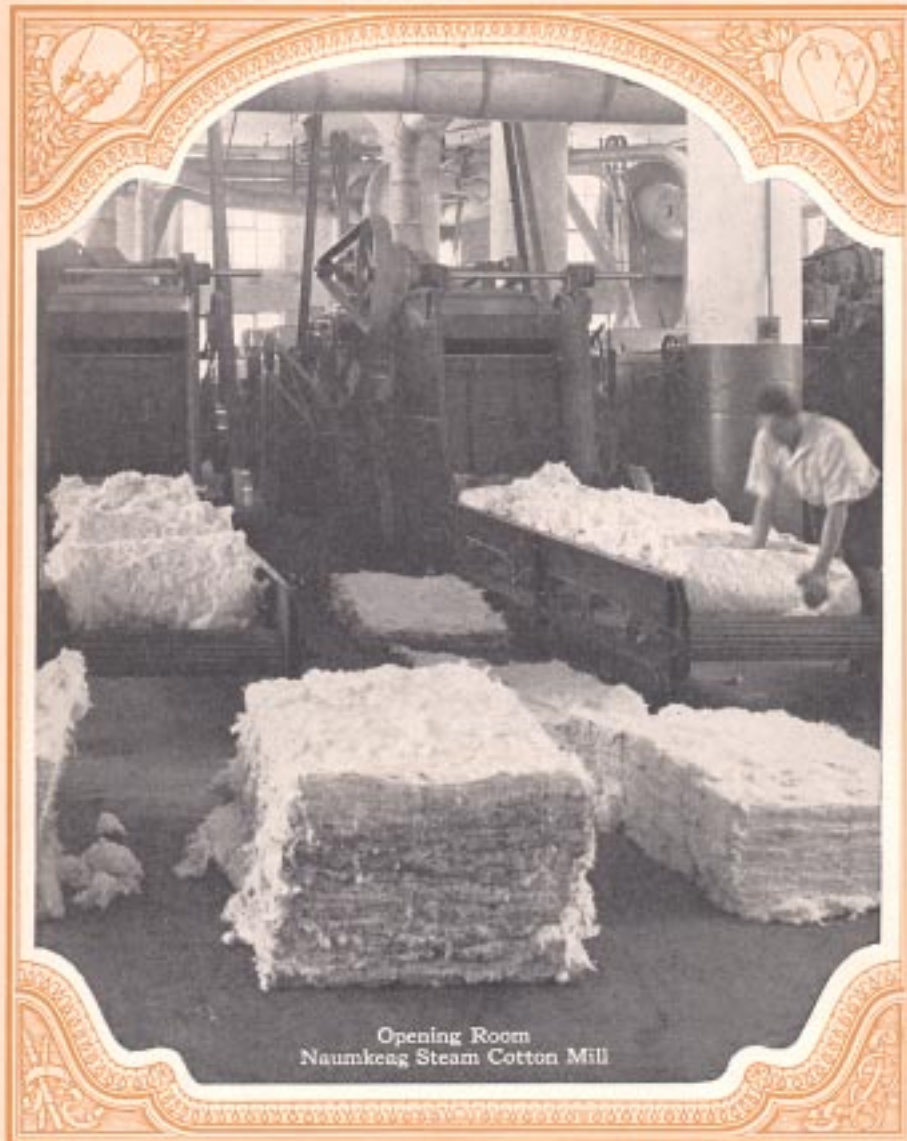


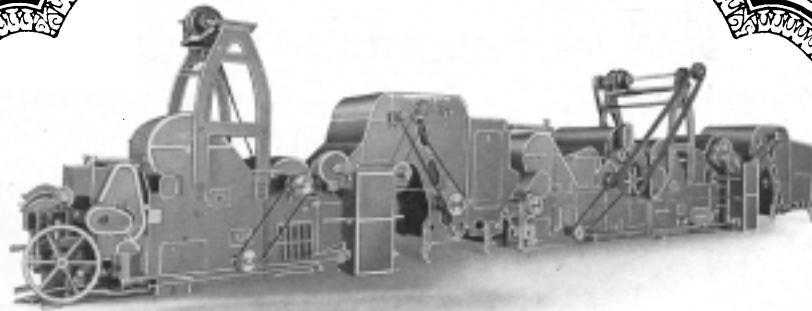
# THE SACO-LOWELL BULLETIN

SEPTEMBER 1928



Opening Room  
Naumkeag Steam Cotton Mill

*In This Issue*  
**Modernizing the Opening and Picking Rooms**  
**Automatic Mixing**



