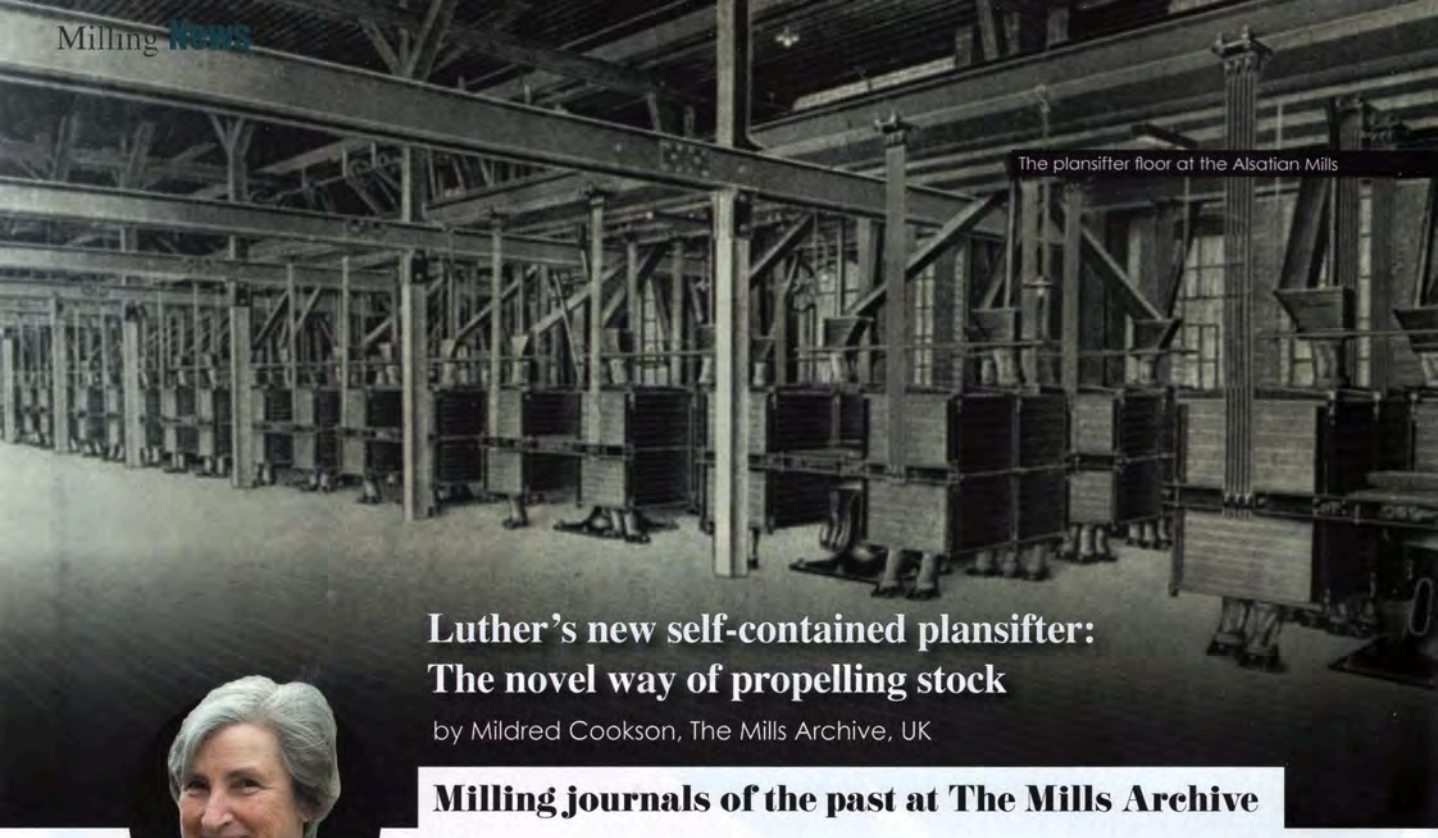


The plansifter floor at the Alsatian Mills

Luther's new self-contained plansifter: The novel way of propelling stock

by Mildred Cookson, The Mills Archive, UK

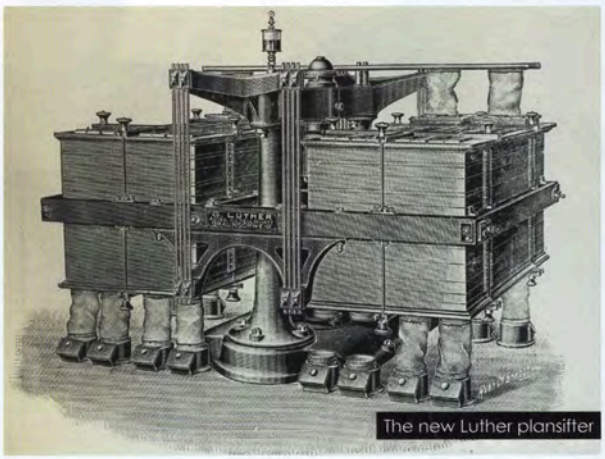
Milling journals of the past at The Mills Archive

My last article on the new Alsatian mills summarised a 1909 report in The Miller. When writing that, I was intrigued by the emphasis on a new Luther Plansifter, so I went back five years to the April 2nd, 1904 issue of Milling, which reviewed the equipment in detail as "the novel way of propelling stock". This earlier article featured fine engravings of the new plansifter and a view of them installed in Van Gruisen and Co's Mill in Boom, Belgium.

At that time, the journal asserted that all millers would acknowledge that sifting on level surfaces of silk cloth or other separating material was correct in principle, but the method had not been largely adopted because the generality of sifters then in use were not free from mechanical faults. The main difficulty was not so much the application of a sifting motion, as combining it with enough agitation of the material being sifted to provide the separation without excessive vibration.

Inclined sifters had been used in mills for years, although only for separating rough material, such as wheat and offals. Until the plansifter was introduced many less successful attempts had been made for dressing softer material, such as meal. The overall aim was to get the true sifting motion of a hand sieve, where the sieve is not turned over, together with agitation enough to separate the material, without disturbing the strata of heavy and light stock and with a minimum of vibration.

In Britain, a new plansifter was promoted by Emil Fiechter of Liverpool. It had been invented by the Brunswick firm of Messrs G Luther, a firm of mill and silo builders established in 1846. The machine was an entirely different kind of the plansifter developed from a design first introduced into the UK by the same firm in



