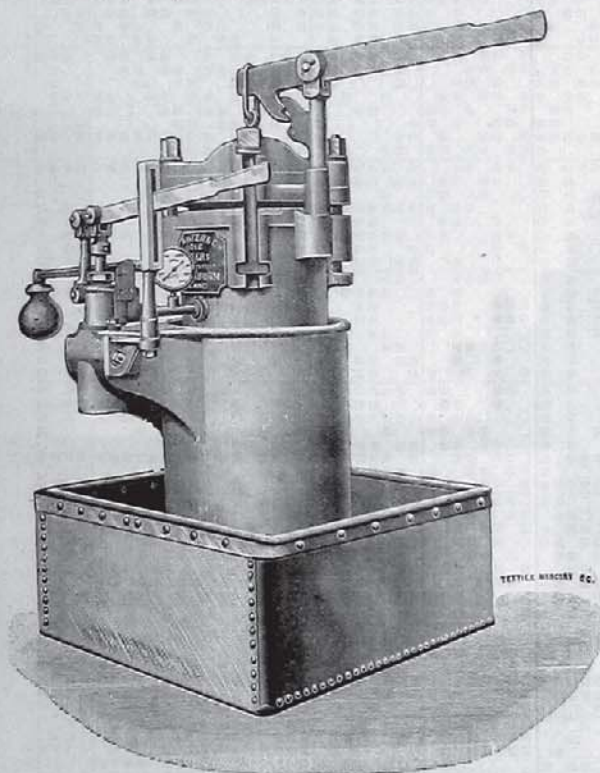


Machinery and Appliances.

IMPROVED PATENT PICKER STEEPER.

MESSERS. JAMES GREEN AND CO., EWOOD MILLS, BLACKBURN.

Exactly twelve months ago we drew the attention of our readers to an appliance invented by Mr. James Green, cotton manufacturer, Ewood Mills, Blackburn, for the purpose of quickly saturating with oil that indispensable adjunct of the power loom, the buffalo hide picker. Without this preliminary treatment, it is to practical persons well known that this article would not last a fourth of the time that it does after thorough saturation with oil. It is

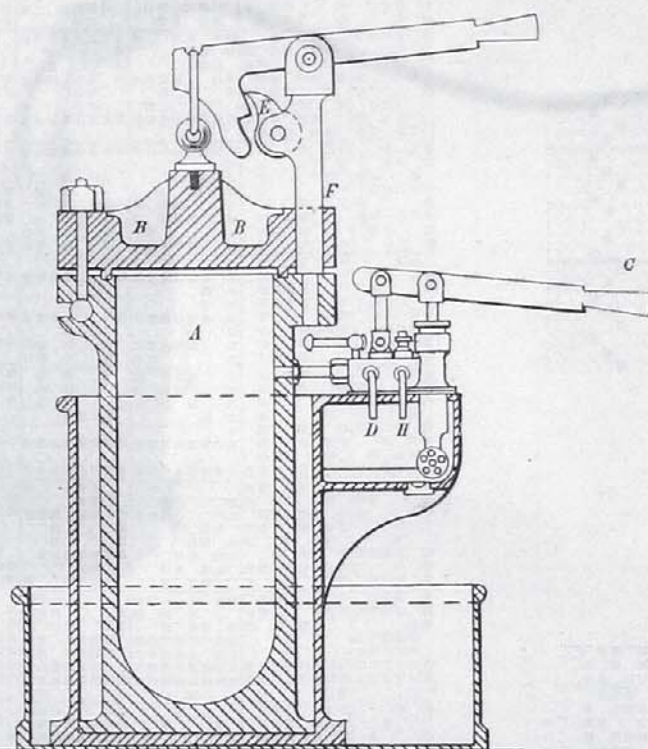


unnecessary to enter fully into the reasons for this, as our readers will find them stated at some length in the previous notice, in *The Textile Mercury* of May 25th last year. As then observed, saturation with oil is the best means of prolonging the life of the picker. The general method of effecting this is an exceedingly slow process, consisting of steeping the pickers in a tank of oil, for a longer or shorter period, but which usually extends over several months. Afterwards they are taken out and hung up to drain and dry, which occupies another considerable length of time. It will be obvious from this that in a large establishment a considerable amount of money must constantly be sunk in the stock of pickers necessary to keep on hand, in order that they may be brought into use in proper condition. There is the further difficulty of being unable to examine or test the quality of pickers as they come to hand, as, under the present system, they are paid for before being put to work.