**SACO-LOWELL** *invites you to*  
**Visit Space 216 at the Greenville**  
**Show, 2nd Floor**

**W**ITH many significant major developments of Saco-Lowell machines on view, our exhibit at the Greenville Show will well repay a careful inspection. One of the most recent, Saco-Lowell's One-Process Picker with synchronized control, is one of the greatest factors leading to better quality and lower costs developed in many years. We cordially invite you to make our booth your headquarters.

**SACO-LOWELL**  
MANUFACTURERS OF TEXTILE MACHINERY

147 Milk Street, BOSTON, MASS.  
CHARLOTTE, N. C. GREENVILLE, S. C. ATLANTA, GA.

# THE SACO-LOWELL BULLETIN

*Issued monthly in the interests of efficient mill operation by the*

SACO-LOWELL SHOPS

147 MILK STREET

BOSTON

CHARLOTTE

GREENVILLE

ATLANTA

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VOLUME I

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NUMBER 7

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## Automatic Mixing

IN the April issue of our Bulletin we expressed in the article "Getting the Most Value From New Opening Equipment," the importance of proper blending and mixing. Since that time we have made a number of interesting installations along the lines advocated in that article, and it seems that more and more the mills are laying out their opening room with the idea of automatically obtaining a thorough mix of many bales.

It is a well-known fact that the heavy Bale Breaker, although a most efficient opener and capable of a tremendous amount of work, does not effectually mix more than a few bales of cotton at a time. When ten or twelve bales are laid around this machine and a layer from each placed upon the extended apron, the layers from the first two or three bales are carried into the hopper, opened up and carried through the line of cleaning machines before the last few layers reach the hopper of the Bale Breaker.

In other words, it is impossible for the hopper of the Bale Breaker to be mixing stock from more than two or three bales at the same time. It is true that all twelve bales will go through within a short time, but to obtain a thorough mix, they should all be going through at once.

In order to overcome this difficulty, a number of mills are splitting up the initial feed of the Bale Breaker by substituting a number of lighter machines which mix a few bales at a time and deliver the stock to a common lattice apron. This, in turn, delivers the whole to the usual line of cleaning machines. In this way any number of bales may be mixed together and fed to the following machines simultaneously instead of two or three at a time. These various small mixes follow each other successively through the line of cleaning machines as is the case when using a Bale Breaker.

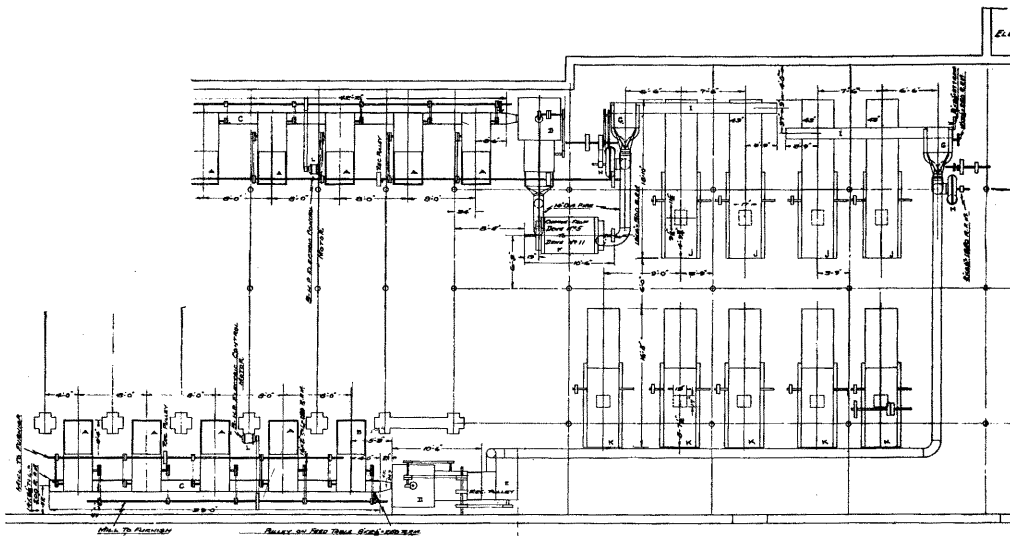
We are now working on three large installations along this line, which we