The new Luther plansifter

The plansifter floor at Van Gruisen's Mill

the early 1890s. I have previously reviewed reports in 1892 and 1893 that first of this new form of plansifter to be used in the UK was installed at the mills of Joseph Appleby and Sons of Blackburn (see Milling & Grain March 2020, page 22). These first machines were put in by Mr Fiechter, displacing 3x3 sheet centrifugals and 3x2½ sheet reels.

The new plansifter operated upon the third break meal and the reduced semolina, or a reduction meal. The old form of Luther plansifter consisted of one set of super-imposed sieves driven from below, whereas the new machine was divided into two sets of sieves placed on either side of two very strong columns. Across the tops of these columns there was a cross arm. At each end of the cross arm two suspenders were secured to hold the cane rods supporting the two sets of sieves on each side.


THE NEW "LUTHER"

PLANSIFTER

(Models "A" and "B.")

Specially constructed to suit all conditions of Milling practiced in the United Kingdom.

THE KING OF SCALPERS & DRESSERS

has a large capacity, and it strikingly imitates the action of a HAND SIEVE, thereby eliminating the light from the heavy material. The Flour from the Break Meals and from the Semolina down to Tailings Reductions is decidedly brighter—of a better colour. Owing to this Hand Sieve action, the NEW LUTHER PLANSIFTER dusts and grades well without disturbing the Strata of the Stock on the Silk—therefore the Separations are

VERY CLEAR AND SHARP.

THE NEW LUTHER PLANSIFTER works without trouble, and does not require watching day and night. A Complete Luther Roller Plansifter Mill, with all latest improvements, will shortly be erected on the Manchester Ship Canal. In the meantime,

Mr. E. FIECHTER, Our Sole Representative in the U.K.,

will be glad to show British and Irish Millers some of our latest Plansifter Mills, working on Washed Wheats, on the Continent.

The Luther "EMERY" Scourer.

"THE BEST OF SCOURERS."