The picker-steeper or saturator, as previously described, was invented by Mr. Green to remedy these inconveniences.

The accompanying illustrations shew the present and improved structure of the steeper. The cylinder has been encased with an outer chamber for holding water, which, in order to prevent risk of the oil thickening in cold weather, may be heated to the requisite degree by condensed steam, or by steam from a small pipe, or waste water. By this addition any kind of oil may be kept perfectly fluid, and in this way assurance be derived that the pickers will be thoroughly saturated. Of the value of these, from a practical point of view, our readers need no assurance.

The following brief description may render the usefulness of this machine apparent to those who did not see our previous notice. The vertical cylinder *A* is constructed of a capacity to receive ten strings of ordinary pickers, which, having received, the cylinder is filled up with oil, and the cover *n* is bolted down. More oil is



then forced into the cylinder so as to bring the pressure up to 500 lb. per square inch. It has been found that the pickers are then best left under pressure for about a week. In taking them out at the end of this time all that is necessary is to open the relief valve *D* for a moment in order to reduce the pressure, and next to unbolt the cylinder lid. This, by means of the lever handle, which works on a pivot at *F*, can then be raised until the catch *E* engages in the notch on the downward projection on the lever handle. The cover is then swung clear of the cylinder and allowed to drip into the oil tank at the base. On examination, the pickers will be found to be evenly and thoroughly saturated.

We commend the machine to the notice of our readers, confident that they will find it to meet a widely-felt requirement. Mr. Green may be addressed as above.

THE LOUÏE TAGEBLETT has been informed that the Russian Ministry of Finance has recently decided on some important changes in the duty on cotton. The duty on cotton yarn will be considerably increased, and in future the coarser and finer counts will be sharply distinguished.

Bleaching, Dyeing, Printing, etc.

MORDANTS AND THEIR USES.

A great deal of the dyeing of cotton, wool, and silk, is effected by the aid of mordants. Many dyestuffs are not capable of themselves of colouring these fibres, but when the fibre has been previously treated with some other body it can be dyed or coloured with the dyestuffs. These mordants, as they are called, are bodies possessing the property of associating themselves or combining with both the fibre and the dyestuff. Some substances, which are used in dyeing along with the dyestuff, as, for instance, sulphate of soda, cannot be considered mordants, because they do not fix the colouring matter upon fibre, but only act by modifying the rate of deposition or solubility of the colouring

matter. A true mordant remains in the fibre in a state of real chemical combination with the dyestuff, whose final colouring effect is actually due to, and depends upon the presence and the nature of the mordant. Alizarine, for instance, gives red dyes upon all vegetable and animal fibres with alumina mordants. Alumina itself is colourless, while on the other hand alizarine has a dull yellowish colour, very different from the scarlet colours that can be produced by the proper fixation of the alizarine and alumina on the fibre. If alizarine be heated with a solution of an alumina salt, such as acetate of alumina, a more or less deep red precipitate is obtained, which is called a lake. This colour lake, however, has no more tinctorial value than alizarine itself. It can give cotton a rose or red colour, but this is only temporary and comes off with the first washing, leaving the cotton as white as before. If, however, instead of preparing the alizarine colour lake beforehand, the cotton be impregnated with a salt of alumina, and if the alumina be then precipitated within the cotton by a suitable precipitant, the cotton becomes mordanted, and if then dyed in a bath of alizarine, it assumes a red colouration which is permanently fixed on the fibre, and the more perfect the previous precipitation of alumina has been, the better fixed on the fibre will the colour lake be.