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believe will be of interest to our readers. One of these which is now being installed in a large Northern mill is illustrated on this page. As in many cases of modernizing the opening and picking department, this mill has been able to utilize much of their initial equipment. From the illustration it will be seen that there are two lines of opening machinery. Each of these lines, instead of being fed by the usual Bale Breaker, is fed by a battery of five automatic feeders (with heavy lags in the aprons); each battery of feeders delivers onto a lattice apron and from there into their old line of cleaning machines. This is made up of a Vertical Opener and Horizontal Cleaner. From these two lines the stock is carried in the usual way through Condensers and Automatic Distributor to the hoppers of the breaker pickers. In this particular case the mill intends to place three bales

around each opening feeder, placing a layer from each in the hopper at the same time. In this way each line of machinery will deliver a perfect blend of fifteen bales to the Breaker Pickers. In this particular layout each line delivers to an independent set of two Breaker Pickers each. If, however, the pipe lines from the two lines of cleaning equipment were connected and delivered through one distributor to all four breakers, the mix would be made up of thirty bales. If four bales were placed around each feeder, the total mix would be forty bales. It can be seen, therefore, that by this arrangement any picker room can be easily laid out to deliver automatically a perfect mix of any number of bales desired.

Our usual electric control is used to regulate the flow of stock to the distributor in the same way as when the



The Picker Room layout referred to above, showing the two lines of Opening and Mixing feeders at the left.

Bale Breaker is used, the complete battery of Opening and Mixing Feeders starting and stopping as a unit.

The other two installations we are now working on are identical in theory with the above. In one of them, for a mill near Boston, there are three lines of opening machinery delivering to one pipe line which carries the stock to the pickers. Two lines are made up of Vertical Opener and Lattice Opener, and the other of Vertical Opener and Tandem Lattice Opener. One line is fed by four mixing feeders and the other two by five mixing feeders, each making a total of fourteen mixing and opening feeders and a possibility of an automatic mix of fifty-six bales.

The third installation for a large Southern mill is similar to the above two, although it is more complicated because of lack of space and necessity of placing

the various units in different rooms. In all, there are five lines of opening machinery, each fed as described above by a battery of five Opening and Mixing Feeders, making a total of twenty-five. The stock from all five lines finally converges through one condenser and is distributed to three large feeders from which it is delivered to three independent picker rooms.

These three layouts show the trend that is now predominant in opening rooms. The advantages of a thorough blend of many bales were always recognized, but the labor and floor space required by elaborate bin systems forced many mills to cut down their mix. It can be easily seen, however, from the above examples, that it is now possible to secure any mix desired entirely automatically and without an undue amount of floor space.

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## Further Data on Saco-Lowell's One-Process Picker at the Langley Mills

MR. GAYLE recently called upon the Langley Mill with Mr. . . . of the . . . Mills and the following is Mr. Gayle's report on the visit.

"The Pickers distinguished themselves. They had lost three laps in the last twenty hours, that is, three laps out of 800 laps made.

"We took some yard to yard weighings. They run as follows: 15.61; 14.83; 15.19; 15.16; 15.26; 15.08; 15.19; 15.60; 15.18

—a maximum variation of .77 ounces, these from the low to the high.

"Mr. . . . could not believe that we were weighing the laps correctly, so we got him to do some weighings. The people in the mill stated that their production had been increased by 10%, and their breaking strength by an average of 10%.

They also stated that they were making a saving in labor amounting to 20% of the investment."

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## Modernizing the Opening and Picking Rooms

THE greatest possibility of improved product today lies in the proper opening and picking of the cotton. Thorough opening, increased cleaning and reduction in harsh beating tends to make better and stronger yarn, with better running of work through the mill.

