

(No Model.)

4 Sheets—Sheet 1.

F. X. GAUDRIE.  
CAN LABELING MACHINE.

No. 527,843.

Patented Oct. 23, 1894.

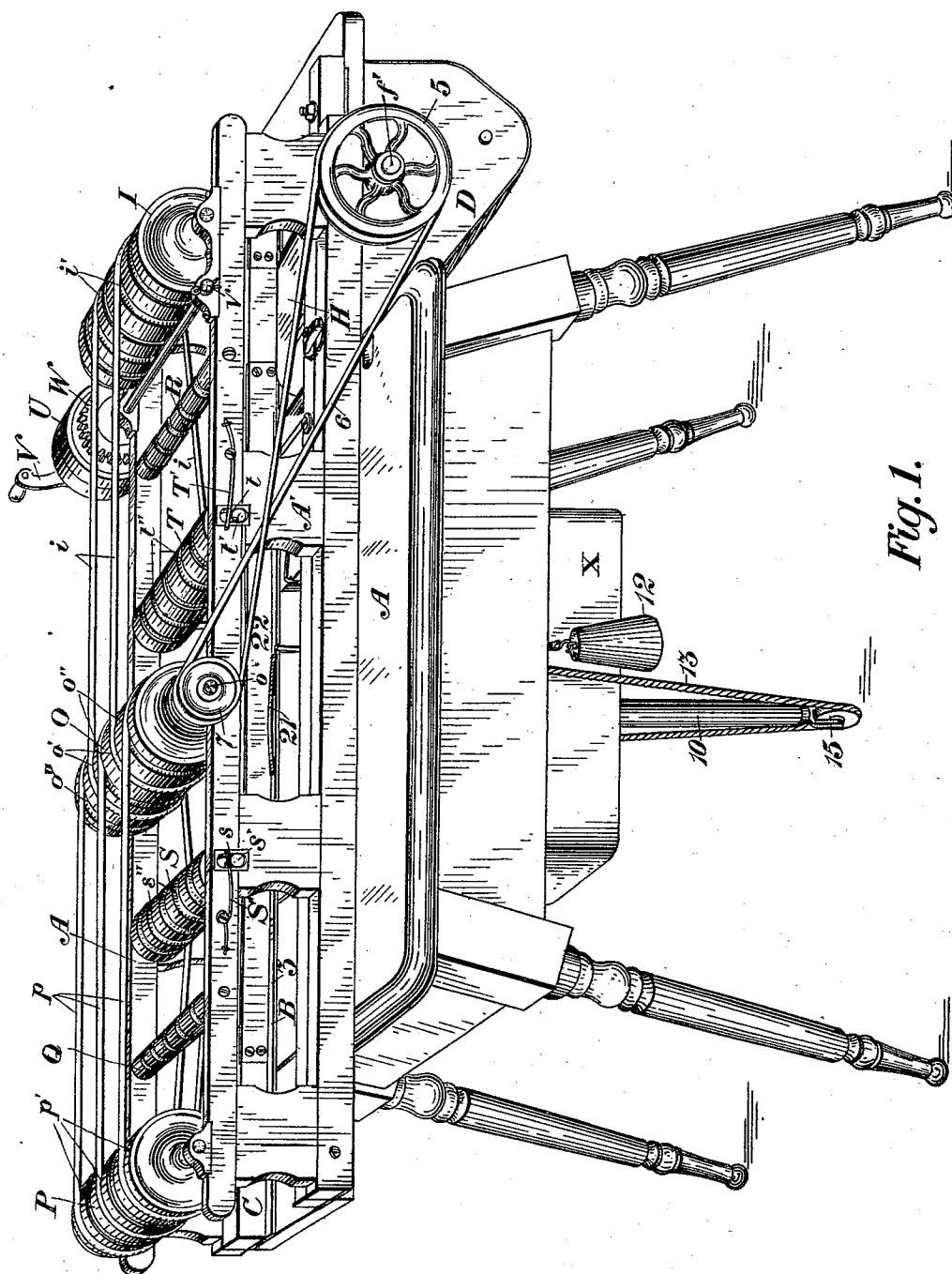


Fig. 1.

