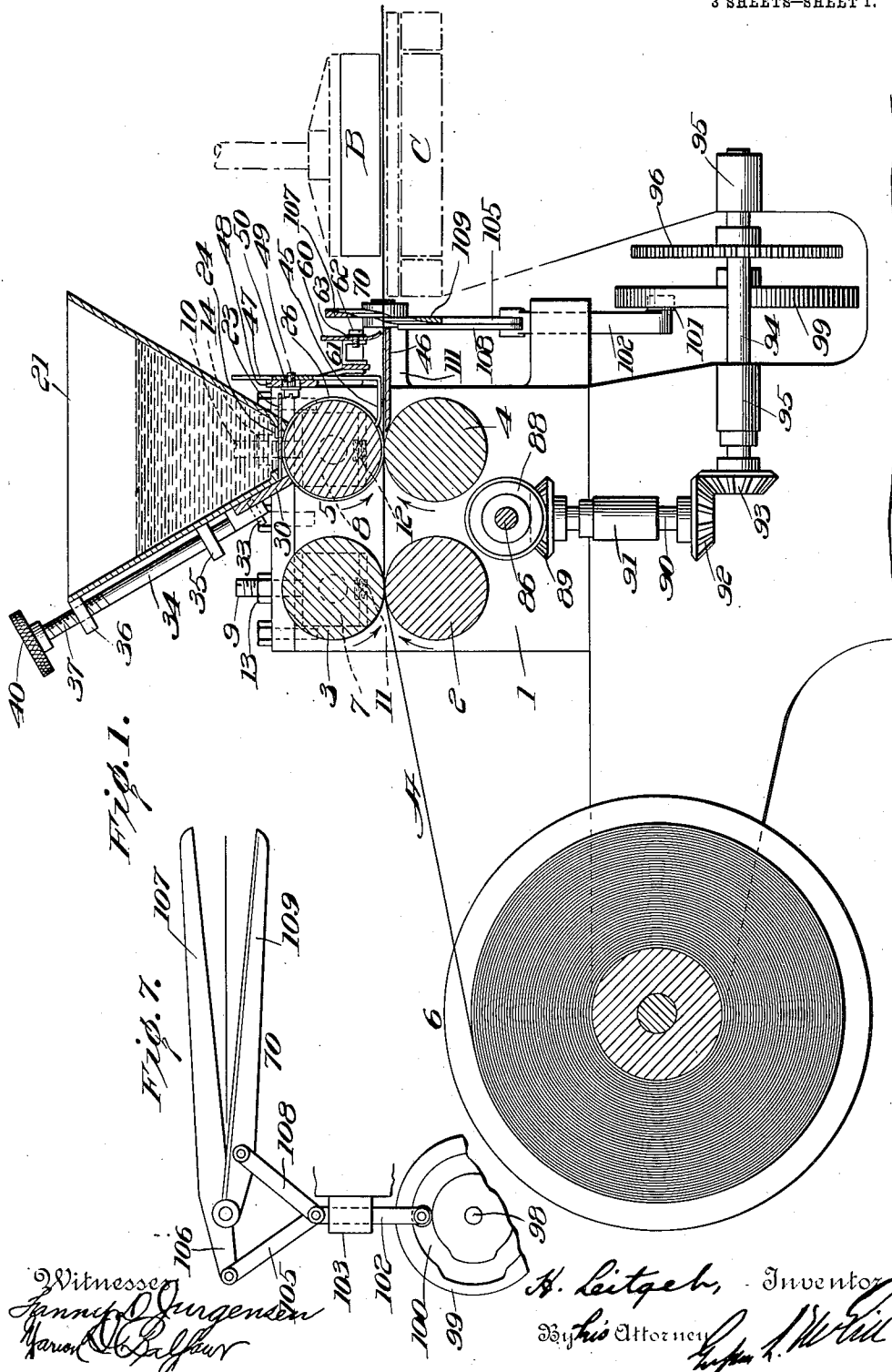


H. LEITGEB.
PASTE APPLYING DEVICE.
APPLICATION FILED JUNE 16, 1911.

1,065,376.