It is not always necessary for a mill to purchase complete new equipment in order to take advantage of the latest important developments along these lines. As an example of the simplicity of such a changeover, a mill running 1" middling to low middling cotton was operating on three process picking with the following machinery:

- Bale Breaker
- Vertical Opener
- Horizontal Cleaner
- Condenser and Distributor
- 4 — One beater Breakers
- 5 — Intermediates
- 5 — Finishers

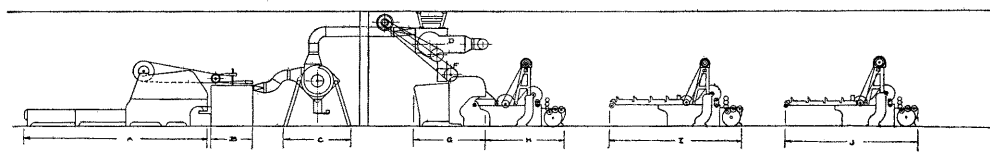
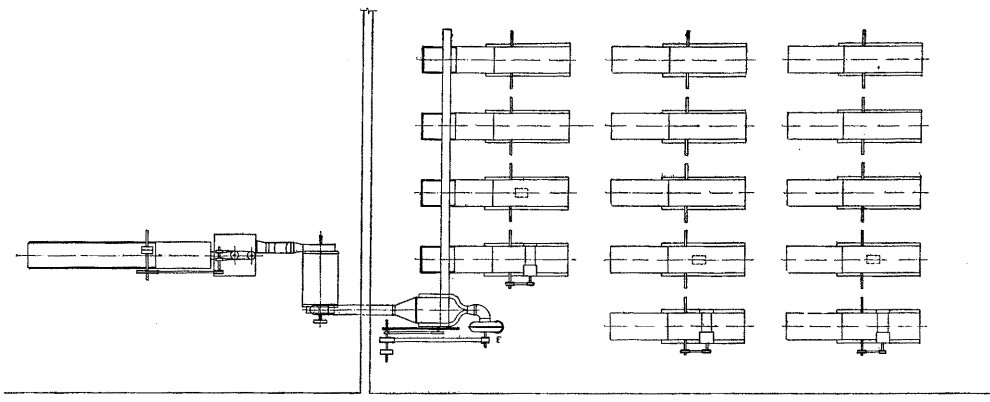
The Opening Room was improved by the addition of a Lattice Opener, giving an additional cleaning of  $1\frac{1}{4}\%$ .

The Picker Room was changed over to One Process. A 24" Cylinder with No. 8 Evener was added to three Breakers, the Eveners on the Finishers changed to No. 7 Eveners arranged for loose stock with short rails. Three Intermediate Feeders were inserted between the second Screen Section and the Finisher, making three lines of One Process

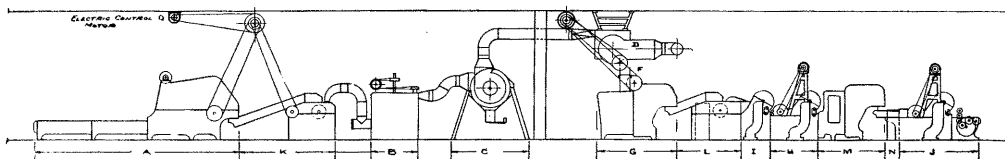
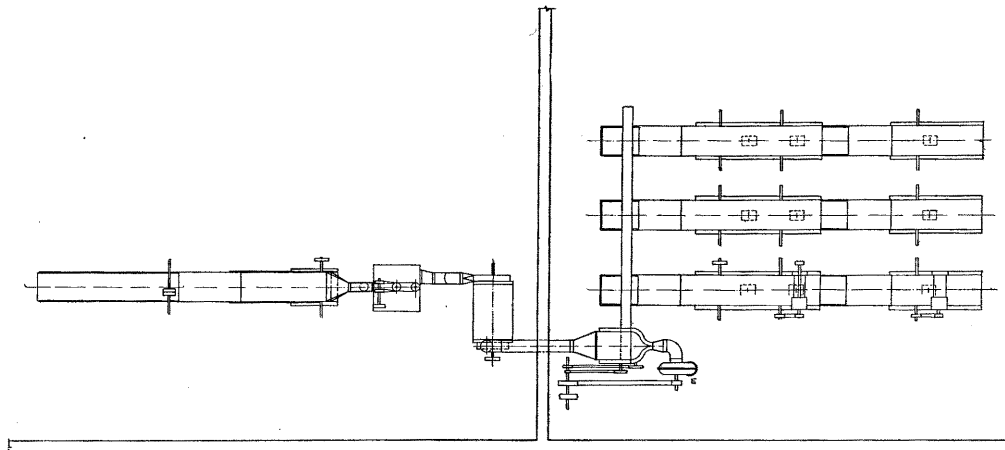
Pickers, with synchronized control. An Electric Control was installed between the Feeders and the Opening Machinery. This permits such automatic regulation of the feed from the Openers as to maintain the supply in the Hoppers of the Feeders within narrow limits and to prevent any overflow when all Feeders are full. New Grid Bars of the sixteen bar adjustable type were put under the 16" Beater, with a resulting increase both in quantity and quality of droppings.

