ANTIMONY MORDANTS FROM WHEY.

The high price of tarter emetic has opened the market to numerous substitutions, among which is some, like the antimony oxide, have met with a fair success. While the new fluorides of antimony provide the rapid action of tarter emetic (antimony with potassium or ammonium compounds) are not satisfactory, owing to their corrosive action and irritating effect upon the hands of the operator. Lactic acid in the pure state has not been used owing to its flammability. From the products of whey it has to be separated as lactate of zinc and water, whereas lactic acid is necessary to separate the odor of the acid.

To avoid this difficulty Kremmarn endeavored by fermentation to produce an indistinct mixture of lactic acid and other acids, regarding only the final solvent power of the product towards oxide of antimony as of value. Papainisation and Faisk's agent has been added in whey 5 to 10 per cent of milk sugar — not a figure borne out by the practical test, as quantitative separation in the laboratory gave a much lower result, and disclosed the presence of much lactose.

To give a more favorable turn to the course of fermentation generally, it becomes necessary to give oxidized wool fibers from the wool materials from which the best precipitants are made. Therefore, a mixture of maleic acid, acetic acid, ferric sulfate, and other. By adding chalk all excess is thrown down as carbonates, and the precipitate is removed. A carbonation, ferric sulfate, and sulphate or lime and magnesia. Peptones are not precipitated; it is desirable that the liquid be free from peptones.

The Badische Anilin and Soda Fabrik have patented some new processes, made by the addition phthalic anhydride with methyl or ethyl amine placed. The hydrochloride of the dimethyldiamine sodium salts built up of a bluish red, colored with a violet, red, and as free from peptones as possible. To test this, the boiled and filtered wort is heated with a small amount of a new precipitant, and placed in a suitably proportioned vessel, and mixed with a trace of pure glassy water. This reagent will keep a long time in a stopped bottle and can be boiled with water without turning black.

The hot filtrate, freed from albuminoids, is decanted into an alkali, and containing a small portion of the precipitated straw-colored liquid possessing in the presence of alkali containing an ample solubility power for oxide of antimony. After boiling it with an excess of the latter, the filtrate was found to be in solution a quantity of antimony corresponding to 99-7 per cent. of tarter emetic or 70 per cent. of lactate.

According to 40 grams of sugar had been transformed per litre, whether present as milk sugar or as lactose.

The liquor may be diluted with 13 times its weight of water, of the precipitating base salt, in order to fit it to the strength of the said milk, containing about 5 grams of tarter emetic.

It is then possible, with milk tannin, worked together with tannin, and has no damaging effects on shade or depth of dye.

ZELLE BROWN is a dye resembling Bisarmeck brown. It is paraphenylenediamine hydrochloride.

BEFORDS PINK is prepared from butylic aniline with nitric acid, and combining the product of extract with fat. It is still sufficient nitric acid and nitric acid in the form of peptones to allow of easy fermentation, and by observing certain unimportant details, a strong colored liquid possesses in the presence of alkali containing an ample solubility power for oxide of antimony. After boiling it with an excess of the latter, the filtrate was found to be in solution a quantity of antimony corresponding to 99-7 per cent. of tarter emetic or 70 per cent. of lactate.

MIRADO ORANGE is obtained by acting with glycolic acid on sodium sulfamate and combining the product of extract with fat. It is still sufficient nitric acid and nitric acid in the form of peptones to allow of easy fermentation, and by observing certain unimportant details, a strong colored liquid possesses in the presence of alkali containing an ample solubility power for oxide of antimony. After boiling it with an excess of the latter, the filtrate was found to be in solution a quantity of antimony corresponding to 99-7 per cent. of tarter emetic or 70 per cent. of lactate.

CARMINAPHE is the impetus of potash. It is feeds wool with a faint tint in a neutral bath, and has a stronger affinity for cotton than for wool.

The most remarkable changes at the Electrical and Industrial Exhibition, now being held in the Bingley Hall, Birmingham, is a case containing an automobile of the latest type and house furnishings dyed and cleaned at the Skidmore Day Works, Nuneaton. This is by far the best and most unique exhibit of its kind ever shown, and well illustrates the perfection to which the art of dyeing and cleaning have been brought. Most noticeable among the specimens of work exhibited are a handkerchief dress of most delicately colored shot silk, a valuable Iomann silk scarf, a rare silk scarf, a rare silk scarf, and a large number of other specimens, all of which have been cleaned by the neptopenie a nice process. The colors are perfectly preserved, the faults of perfection, the whole looking as fresh and good as new. The various dyed fabrics are of the highest quality, the figures and colors being distinct and in fine order, the figures and colors being distinct and in fine order. The space surrounding the case is draped with fine curtains, each curtain being dyed in a gradation of art shades a distinct new mill or to the prearranged, while a great arrangement of dyed garments gives a pleasing finish to the whole.