Witnesses.

*W. H. Brown.*  
*J. L. Young.*

Inventor.

*F. X. Gaudrie*  
*by J. H. Richardson & Co.*  
*attys.*

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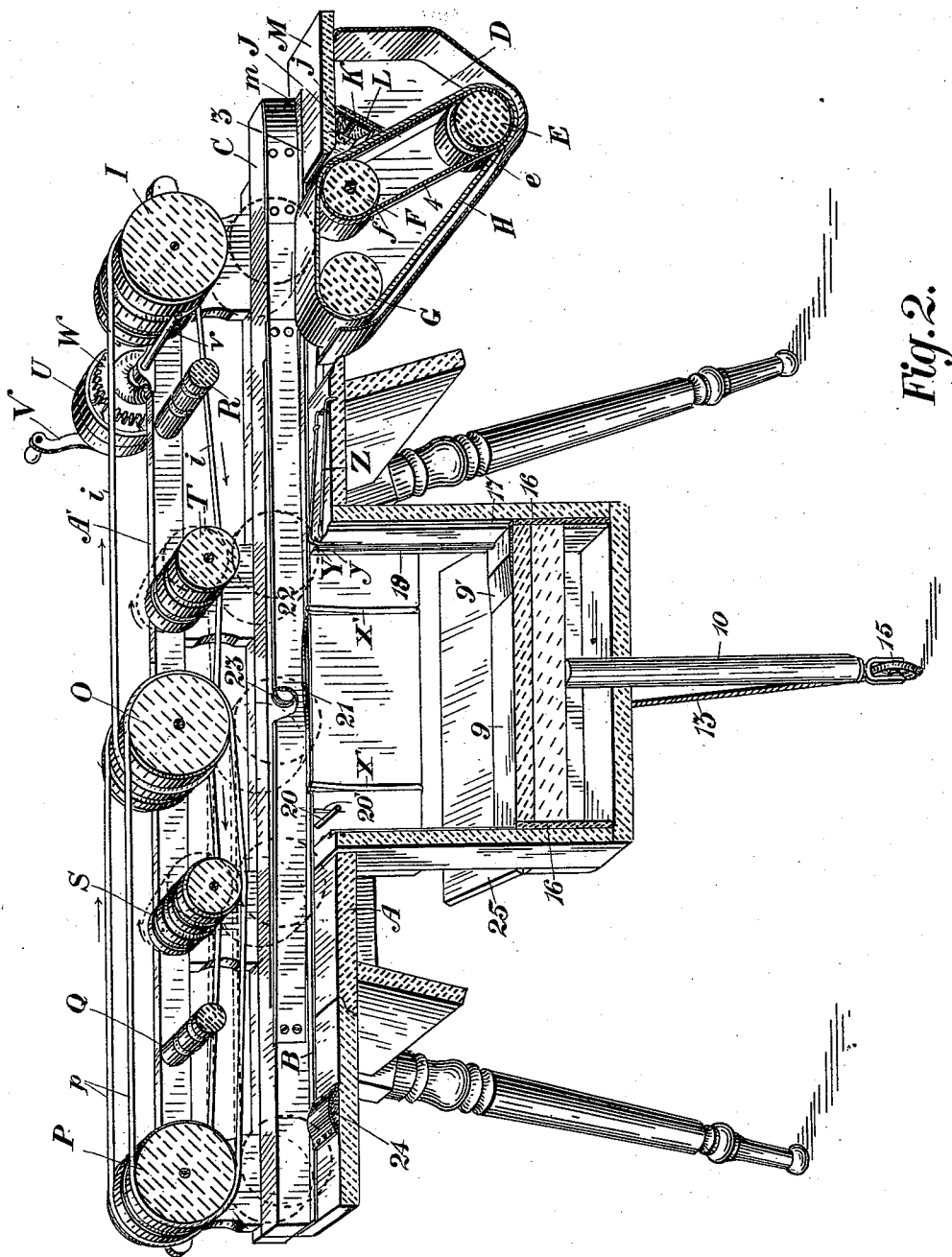


Fig. 2.