The whole change was extremely simple to make, practically all the old equipment being utilized except the intermediate pickers, and the outlay of new equipment was very small. The result was a modern picker room of the most efficient layout, with an increase in the cleaning, reduction of labor cost, a decrease in the number of laps set back, more uniform weight yard for yard, a reduction in the number of beats, and with all beating done from cotton in a loose, open state instead of from hard, compressed laps.

The following table on page 6 shows an increase in cleaning of 1.6% in the system. This increase was effected with a reduction of beater speeds from 1250 r.p.m. of the 16" Beaters to 1000 r.p.m. and a reduction in beats per inch from 136 to 42. The operatives were reduced in the Picker Room from three to one.



Original Layout



Layout after changeover

## BEFORE CHANGE — OPENING ROOM

5,848 lb. Cotton

	<i>Droppings</i>	<i>%</i>
Vertical Opener	54 lb. 7 oz.	0.93
Horizontal Cleaner	35 lb. 6 oz.	0.61

## PICKER ROOM

2,111 lb. Cotton

Breaker	7 lb. 3 oz.	.34
Intermediate	8 lb. 13 oz.	.42
Finisher	5 lb. 15 oz.	.28

2.58

## AFTER CHANGE — OPENING ROOM

5,474 lb. Cotton

Lattice Opener	77 lb. 6 oz.	1.41
Vertical Opener	39 lb. 8 oz.	.72
Horizontal Cleaner	32 lb. 6 oz.	.59

## PICKER ROOM

2,711 lb. Cotton

24" Cylinder	22 lb. 9 oz.	.83
First 16" Beater	11 lb. 10 oz.	.43
Second 16" Beater	5 lb. 7 oz.	.20

4.18

May 8, 1928

## New Saco-Lowell Drawing Makes a Hit

**B**ELOW is a letter we recently received from Mr. Comer of our Southern office:

"I called at this mill Thursday to see how our new installation of Drawing was going, and in talking with Mr. . . . , he showed me a test which he had run on the new drawing against the old, following this through to the spinning. On the stock from the old drawing, the yarn sized 28.58 and broke at 51¼ lbs. The

stock from the new drawing sized 28.76 and broke at 53½ lbs., which was an increase of 2¼ lbs.

"Judging from Mr. . . . conversation it seems that this new drawing is making their 40 deliveries of old drawing look so bad that I would not doubt that before many months but what they throw out the remainder of this old drawing and replace it with new."



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## Spain Takes a Step in the Right Direction

THE government of Spain, in an effort to reduce the cost of textiles in that country, has ordered that all textile machinery more than forty years old be destroyed. To replace this equipment, it is understood that machinery may be imported duty free, and that the government will pay a maximum of 1000 pesetas (\$167.70) for each machine which was bought between 1890 and 1920, the amount of premium depending upon the age of the machine.

This certainly is a step in the right direction, and, if the project is carried out as directed, will undoubtedly help to put the manufacturing facilities of

textiles in Spain on a sound, economic, and efficient basis.