MACHINERY and Appliances.

IMPROVED MULE, RIM PARALLEL WITH CARTRIDGE.

Messrs. John Hetherington and Sons, Manchester.

One of the most remarkable things that strikes the student of the history of the cotton trade is the rapidity with which machines and even the buildings containing them are rendered obsolete by the progress of invention. This has often occurred long before what may be termed the natural term of their life has expired, when they require to be displaced or disposed of being worn out. Many instances of this kind might be pointed out were it necessary to substantiate the affirmation, but as we have no doubt many of our readers will be able to confirm it within their own experience, we will content ourselves with pointing out the fact how completely a new type of cotton mill has been rendered almost useless and worthless by the enlargement of the mule to the dimensions now usually constructed. We refer to the long and comparatively narrow mills built in the Scottish counties containing from 500 to 900 spindles. Since the latter have been lengthened so as to contain from 1,000 to 1,500 the short ones have been placed at a great disadvantage, and cases their use has been consistently discontinued, owing to the impossibility of their production in the present times of separate operation being at prices as low as from the long mules. The result has been, in this country at least, that many of these mills, though excel lent in some respects, have been abandoned or converted to other and inferior purposes as a coarse preferable to those working them facing certain ruin, or the alternative of a further great outlay of capital upon them to render them fit for the machinery made of day. In America there are still many of these old mills maintained at work, but this has only been possible owing to the high degree of protection enjoyed by the cotton trade in that country, and as the period is rapidly approaching when the machinery will be worn out and must be replaced, the owners, we believe, are looking with some degree of anxiety to what has to be done with the new, and whether they will have to confront the responsibility of creating new structures and buildings. Our English competitors have had to do with the extinguishment of the capital they represent, and it is quite out of the question that they should renew their machinery upon the old type. Mechanical or architectural conversions rarely answer well in these departments, any more than they do in other spheres of interest to man-kind. There has, therefore, apparently been nothing but Hobsom's choice before them. But the student who has often noted such things as the above will also occasionally have encountered the fact that invention and improvements sometimes occur very opportunely to the advantage of those who are subject to difficulties and desire to preserve the life of capital, otherwise irretrievably lost. The smaller such mills as we have spoken of, especially in the United States, where they have not yet been dismantled, will, we think, welcome the improvements made by the English, and the mule and loom improvements made by the English, and the mule and loom improvements made by the English.
forced upon their attention so repeatedly in the
course of business, that they have been led to
consider whether they could not, to a large
extent, be saved to their original use. The chief
difficulty in the way was the heavy expense of
re-arranging the gearing of the mules, the
original setting out being for driving the
mules when set across the width of the
rooms. It was soon apparent that a simple
alteration in the headstock would quite obviate
all necessity for the expensive alterations
hitherto essential in adapting mills on the
older type to receive the modern mule. This
was to place the rim shaft parallel with the
carriage, instead of, as usual, transversely. This
was quickly accomplished, as shown in our
illustration, and has proved a complete solution
of the difficulty so far as rendering it possible to
use narrow mills advantageously for mule spin-
ing goos. This will very widely be regarded as
an improvement of first class importance.

The headstock as thus modified is shown in our
illustration, Fig 1.

and is accomplished by means of grooved pulleys
and ropes. The bevelled gearing and the cross
movements connected with this portion, so
frequently a source of breakages, are thus
enabled to be dispensed with.

As one improvement often makes room for
another, so it has been in this case. All the
bevels from the twist wheel down to the front
roller have been removed and substituted by
spur gearing. In connection with the front
roller, the makers have introduced a consid-
ervably larger clutch box, rendering it stronger
and quicker in action, and diminishing the
liability of breakage. The sliding portion of
the box is provided with a bearing much longer
than usual by which the movement sometimes
turned "wobbling" is quite prevented. This
consisted of a slight canting of the clutch box
through the hole getting too large through
wear, and which resulted in the imperfect en-
gagement of the teeth, only a portion entering
causing great strain upon them and frequent
breakages. This is an improvement that has

The sum of the improvements effected is, how-
ever, not yet told. The makers have also intro-
duced a large backing-off friction arrangement,
by which slipping is quite prevented, a fact
which can be easily tested and the means for
doing which are well known. Cast upon the
backing-off lever is a projection, to which is
attached a finger, one end of which would act
upon a small bow upon the strap fork lever in the
event of the backing-off friction wanting to get
into gear, and would prevent it until the strap
had got upon the loose pulley. This arrange-
ment effectually prevents the two motions en-
tering into a conflict with one another for the
mastery, and thus obviates much of the wear
and tear of the strap and risk of breakage to
the wheels.

