alyze raw material in a piece of paper and to tell whether the wood—if it is pulp paper—was prepared by a chemical or mechanical process. And if the investigator knows his paper history, he can say that the materials and process indicate that the paper was made after a given date.

Dr. Grant tells some paper facts that prove useful. For example, until about 1800 all paper was made of rags, mainly linen or cotton. In the eighteen fifties a rag shortage was so acute that straw eked out rags in paper. Esparto grass was first processed in 1861; wood some twenty years later.

Rosin was used to make paper take ink better, at first in Germany, then more widely about 1835. Paper loaded with titanium dioxide and associated white pigments is later than 1930. Calendered papers date from 1830; coated papers from 1890.

Some landmarks in paper history are still vague, but not the recent ones. Sherlock Holmeses of the paper world keep close track of current changes in the industry.

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ETHNOLOGY

Feudal State Preserved On Island of Sark

THE FEUDAL age is supposedly dead. But England has a sample of it left, like a living bit of archaeology.

This feudal state, the Island of Sark in the Channel group, is still held under the charter Queen Elizabeth granted to a Norman in 1565. A Norman descendant, Sybil Hathaway, and her American-born husband, Robert Hathaway, are dame and seigneur of Sark.

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Mr. and Mrs. Hathaway—they have long Norman titles at home—have been visiting our shores and giving some Americans a chance to gaze at two amiable moderns who are actually expected to protect an island in return for public duties performed by their loyal tenants.

There is no unemployment in Sark, says Mrs. Hathaway; no automobiles, no street lights. The 600 inhabitants are mainly fishermen and farmers. A parlia-

ment of 52 men and women make laws, which Mrs. Hathaway can veto if she sees fit. The people speak ancient Norman, interlarded by English words like radio and telephone. Education has been compulsory in Sark since 1805, or before England had it. English and French are taught to Sark children. Tourists are a source of revenue, to the tune of 25,000 visitors a year.

People of Sark, Mrs. Hathaway emphasizes, are not British colonists. They are Normans. They are her feudal tenants, and she is the King's feudal tenant. She pays every year a twentieth of a knight's fee.

Asked how she spends her time at the feudal manor, she says she has a farm, is keen about dairying and has a dairy diploma, likes gardening, receives endless visitors. Every problem on the island is brought to her door.

Her husband, who must sign state papers, is nevertheless secondary. He once asked someone to make his position clearer, and was told, "Well, if your wife committed murder, you could be hanged for it."

Science News Letter, February 11, 1939

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Many New Juices to Join Familiar Ones on Table

FOR the breakfast menu of a few years hence: Rhubarb juice. Passion fruit juice. Guava juice. Strawberry juice. Blueberry juice. These are new products that the giant-infant of the food industry, the juice business, is about to make available for your pantry.

Tomato, grapefruit and pineapple juices are the leaders in this array of liquids. Yet prior to 1925 bottled and canned juices were limited to bottled grape juice and small amounts of bottled apple, loganberry and other berry juices.

Grapefruit juice came in in 1926, tomato juice was packed first on an important scale in 1928 and pineapple juice joined the procession in 1931.

The total quantity of fruit and vegetable juices preserved exceeded 32,000,000 cases in 1937. The volume is still growing and tomatoes alone provide approximately 13,500,000 cases annually.

Canned orange juice introduced in 1930 reached large commercial production in 1934. More recently lemon and cranberry juices have appeared, along with the "nectars" of apricots, peaches and pears. Plum, cherry, papaya, cur-

rant, tangerine and pomegranate juices are available. Sauerkraut juice is well known and small amounts of celery, spinach, carrot, garlic, onion, beet and lettuce juices are packed.

Three recent developments, it can be reported on the authority of Arthur D. Little, Inc., of Cambridge, Mass., are rapidly revolutionizing the industry.

The first, the introduction of continuous flash-pasteurization processes, is of very great importance, as it makes possible the preservation of practically all kinds of fruit juices without the simultaneous formation of a "cooked" flavor formerly thought to be a necessary accompaniment of pasteurized fruit juices. The second development has been made by the leading can companies by the perfection of enamels which prevent the corrosion of the tin by acid juices. Cans have come into general use for fruit juices and are very popular containers for these products. The third advance has been the introduction of cloudy and pulpy juices, which in most cases have much more flavor than the clarified products.

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PSYCHOLOGY

Two Simple Rules Will Help You to Forget

F YOU have something on your mind that you would like to forget, just follow these two rules:

First, fill your days with new interests, new activities, and these will crowd the old from your mind.

Next, transplant yourself to new surroundings away from all the little reminders that bind you to the past.

New learning or activities and new surroundings, Dr. John A. McGeoch, psychologist of Wesleyan University, told the New York Academy of Sciences, are among the major determiners of human forgetting.

Since in actual life, he said, one cannot, short of a psychological vacuum, escape the destroying effects of new activity, the wonder is, not that we forget, but that we remember anything at all.

The only reason we fail to forget everything is because we learn some things very well indeed.