Witnesses.

W. H. Throw  
H. Young

Inventor:

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4 Sheets—Sheet 3.

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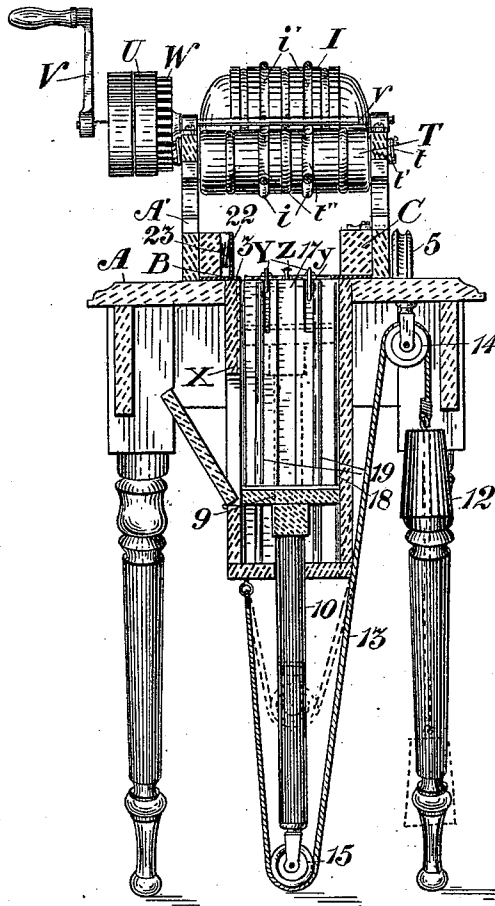


Fig. 3.

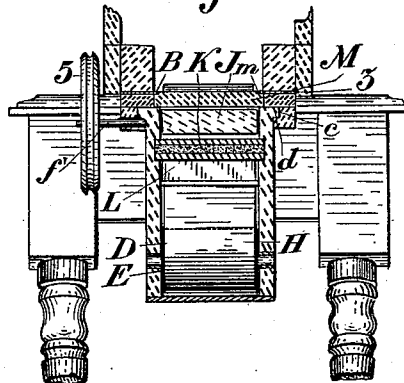


Fig. 4.

Witnesses

W. H. H. H. H.  
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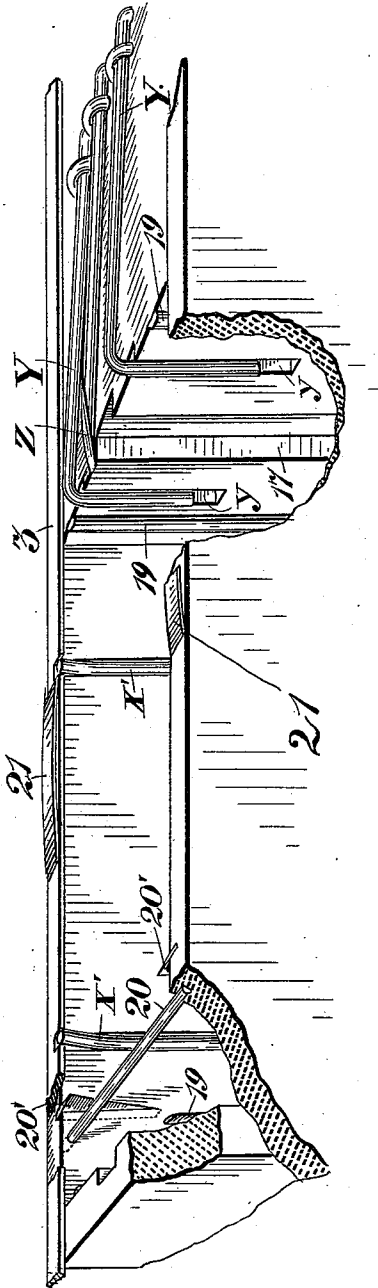


Fig. 5.