Patented June 24, 1913.

3 SHEETS—SHEET 1.

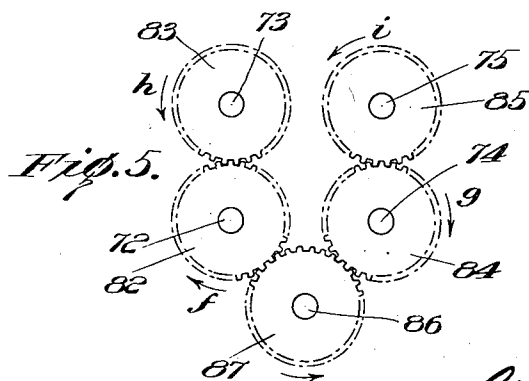
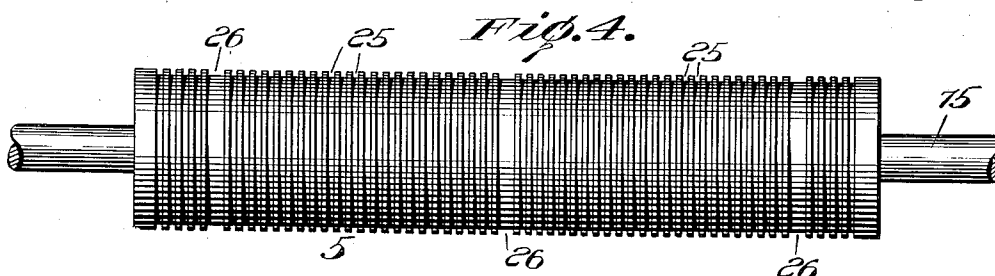
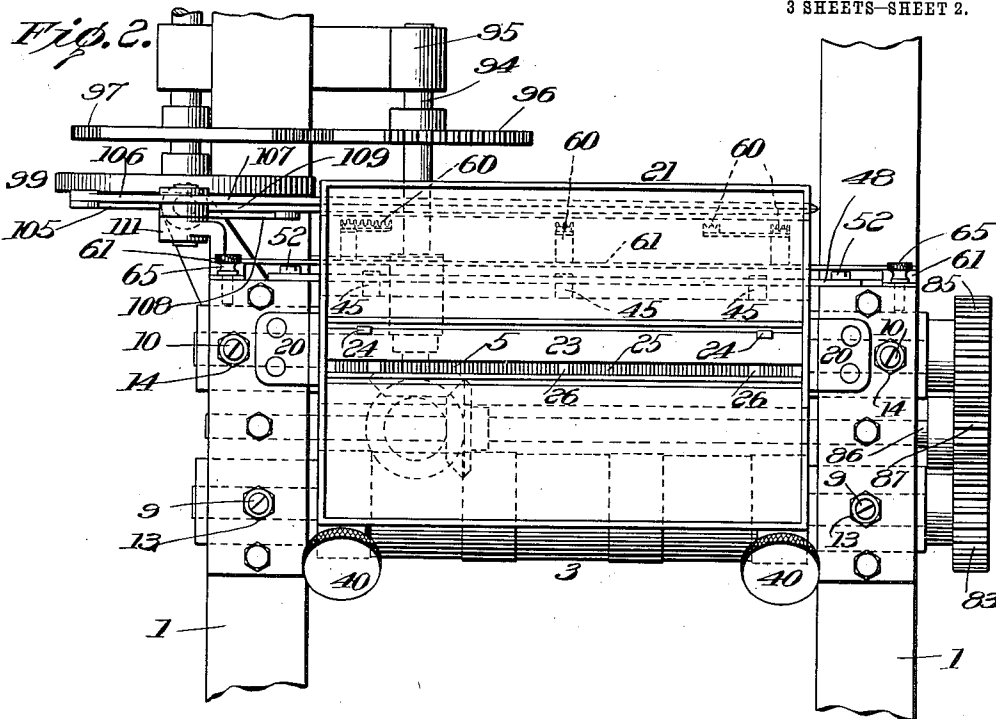


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3 SHEETS—SHEET 2.



