of the belt. The head 13 of the spindle bolt projects beyond the side of the casing 120 and the nuts 14 are applied on the outside of the removable side 15 of the casing. These bolts not only serve as spindles for the various rollers but as tie bolts for binding the removable side of the casing in position. The top 16 of the casing is provided with an opening 17 adjacent the end of the casing which carries the handle 18. This is for the insertion of the color or paint applying implement which is illustrated in the form of a brush 19. The bristles of the brush will pass through

the opening 17 and engage the surface of the color applying roll 6, which is shown as depressing the run of the belt between the rolls 7 and 12. The operator can regulate the amount of color which is applied to the belt by regulating the amount of pressure of the brush upon the roller and the amount of color which he supplies to the brush.

The front end of the casing, that is the end opposite the handle end, is provided at its corner with an opening 20, in which opening the roller 8 is mounted so that the portion of the belt 5 which engages such roller is carried beyond the front wall 21 and the bottom wall 22 of the casing, and presents a working portion which is clear of the casing. This gives an ample working surface, and at the same time houses the largest possible amount of the belt, there being but a very small portion of its length exposed.

Ordinarily the device will be moved in the direction of the arrow 23 which will cause the lower run of the belt to move in the direction of the arrow 24. Unevenness in the surface which is being treated and unevenness in the pressure applied, or sudden quick forward movements of the device will cause in many instances a fluctuation of the run of the belt between the rollers 8 and 10 and will have the tendency of creating a slackness at times of the belt which will materially interfere with the proper application of the paint carried by the belt to the surface which is being treated. To prevent this slackness occurring and to keep the belt taut at all times over the roller 8 the spindle bolt 110 for the roller 10 is mounted in carriages 25 which are supported in guideways 26 in the sides 120 and 15 of the casing. The ends of the guideways 26 are provided with set screw carrying portions 27 which carry set screws 28, which set screws are provided with reduced portions 29 for passing through abutment portions 30 of the carriages 25 which screws are also provided with collars 31. Between each collar 31 and the corresponding abutment 30 there is mounted a compression spring 32 which surrounds a reduced portion 29 of the set screw. This spring is for the purpose of applying the desired tension to the belt. The set screw is for the purpose not only of adjusting the tension but also of providing means for making the belt slack when it is desired to remove the belt from the rollers and substitute a different belt in its place.

The outfit as ordinarily supplied to the user will comprise the casing and several belts each for producing a different graining effect. These belts will be readily substituted one for the other by removing the nuts 14 and the removable side of the casing 15 which will take with it the carriage 25 and set screw devices for that side of the device. The set screw carried by the side 10 120 of the casing may at the same time be adjusted for releasing the tension on the belt so that the belt may be readily removed and another substituted. The rollers will remain in position upon the spindle bolts 11 15 during the changing operation, or if desired the rolls 9 and 6 which are somewhat in the nature of idlers may be removed to afford greater facility in applying the belt to the other rollers.

20 It will be noticed by referring to Fig. 1 that the belt 5 is long in relation to the dimensions of the housing casing. The roll 11 doubles the belt upon itself between the rolls 10 and 12. This makes it possible to 25 employ a casing which is sufficiently short to permit a man to manipulate it by means of one hand while he has the other hand free to control the color applying implement 19, and at the same time use a long belt.

30 Having described my invention I claim:
1. In a graining machine, the combination with a casing, of a series of rolls mounted therein, an endless belt carried by the rolls, 35 a handle at one end of said casing, the casing having an opening in the top adjacent said handle end, one of the belt rolls being

located below such opening for receiving color material applied through such opening, the casing having an opening at the lower front corner, and one of said rolls 40 being located in such opening and projecting beyond the outlines of the casing for carrying the belt out of the casing where this surrounds such roll, as and for the purposes specified. 45

2. In a graining machine, the combination with a casing, of a series of rolls mounted therein, an endless belt carried by the rolls, a handle at one end of said casing, the casing having an opening in the top 50 adjacent said handle end, one of the belt rolls being located below such opening for receiving color material applied through such opening, the casing having an opening 55 at the lower front corner and one of said rolls being located at such opening and projecting beyond the outlines of the casing for carrying the belt out of the casing where this surrounds such roll for applying the 60 belt to the work, another of said rolls being located in the rear of the working roll, springs engaging said rearwardly located roll for pressing the same in a direction away from the working roll for taking up the slack in the belt as it passes from the 65 said working roll, and means for adjusting the tension of the spring, as and for the purposes specified.

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