

strong boiling is to be avoided. In the case of noils that have but a slight tendency to felt, one and one-half hour's boiling is permissible; but here, too, excessive boiling is to be guarded against, otherwise the weak felting tendency of the material will be still further weakened. As a rule, mohair noils felt most strongly in dyeing, so that in working with this material boiling must almost invariably be avoided and merely a seething temperature be maintained. In the dyeing out of the material the same cautious treatment must be observed.

If noils and wool are to be dyed according to one and the same sample, the best plan is to match each separately, and not to mix the noils and wool until dyed. In that way it is possible to give each material its proper attention. Precaution is likewise necessary in the case of uncarded wool, on account of its non-uniformity. The various colonial wools possess such an endless variety of characteristics that dyers are almost compelled to treat each wool according to its origin. For instance, one kind of wool comes from sheep that rest at night in the sand on the open plain. Such wool is usually not so yellowed as the wool of sheep kept in stalls. Then comes the feeding of the sheep, the washing of the wool, the health of the sheep, and whether the wool be live or dead. All this asserts itself very frequently during dyeing, in the most unexpected ways and in difficulties that involve all kinds of inexplicable phenomena. In spite of all pains and effort, the result can never be guaranteed; it can only be approximated, even if we work according to the customary and well-compiled recipes.

If noils be matched in dyeing and then an effort made to bring the same shade upon loose, uncarded wool, the working of the mixture for one-colored goods will present difficulties only if great non-uniformity exist in the felting tendency of the two materials. If one material felts strongly and the other not at all, a good smooth felt cannot be obtained. The so-called felt, after completion, will be stubby, or, as we may say, not fully closed. Loose and dense places will show, as if the object had been to produce rough, coarse goods. Whether noils and uncarded wool be dyed together or dyed separately, there is one point to be kept in view, says the *Deutsche Farber Zeitung*; both materials must have the greatest possible uniformity as to felting, and they should be alike in other respects as well, such as fineness, etc., in order to assure proper preparation for the manufacturing process.

### RILEY AND THE SCOTCHMAN.

Eugene Field was fond of relating the following story of James Whitcomb Riley: "To beguile the tediousness of the return voyage from Europe it was proposed to give a concert in the saloon of the ship, an entertainment to which all capable of amusing their fellow passengers should contribute. Mr. Riley was asked to recite some of his original poems, and of course he cheerfully agreed to do so. Among the number present at this mid-ocean entertainment, over which the Rev. Myron Reed presided, were two Scotchmen, very worthy gentlemen, en route from the land o' cakes to the land of biscuits upon a tour of investigation. These twain shared the enthusiasm with which the auditors applauded Mr. Riley's charming recitations. They marvelled that so versatile a genius could have lived in a land reputed for uncouthness and savagery.

'Is it no wonderfu', Donald,' remarked one of these Scots, 'that a tradesman sud be sic a bonnie poet?'

'And is he indeed a tradesman?' asked the one.

'Indeed he is,' answered the other. 'Did ye no hear the

dominie intyjuce him as the hoosier poet? Just think of it, mon—just think of sic a gude poet dividing his time making hoosiery!'

### HIDDEN FOR A CENTURY.

Whilst some workmen were employed in taking away the old thatching on the picturesque Swiss cottage in Ledbury Park Gardens (which surround the Herefordshire seat of Mr. Michael Biddulph and Lady Elizabeth Biddulph), they discovered a brown-paper parcel, which had been secreted in the roof for over a century. On opening it, it was found to contain a roll of linen, carefully tied up as if just from the makers. There was also an invoice for the goods, as follows:

Messrs. Pinnocks and Gibbs,

Bought of G. Watson.

1794,  
Sept. 3rd.

25 yards  $\frac{3}{8}$  fine Irish,  $\frac{2}{5}$  ..... £3 os. 5d.

Besides the above there was a written letter, of which the following is a copy,

Gloster, September 3rd. 1794.

Gent,—I duly received yours, value £40, which is plac'd to your credit with thanks. The cloth sent is a make I can recommend, if you think it fine enough, if not I shall have a parcel from Manchester on Saturday at farthest, when I can supply you with any quality you wish, tho' I doubt not but this will answer the purpose of any friend you may recommend it to.

I have got about 12 pieces herdens, cost me from 27s. to 31s., shall charge you only 5 per cent., and at present are worth more money.

Your future commands shall have every attention.

I remain, yours, etc.,

G. WATSON.

In the olden days there was a roadway across Ledbury Park. How the parcel became secreted under the thatch is a mystery.—*Birmingham Daily Post*.

### SOME NEW DYES.

During the year 1901 some 136 new dyes derived from that everlasting source, coal-tar, were put upon the market. Of these, eleven came from English works, twenty from Swiss works, and the rest from German works, a circumstance which indicates the preponderance of German efforts in introducing new dyes. Thirty-two of these dyes belonged to the new group of sulphur dyes now coming so much into prominence, while only nine were basic dyes, which small figure indicates the decay in the development of really the oldest type of dyes. Forty-eight dyes belonged to the direct cotton dyes, 35 were acid dyes for wool and silk, and 12 were mordant dyes capable of being used in wool-dyeing and calico-printing.

### CALCULATING HORSE POWER FOR BOILERS.

The expression "horse-power of a boiler," although frequently used in engineering practice, is highly unsatisfactory on account of its undeterminateness. The American Society of Mechanical Engineers' rule for determining the evaporative efficiency of boilers is practically the standard the world over, but that deals with terms more exact than those used when the ordinary engineer speaks about the horse power of his boilers. No one can calculate what actual horse power can be realized from a boiler without knowing what sort of an engine is to be used; for a boiler which gives 50-horse-power