Witnesses.

W. J. Whitrow.  
Attest Yours, q.

Inventor.

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# UNITED STATES PATENT OFFICE.

FRANCIS XAVIER GAUDRIE, OF PORT HOPE, CANADA.

## CAN-LABELING MACHINE.

SPECIFICATION forming part of Letters Patent No. 527,843, dated October 23, 1894.

Application filed July 18, 1893. Serial No. 480,846. (No model.) Patented in Canada August 30, 1893, No. 44,117.

### *To all whom it may concern:*

Be it known that I, FRANCIS XAVIER GAUDRIE, gentleman, of the town of Port Hope, in the county of Durham, in the Province of Ontario, Canada, have invented certain new and useful Improvements in Can-Labeling Machines, of which the following is a specification.

This invention has been patented to me in Canada on the 30th of August, 1893, No. 44,117.

My invention relates to improvements in can labeling machines patented to me in Canada on the 7th day of November, 1892, under No. 40,927, and in the United States on the 20th day of December, 1892, under No. 488,273.

The invention is illustrated in the accompanying drawings, in which—

Figure 1, is a perspective view of my machine. Fig. 2, is a perspective view of a longitudinal section of the machine. Fig. 3, is a cross section. Fig. 4 is a section through the paste receptacle. Fig. 5 is an enlarged detail view showing the upper portion of the blank holding receptacle.

In the drawings like letters and numerals of reference indicate corresponding parts in each figure.

In my invention I paste or gum preferably a portion of the periphery of the can leaving the label without any gum whatever. By introducing the can and feeding it, it will be seen that after it has received its layer of paste, this layer when the can has been rotated comes upon one end of the label, which as the can still continues to rotate draws the label around it so as to bring the other end of the label upon the remaining uncovered layer of paste. By this method the covering of the cans with labels is very much more readily performed and with much less unclean work.

A, is the standard or table supporting the can track, B, which has situated at each side of it a frame, A', which is secured to the top of the table.

C, are parallel bars situated at each side of the track and designed to guide the cans from one end of the machine to the other.

The feed end of the machine is slightly elevated as compared with the discharge end, so

as to facilitate the easy passage of the cans through the machine.

D, is a paste or gum receptacle, which is filled with paste or gum and has journaled within it, the rollers, E, F, and, G, the roller, E, being situated at the bottom of the receptacle and the rollers, F, and, G, having their centers on the same horizontal line.

The rollers, F, and, E, are connected together by a supplemental belt, 4, which extends around the rollers in the annular grooves, *f*, and, *e*, and is designed to communicate motion to the roller E so as to insure the belt hereinafter described from slipping as it is being driven. The roller, F, has secured to the end of its spindle, *f'*, the grooved pulley, 5, which is connected by a cross belt, 6, to the groove pulley, 7, on the end of the spindle, *o*, of the intermediate roller, O.

H, is an endless belt which passes around the rollers, E, F, and, G, the horizontal portion of the belt being beneath the driving and feeding roller, I. From the portion of the belt beneath the feeding roller the can derives its layer of paste.

J, is a cross bar and, K, is a scraper which rests against the cross bar, L, against which it is held by the set screw, *j*, extending through the cross bar, J. The scraper, K, is designed to be adjusted to or from the belt so as to regulate the amount of paste which adheres to the surface of the belt and direct any overplus back into the body of the paste. The layer of paste which passes up on the horizontal portion of the belt will consequently be of an even thickness throughout.

The scraper, K, may be got at in order to adjust it by removing the slide, M, which is provided with a groove, *m*, made at its forward end, so that the top of the slide is flush with the rails, 3, of the can track B.

*c*, are longitudinal grooves made in the feeding end of the bars, C, and designed to receive the tongue, *d*, secured at each side of the paste receptacle, D, at the top.

P, is the discharge roller. The three rollers, I, O, and, P, are journaled in bearings at the top of the frame, A'.

Q, and, R, are cross bars serving to connect the opposite sides of the frame together.