This country can well take a lesson from this action by the Spanish government, as it shows the importance they lay to modern equipment as an economic necessity. It is a question of scrapping obsolete equipment and installing modern machinery, not only when it is financially easy to do so, but also at all times, and especially when business is dull. It is a known fact that up-to-the-minute equipment and manufacturing methods increase materially the margin of profit, and an effort to increase this margin should be made more than ever when business is poor.



Factory of Hilados y Tejidos del Hato, Colombia, S. A. 5,000 Spindle, complete Saco-Lowell Equipment.

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## Another Report on Saco-Lowell Long Draft

WE recently received from a well-known Southern mill the following report comparing their Saco-Lowell Long Draft Frames with their regular spinning. This is a typical example of the many reports we receive upon the merits of our Long Draft system.

### LONG DRAFT

Increase in breaking strength 22% from  $\frac{7}{8}$ " to  $\frac{15}{16}$ " staple cotton.

Size	Breaking Strength
20.00	100
19.61	95
20.83	95
19.80	92
20.64	86
20.85	86
20.00	86
20.00	98

20.24 93.1

Variation in No. 5.46%

Variation in B. S. 15.03%

21s warp yarn from  $\frac{15}{16}$ " to 1" cotton

3.15 H. R. Double

Draft 12.85

Break factor 1884

Sheldon's factor 1546

### REGULAR DRAFT

Size	Breaking Strength
20.74	77
21.16	71
21.06	77
20.96	79
21.06	72
20.31	82
21.77	78

21.00 76.5

Variation in No. 6.95%

Variation in B. S. 14.32%

21s warp yarn from  $\frac{15}{16}$ " to 1" cotton

4.10 H. R. Double

Draft 10.24

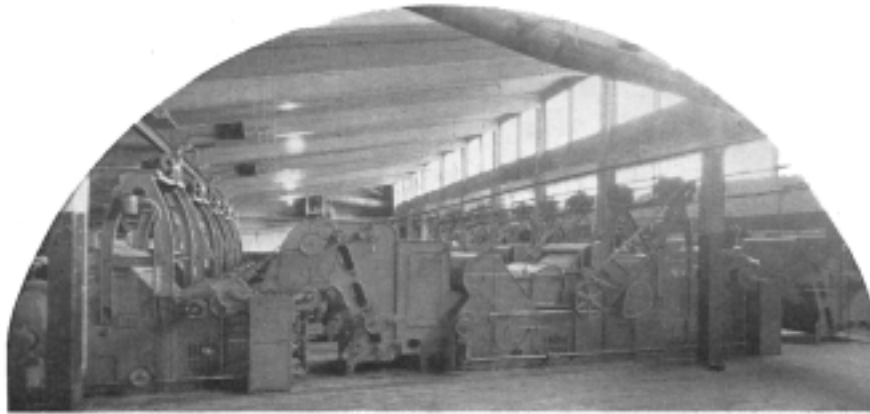
Break factor 1606

Sheldon's factor 1536

## Mill Man Praises Saco-Lowell Spinning

Mr. Cole of our Southern office recently called upon the president of a large print cloth mill in South Carolina which has recently installed a number of Saco-Lowell Spinning Frames. During the conversation he told Mr. Cole, that in his opinion, Saco-Lowell had developed their Spinning to the point that they had occupied for many years on Cards and Drawing,—that was "at the top of the list."

He stated that this new Spinning ran the best of any Spinning that he had ever seen. The only thing that he feared in connection with it was that his operatives would become so dissatisfied because of the ease of operating the new frames as compared with the old, that he could not get help to stay on the old frames in the same room.



*Battery of Five Saco-Lowell One-Process Pickers at the Langley Mills, Langley, S. C.*

## **Synchronized Control**

### **An Outstanding Feature in the Success of Saco-Lowell's One-Process Picker**

There is now available to you in the special July issue of the Saco-Lowell Bulletin, complete facts about the battery of five Saco-Lowell One-Process Lappers in the Langley Mills, Langley, S. C., as well as other recent installations, North and South.

These new machines are giving day-in-and-day-out performance far beyond our expectations,—a marked increase in quality over two or three-process picking at a substantial saving.

Synchronized control is the key to the unusual success of this completely new machine. Read about its development in the July Bulletin, a copy of which should have come to you through the mails. If not received regularly, ask to have your name put on the mailing list.

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