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By his Attorney

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3 SHEETS-SHEET 3.

Fig. 3.

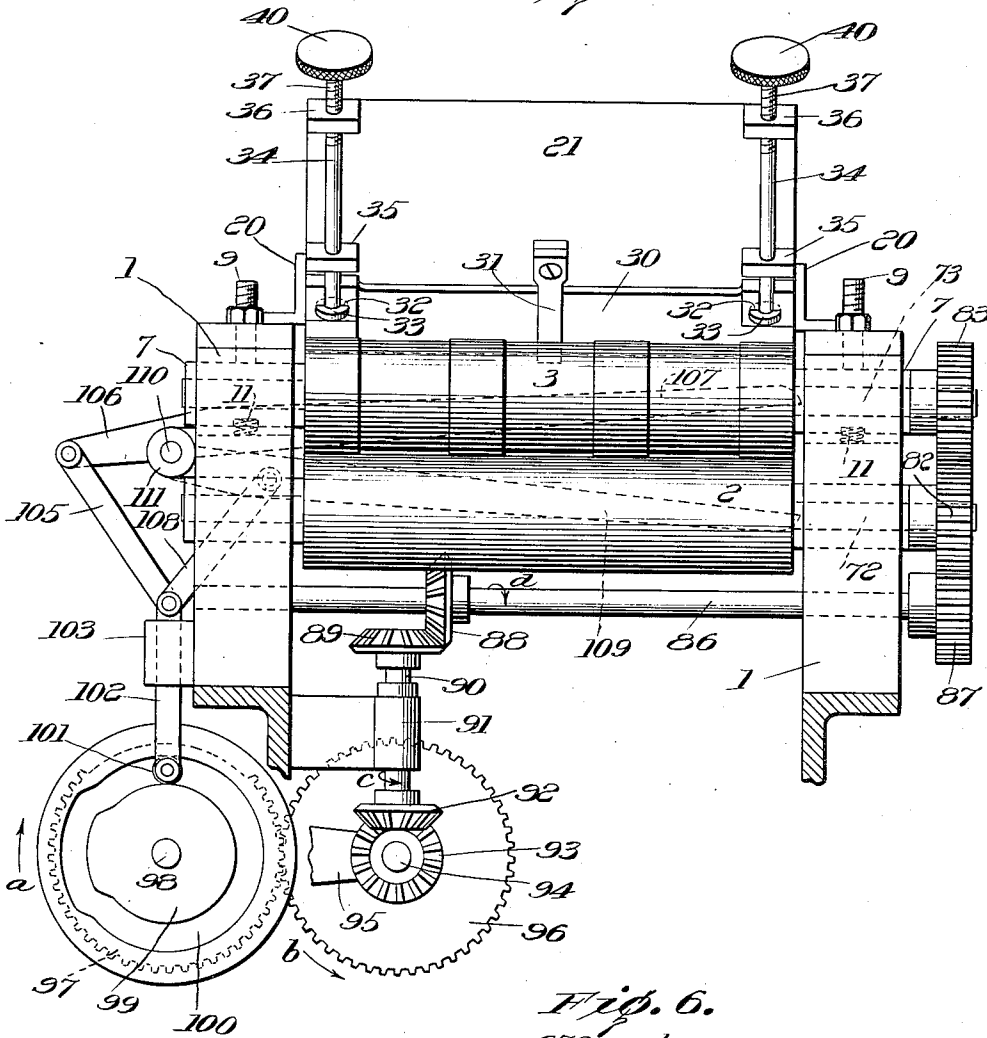
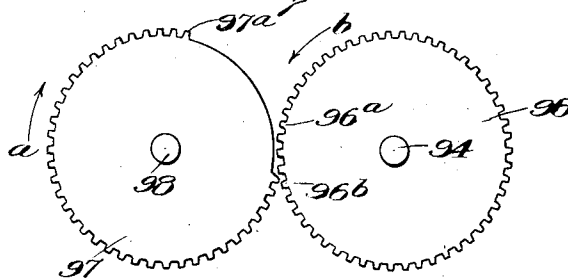


Fig. 6.