S, and, T, are compression rollers which are also journaled in the frame, A', in the slots, s, and, t, against the bottom of which the spindles s', and, t', are held by the springs, S', and, T'.

i, are two round belts extending from the roller, I, to the roller, O, around the annular grooves, i' and, o', made in the rollers, I, and, O, respectively. The belts, i, extend also beneath the roller, T, through the under portion of the annular grooves, t'', of which, the belts extend.

p, are a series of three round belts which pass around the annular grooves o'' in the roller, O, and the annular groove, p', in the roller, P. The belts, p, pass beneath the roller, S, through the under portion of the annular groove, s''.

The feeding roller, I, is driven through the pulleys, U, or by the crank handle V, on the end of the shaft, which is connected by the gearing W, to a gear pinion on the end of the spindle of the feeding roller the same as in my former machine. The motion communicated to the roller, I, is transmuted by the belts, i, to the roller, O, and by the roller, O, to the rollers, P, by the belts, p. The direction of the rotation of the rollers and the movement of the parts are indicated by arrows.

X, is the label receptacle which is provided with a bottom which yields to upward pressure, and is shown as a plunger 9. The plunger, 9, is provided with a downwardly projecting rod 10, and the operation is the same as in my former machine, the gravitating weight, 12, cord, 13, pulley, 14, and moving pulley, 15, being provided. The plunger is prevented from binding in its upward and downward movement by being slightly less in its dimensions than the inner dimensions of the receptacle and by having tongues, 16, which move in grooves, 17, at each end of the receptacle and is also held in position from the sides and ends of the receptacle by the side strips, 18, and end strips, 19. The labels are placed in a pile face downward upon the plunger, 9, and in order that they may be fed evenly upon the cans I provide at one side of the label receptacle spring fingers, X', which extend slightly outwardly at the top and as far up as the rails, 3. The spring fingers X' serve to press the labels toward one side and hold them in such position until the can picks them up.

In order to prevent the labels from being forced out of the receptacle I provide a cross bar, 20, which extends across the label receptacle at the end nearest the discharge roller. I find in practice that this cross bar is much more effective than the lip used in my former machine as the lip frequently allowed two labels to be drawn out at the same time whereas I find that the cross bar will only allow one label to be drawn out at a time. To further provide for labels of very thin paper from being

drawn out more than one at a time I provide vertical knives, 20', which are beveled downwardly and which are placed immediately beneath the rails, 3. These knives make an incision in the labels at each side when they come up, and when one is lifted from over the top of the knife by the can as it rotates onwardly through the machine, the other is held fast by the knives and prevented from being drawn out from under the cross bar, 20.

Y, are spring fingers secured toward the feeding end of the machine and having turned-down ends, y. The spring fingers, Y, are designed to prevent labels in the receptacle after one has been removed from being drawn by the adhesion up and out of place toward the feeding end of the machine. In practice I find that the spring fingers Y press against the ends of the pile of labels, and thus prevent the labels from being drawn out of place as above described.

Z, is a spring finger with a flat end which projects slightly over the end of the label receptacle. It sometimes happens that the top label is slightly out of place and a narrow margin of the next label beneath appears toward the end of the label receptacle next the feed roller. This narrow margin when the can is brought along will become pasted and will adhere with the upper label to the can. By the spring finger with the flat end which extends over this margin it will be seen that the label beneath will be prevented from rising and getting out of place.

In my former machine I find with the bars, C, formed solid as shown, that frequently where there are inequalities in the surface of the ends of the can they would stick as they are passing over the pile of labels. In order to obviate this I recess the bar C on the side adjacent to the can track and in front of this recess locate a spring bar, 22, which has a spring, 23, at the back of it, by which the bar is normally held in alignment with the side of the bar, C. As the can is brought through the machine by the rollers, this bar overcomes any inequality in the surface of the end of the can and allows of its passing freely through the machine from one end to the other. The usual segment pieces, 21, are provided as in my former machine so as to raise the can from the level of the rails.