REPEAT ORDERS GIVEN BY THE FIRST ENGLISH MILLS.

Please write to our Sole Representative in the U.K.

EMIL FIECHTER,
Baltic Buildings,
Redcross St.
LIVERPOOL.

The Wheat after treatment by this machine is much brighter in appearance than by the ordinary Scourer.

Speed of Travel can be regulated while the machine is at work.

The King of scalpers and dressers


THE NEW LUTHER

"SELF-CONTAINED"

PLANSIFTER,

For the Production of PURE FLOUR.

For Clear and Distinct Separations, Steady Smooth Working,

WITHOUT VIBRATION,

AND FOR BEST RESULTS ALL ROUND, THIS IS THE MOST PERFECT

SIFTER OF ALL.

FULL GUARANTEE GIVEN WITH EVERY MACHINE.

Patent Canes Suspension.

Patent Propeller.

Slats, Coils and Crank-Pins are Dispensed with. Reliable Brush Device.

SIEVES EASILY AND QUICKLY CHANGEABLE.

Sole Representative for Great Britain and Ireland:

EMIL FIECHTER (Expert in Plansifter Milling),

Baltic Buildings, Redcross Street, LIVERPOOL.

G. LUTHER, LTD., BRUNSWICK.

Contemporary advertisement

The base plate, from which the two columns rose, was about five feet-by-two and, in its centre, there was a rigid bearing for the lower end of the crank shaft. The latter had no footstep, the rigid bearing holding the lower end in position while it was supported by a flange at the upper end, turning upon ball bearings

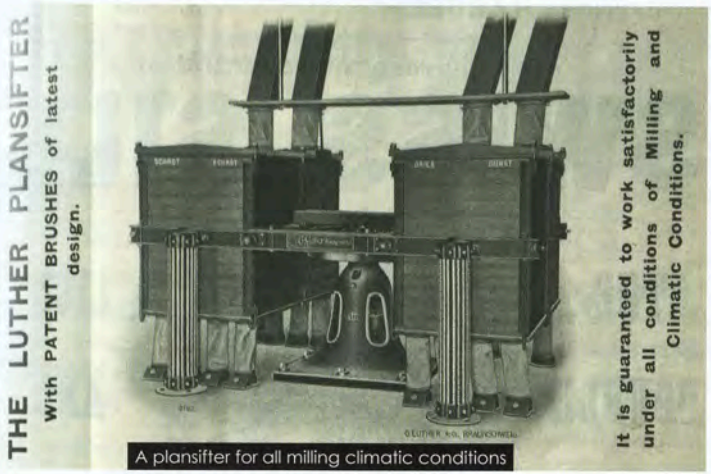
in the centre of the cross arm. The crank shaft was exactly equidistant from both sets of sieves and was fitted to work in a central bearing fixed halfway up the sieves between the two sections.

It was connected between the two columns with strong clasping timber round both sets of sieves. This arrangement meant that the only weight on the ball bearing supporting the crank shaft was that of the two balance regulators. One of these was on the shaft just under the cross tree and was adjustable; the other was a little above the base and was fixed. The driving pulley could be between the base plate and the bottom balance regulator or arranged below the floor by having a crank shaft which extended through the base and floor.

The sieves could number from ten to twenty and made to fit over one another, with six clasping rods to each set to bind them tightly together. Each sieve was divided longitudinally into four sections with two catch trays underneath the silks, each gathering from two sections and discharging down slopes to a central aperture the whole length of each sieve. This allowed finished material to be got rid of as soon as it had gone through the silk relieving the machine of weight.

On the tops of the sieves acacia beans were kept moving over the silk to keep it clean, the use of the beans was optional. The silk area on a ten-sieve plansifter was about 200 square feet. The sieves could easily be removed, the bottom ones being taken out without disturbing the top sieves and vice versa. All bearings were automatically lubricated.

The lengthy article in Milling provides a lot of data on the functioning of a ten-sieve machine, remarking on the ingenious arrangement of brushes, many described as wisps. The machine occupied a space of just 8x7 feet and took only a three-inch belt to drive, allowing the reporter to predict that it would face a useful future and Mr Fiechter should find it easy to make sales.



A plansifter for all milling climatic conditions