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UNITED STATES PATENT OFFICE.

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PASTE-APPLYING DEVICE.

1,065,376.

Specification of Letters Patent.

Patented June 24, 1913.

Application filed June 15, 1911. Serial No. 633,379.

To all whom it may concern:

Be it known that I, HANS LEITGEB, of Flushing, in the county of Queens and State of New York, have invented certain new and
5 useful Improvements in Paste-Applying Devices; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to
10 make and use the same.

The invention is a device for spreading adhesive substance upon a sheet of paper, or other material, cutting the sheet off after it has received the paste, in lengths suitable
15 for wrappers for various objects, such as packages containing articles of merchandise, and delivering the wrappers in position to be wrapped about the objects.

The general object of the invention is to
20 provide an improved device of this character which will be simple in construction and efficient in operation, and which will spread the adhesive substance on the wrapper evenly and uniformly and over substantially
25 the entire surface of the wrapper.

Referring to the drawings Figure 1 is a longitudinal sectional view of my improved device, with certain parts of a wrapping machine, indicated in dotted lines, shown
30 in connection therewith. Fig. 2 is a plan view of my improved device. Fig. 3 is an end view thereof with the paper supply roll of the device removed. Fig. 4 is a detail
35 view of one of the paper feed rolls which also feeds the adhesive substance from a container to the paper feed sheet from which the wrappers are cut. Fig. 5 is a diagram of the gearing for driving the feed rolls, for
40 feeding the paper and the adhesive substance. Fig. 6 is a detail view of the intermittent driving mechanism of the feed rolls which feed the paper sheet in position to be cut in lengths suitable for wrapping purposes. Fig. 7 is a view of the shearing
45 mechanism for shearing the paper sheet.

Upon a suitable frame 1 are journaled the paper feed rolls 2, 3, and 4, roll 5 for transferring the adhesive substance and the supply roll 6 for the paper or other wrapping
50 material for the packages to be wrapped. Said rolls are arranged with the rolls 2 and 3 and 4 and 5 in pairs, with the roll 5 resting above the roll 4. The rolls 3 and 5 are journaled in bearings 7 and 8 movably
55 mounted in the frame 1 and provided with

adjusting screws 9 and 10 and compression springs 11 and 12 whereby the rolls 3 and 5 may be adjusted to the desired position with relation to the rolls 2 and 4. The screws 9 and 10 are respectively provided
60 with lock nuts 13 and 14 for locking the rolls 3 and 5 respectively in their desired positions.

Supported directly over the transferring roll 5 upon the frame 1 by brackets 20, is
65 a container 21 to hold a liquid adhesive substance, preferably paste. A sliding gate 23, arranged at the bottom of the container 21 and resting close to the periphery of the roll 5, controls the supply of paste to said
70 roll which is designed to transfer the paste from the container and spread it on the sheet A. The gate 23 extends through the front wall of the container so that it may be gripped and drawn to allow the paste to
75 flow out on the roll 5. Said gate is provided with stops 24 adapted to engage the front wall of the container to limit the opening movement of the gate so that when the gate is open the rear edge thereof will rest forwardly of the center of the roll 5 in which
80 position of the gate the paste will flow from the container to the rear side of the roll 5 in the direction of rotation of the roll. The roll 5 is provided with a plurality of annular
85 grooves 25 and 26 into which the paste flows from the container and is transferred to the sheet A as the sheet is drawn off the supply roll 6 and fed forward by the rotation of the feed rolls in the direction of the
90 arrows shown in Fig. 1 of the drawing. The rolls 2 and 3 are respectively arranged in substantially the same horizontal plane as the rolls 4 and 5 so that the sheet A will rest in a substantially horizontal position at the
95 rear of the roll 5 in which position the paste will flow properly from the roll on to the sheet. The container 21 is also provided with an auxiliary gate 30 arranged at the lower edge of the rear wall of the container
100 to regulate the flow of the paste in the grooves 25 and 26 of the roll 5. This gate is maintained in sliding position with relation to the wall 22 of the container by the arm 31 which is secured to the container.
105 Said gate is provided near each end thereof with a groove 32 adapted to receive an annular flange 33 on the end of a rod 34 mounted in brackets 35 and 36 on the rear wall of the container 21. The brackets 36 are thread- 110