24, is a spring pad situated on the track, B, between the rails and is so placed in position that the can is caused to rotate by the rollers and the belts will bring the part where the paper overlaps and is pasted together directly over the pad so that the action of the can upon it, will cause the paper to firmly adhere together, thus rendering the cementing or the pasting of the paper perfect upon the can.

9', is an inclined plate placed at the end of the plunger next the feeding end of the machine. This plate is designed to raise the pile of labels at this end slightly above the level of the track, so that the can when it is

being brought along the track by the rollers will by the pressure of the roller, T, be caused to readily grasp the paper. The can is fed into the machine either by hand or from a  
 5 hopper to a point where it is grasped by the feeding roller, which brings it over the paste belt by which the layer of paste is deposited upon the can of sufficient width, so as to enable the end of the label to be securely  
 10 fastened. The rotation of the belts carries the cans along the track and when the can reaches the end of the label receptacle it is held down as it passes along by the compression roller, T. The circumference of the can is such that when it leaves the paste belt, H,  
 15 it makes a little over a complete revolution so that one half of the paste will have passed the end of the label receptacle and the other half will by the compression of the roller, O, cause the paper to adhere to it. The can as  
 20 it is being brought along by the belts and rollers will wrap the label upon itself pulling the opposite end of the label from underneath the cross bar, 20, which end will pass around and adhere to the then remaining uncovered  
 25 pasted portion of the can. The can will now be brought along the compression roller, S, and belts, T', until it makes a complete revolution that is to say until the portion where the paper is joined together passes upon the spring  
 30 pad which will cause the ends of the label to firmly adhere to the can. As there is no paste on the end of the label, which first adheres to the can it will be seen that in overlapping there will be no paste for the opposite end of  
 35 the label to adhere to except the overplus, which is forced from between the paper. This I have found sufficient to make a neat joining of the label. As in my former machine the ends of the cans ride upon the track  
 40 it will be seen that as the paste is between the rails and the coating on the belt is quite thin there will be no danger of any paste being injuriously distributed and wasted on the end  
 45 of the can.

In order to provide for the replenishing of the labels without disconnecting the working parts or displacing them I provide at the side of the label receptacle the hinged flap, 25,  
 50 which may be drawn down and the labels inserted upon the top of the plunger without disconnecting. The flap of course is kept

closed except when it is desired to replenish the label receptacle.

In a former part of this description I have  
 55 called attention to the segment pieces, 21, by which the can is raised from above the level of the track. The use of these segment pieces is especially important as if they were not provided the can would disturb the label or labels immediately beneath the top label. In  
 60 fact I find in practice that the tendency would be to push forward the labels immediately beneath the label which is being caused to adhere to the can. By the use of these segment pieces all danger of disturbing the labels  
 65 is effectually obviated.

What I claim as my invention is—

1. In a can labeling machine, a paste supplying mechanism therefor comprising a receptacle for containing the paste, rollers E F G  
 70 journaled therein, a narrow belt 4 passing over grooves *e f* in the rollers E F, an endless broad pasting belt H passing around the three rollers, and means for driving one of the rollers E F, substantially as described. 75

2. In a can labeling machine a paste supplying mechanism comprising the receptacle D, the three rollers, E, F, and, G, journaled therein the rollers, E, and, F, being connected  
 80 together by the belt, 4, passing over the annular grooves, *e*, and, *f*, in the rollers and the roller, F, being driven through the pulley, 5, cross belt, 6, and pulley, 7, on the end of the spindle, *o*, of the intermediate roller, O, and  
 85 the endless paste supplying belt H passing around said three rollers as and for the purpose specified.

3. In a can labeling machine, a label receptacle having a plunger adapted to receive the  
 90 pile of blanks, vertically arranged spring fingers located in grooves in the sides of the receptacle and having their upper ends curved outwardly therefrom, and a second set of horizontally arranged spring fingers secured between the rails of the can track and having  
 95 their ends overhanging the edge of the receptacle and depending within grooves in the front wall thereof, substantially as and for the purpose set forth.

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Witnesses:

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