In the ordinary arrangements the movements
of the straps when changing positions is much
too slow, causing considerable loss of time, which

FIG. 2.—MULE WITH ORDINARY DRIVING ARRANGEMENTS : MESSRS. JOHN HETHERINGTON AND SONS, MANCHESTER.

In the overhauling of the headstock necessary
to accomplish this alteration others of great
value were suggested. The driving arrange-
ments as commonly constructed, it has often
been demonstrated by numerous break downs of
its parts, is overburdened with work. It was
seen to be possible to effect a much better dis-
tribution of the labour, and means were
adopted to relieve the driving arrangement
from the task of drawing out and taking up
the carriage, confining its duty to driving the
front rollers and spindles. This was a large
proportion of the work the driving strap had
to perform, and its transference elsewhere will
greatly reduce, if not entirely obviate the
numerous breakages to which it has been liable.
Lose breakages, steadier working, and greater
production result from this change.

The duty of drawing out and taking up the
carriage is now placed upon the counter shaft,
THE TEXTILE MERCURY.

News in Brief.
FROM LOCAL CORRESPONDENTS AND CONTEMPORARIES.

England.

Ashdon-under-Lyne.

We are informed that Messrs. Heyman and Sons and Messrs. H. Heapbotham and Sons will both be floated as limited companies in the course of a few weeks.

At Ashdon-under-Lyne on Wednesday, four men, named Gallagher, Greenwood, England, and Howard, were charged with suspicious John Holden, with intent to intimidate him from following his employment. The defendants are said to have struck off at Oldham, and the complaint was a "knob-stick." The allegation is that the defendants, who were picking the mill, followed Holden to Ashton on September 18th, and there attacked him and kicked him severely. They were committed for trial and admitted to bail.

Bacup.

The new wheel which is being erected by Messrs. J. and J. Hoyle Bros., of Olive Mill, is being pushed forward with all possible speed. We understand that a part of the new building is to be used as a sitting room.

Messrs. McLeishworth Hopworth and Co., of Abbey Mill, who, some few weeks since purchased Grove Mill from the Co-operative Stores, are pushing on the various alterations, and intend to have the mill full of looms and ready for starting in a few weeks.

Messrs. Joshua Hoyle and Sons, Limited, of Bacup and Summerseat, will close the whole of their extensive cotton-spinning and manufacturing mills next week. The firm owns about 8,000 looms and 100,000 spindles. At Rochdale nearly all the mills are working equal to half time.

Barking.

The statutory meeting of the shareholders in the Barking Jute Factory, Limited, was held on Tuesday, at Winterburn House, London, Mr. M. Harris, in chair. The chairman said that this was a statutory meeting, at which no accounts were presented, but who were referred to a few minutes interest them. The capital of the company was £100,000, of which £72,000 only had been issued, and was over subscribed by the public, the balance of £28,000 having been reserved for future issue if necessary. The company was doing well in the possession of the company, and the directors believed that they had obtained a very valuable property. A competent mill manager had been secured in the person of Mr. William Lee, formerly of Duplex.

COMBINATION YARN TESTING AND INSPECTING MACHINE.—MESSRS. H. WALLWORK AND CO., MANCHESTER.

It will thus be seen from this brief description that the little machine shown in our illustration is a remarkable combination and one that is almost indispensable in a well-organized office or warehouse of spinners, manufacturers, or merchants. All these various classes of work are appreciated of it, as demonstrated by the large four-inch shaft that, besides, is only of comparatively recent introduction.

The cards are specially prepared for the machine and supplied at a cheap rate for the preservation of standard samples of yarn. For other particulars, application may be made to the makers at the above address, who, we have no doubt, will be pleased to give prompt attention thereto.

A large steam-jacquard weaving shed is in course of erection at Auch, in Austro-Hungary. The specialy of Rossbach, made, skilful, of different colours, will be manufactured. It is said that other power weaving sheds are projected at the same place.

The increase in the number of power-loomers in Austria, which attracted attention last year, still continues. During the remainder of this year and the early part of next, several cotton spinning establishments will come into operation with almost a quarter of a million of spindles, which will produce about twenty million pounds of yarn. The establishments are the Teun- valder Spannfabrik, the Theresenthaler Aktien-gesellschaft, G. Borkemlen and Schmel, Win- dreich and Hals, M. F. Ob- lauder, of Eipol, Münster and Co. of Thone- senen, E. K. Nunnemann, of Friedeck, Kühne and Sons of Gotha, and others.