ed to receive the threads 37 on the rods 34 by means of which the rods upon being rotated are moved longitudinally whereby the gate 30 by the engagement of the flanges 33 and the grooves 32 is moved toward or away from the roll 5 to regulate the flow of the paste in the grooves of said roll. Each of the rods 34 is provided at its upper end with a thumb wheel 40 by means of which it is rotated. The grooves 25 in the roll 5 are made quite narrow so that the paste will not flow too freely from the container 21 to the paper sheet A and spread too much paste on said sheet. The grooves in the roll 5 are arranged very closely together so that the outer surfaces of the roll between the grooves, which contact with the paper sheet A will be very narrow and will not leave any appreciable uncovered spaces on the sheet when the paste is spread thereon through said grooves. The grooves are moreover arranged successively throughout substantially the entire length of the roll so as to deliver the paste across the entire width of the sheet.

The grooves 26 are preferably a little wider than the grooves 25 to receive the guide fingers 45 which the sheet A engages as it is fed forward beyond the gripping point of the rolls 4 and 5 whereby the sheet is diverted away from the roll 5 against which the sheet has a tendency to stick after receiving the paste, and is guided forward along the surface of a table 46. Each of said guide fingers is provided with an arm 47 which is adjustably secured to a supporting bar 48 by means of a screw 49 which extends through a slot 50 in said bar and engages a threaded opening in said arm. The bar 48 is detachably secured to the frame 1 by means of screws 52 so that it may be conveniently secured to the frame or removed therefrom for adjusting or other purposes. Arranged at the forward edge of the table 46 near the shearing point of the sheet A are a set of holding fingers 60 adapted to engage the sheet A and adjustably secured to a supporting frame 61 by means of a screw 62 which extends through a slot 63 and engages a threaded opening in the frame 61. The frame 61 is detachably secured to the frame 1 by means of screws 65 so that it may be readily secured in position on the frame 1 or removed therefrom for adjusting or other purposes. The fingers 60 hold the sheet A in position to be cut by the shears when it has been fed forward between the shears to the package B to be wrapped and the wrapping mechanism C of a wrapping machine, shown in dotted lines in Fig. 1 of the drawings. Upon the journals 72, 73, 74, and 75 of the rolls 2, 3, 4, and 5 are respectively mounted the gears 82, 83, and 84, and 85. Upon a shaft 86 journaled in the frame 1 is mounted a gear

87 which meshes with the gears 82 and 84 which in turn mesh respectively with the gears 83 and 85. Upon the shaft 86 is also mounted a miter gear 88 which meshes with a similar gear 89 mounted on a shaft 90 journaled in bearing 91 on the frame 1. Another miter gear 92 is also mounted in the shaft 90 which meshes with a similar gear 93 mounted on shaft 94 journaled in bearings, 95 on the frame 1. A gear 96 is mounted on the shaft 94 and meshes with a mutilated gear 97 mounted on shaft 98 whereby the shaft 94 is intermittently driven by the shaft 98 which is continuously driven. A cam 99 also mounted upon the shaft 98 is provided with a groove 100 engaged by a roller 101 on the lower end of cam arm 102 which is mounted, in bearing 103 on the frame 1 so as to be reciprocated by the action of said cam. A link 105 connects the upper end of arm 102 with the short arm 106 of the blade 107 and a link 108 connects the upper end of arm 102 to the blade 109 of the shears 70, which blades are pivoted at 110 on bracket 111 on frame 1, whereby said blades are caused to approach each other to shear off the paper sheet A or to draw apart to permit the sheet to pass therebetween to the proper position to be cut; as the cam arm 102 is reciprocated by the cam 99.

The operation of my invention is as follows:—Power is applied in any suitable manner (not shown) to rotate the shaft 98 together with the cam 99 and the mutilated gear 97 in the direction of the arrow *a*. As the gear 97 is also rotated as described, the gear 96 which meshes with the gear 97 is also rotated together with the shaft 94 and miter gear 93 in the direction of the arrow *b*. As the miter gear 93 is rotated as described, its companion gear 92, together with the shaft 90 and miter gear 89 are caused to rotate in the direction of the arrow *c*. As the miter gear 89 is rotated as described its companion gear 88 together with the shaft 86 and gear 87 are rotated in the direction of the arrows *d* and *e*. As the gear 87 is rotated the gears 82 and 84, with which the gear 87 meshes, and the gears 83 and 85 which respectively mesh with the gears 82 and 84, are respectively rotated in the direction of the arrows *f*, *g*, *h*, and *i*, causing the paper feed rolls 2, 3, and 4 and transferring roll 5 to be rotated in the direction of the arrows as shown in Fig. 1 of the drawing whereby the paper sheet A is drawn off the roll 6 and fed forward, guided by the guide fingers 45 and 60 between the blades 107 and 109 of the shears 70, to the package B to be wrapped, and the wrapping mechanism, C of a wrapping machine. As the sheet A is fed forward by the rotation of the feed rolls, the gate 23 being open and the gate 30 being properly adjusted, the paste will

flow from the container 21 into the grooves 25 and 26 of transferring roll 5 to the rear of the center of the roll, and down the rear side thereof in the direction of rotation of said roll, and as the roll rotates the paste will be transferred to the sheet A across its entire width so that when the sheet has been fed between the shears 70 to the package B and wrapping mechanism C substantially the entire upper surface of the portion of the sheet to be cut off for a wrapper for the package B will be covered with paste.

When the sheet A has received the paste and has been fed forward between the shears 70, by the rotation of the feed rolls to the package B and wrapping mechanism C the sheet will extend forward of the shears the length of a wrapper, in which position the sheet will be caused to come to a short rest owing to the mutilated portion of the gear 97 coming into registration at this time in which position of said gears the gear 96 will come to a temporary rest and cause the shaft 94, miter gears 93 and 92, shaft 90, miter gears 89 and 88, shaft 86, gears 87, 82, 83, 84, and 85 and the feed rolls 2, 3, 4, and 5 to come to a temporary rest. The mutilated portion of the gear 97 is of such length that the gear 97 may rotate sufficiently, while the gear 96, feed rolls 2, 3, 4, and 5 and sheet A are at rest, to allow the cam 99 through the arm 102 and links 105 and 108 to bring the shear blades 107 and 109 together to cut the sheet A. Moreover, the mutilated portion of the gear 97 is so timed that the gear 96, paper feed rolls 2, 3, 4, transferring roll 5 and paper sheet A will be maintained in a position of rest, after a wrapper has been cut from the sheet A, a sufficient length of time to permit the wrapper to be wrapped about the package B by the wrapping mechanism C and to allow the wrapping mechanism to return to its initial position to receive another

package and wrapper, before the teeth of the gears 96 and 97 again come into mesh and cause the gear 96 and the feed rolls 2, 3, 4, and transferring roll 5 through the power transmission mechanism hereinbefore described, to be rotated to repeat the above described operations.

I do not desire to limit myself to the exact construction herein shown and described as variations and modifications thereof may be made without departing from the spirit of the invention.

If desirable my improved pasting device may be employed independently of a wrapping machine and the wrappers wrapped about the packages by hand. Moreover, the shears 70 could also be dispensed with and the wrappers cut from the sheet A by manual means.

I claim as my invention.

A device for spreading adhesive substance upon sheet wrappers comprising a container for the adhesive substance, a transferring roll provided with a plurality of narrow annular grooves, and a plurality of relatively wider annular grooves arranged closely together throughout substantially the entire length of the roll to receive the adhesive substance from the container and transfer said substance to substantially the entire surface of the wrappers, means for feeding said wrappers from said roll after receiving the adhesive substance and a plurality of guide fingers projecting into said wider grooves to guide the wrappers away from said transferring roll as the wrappers are fed from said roll.

In testimony whereof, I have signed this specification in the presence of two subscribing witnesses.

HANS LEITGEB.

Witnesses:

A. SHERER,
R. J. SAPPÉ.