son. Latham, Alexander & Co. have shown, in a recent report, that some of the bottom lands in Louisiana and Texas have had a remarkable degree of fertility, as much as a bale of cotton to the acre having been grown. This, however, is a maximum, and, as a matter of fact, half that quantity is probably much above the average. Supposing that the conditions are exceptionally favorable, so that the yield per acre is higher than has hitherto been obtained, about 10,000,000 bales will be available, but it is extremely probable that this figure will require considerable discount, and that there will be, so far as can be judged from present indications, a crop of about 9,500,000 bales.

Consulting Chemists. In some of the large cities of the United States where textile manufacturing occupies a good proportion of the invested capital, consulting chemists are now making a good living by analyzing samples of various oils, dyestuffs, and soaps submitted by their clients. The majority of large mills regularly employ an expert chemist, of course, who co-operates with the dyer, and whose duty is to thoroughly test all dyeing materials which are used by the mill. Manufacturers make money by pursuing this policy, the gain much more than balancing the cost of maintaining this department. Few small manufacturers feel that they can regularly employ a chemist, and many seem to work to a large extent upon faith, that is, faith in the strength and purity of the dyes and extracts they are using. The result is frequently indifferent work, and more often exceedingly bad work. If all dyes, extracts, soaps and oils were of uniform quality, if the conditions under which they are used were the same, and if all dyers were experts this faith would not be misplaced. Since the opposite is true, the small manufacturers, and the ones who have not expert chemists in their employ, will further their interests by consulting such an expert when difficulties arise, or when the quality of dyeing materials is in question.

PATENT RUG CASE.

A case of considerable interest to textile manufacturers was tried before Judge Street, in the High Court of Justice, Toronto, in October. The plaintiff in the case, Frederick Bullock, a rag carpet manufacturer, Queen Street West, Toronto, brought action against Andrew Murray, Harriet Murray and Martin Fallon, for infringement of a patent for making reversible rugs from old carpets.

The plaintiff in his statement of claim declared, that after much experimenting, he invented an improvement in the method of weaving reversible rugs from old carpets, and that on the 3rd of October, 1895, he obtained a caveat relating to the invention, and applied for a patent which was issued to him on the 4th February, 1896. Immediately afterwards, he commenced the manufacture of the rugs; but by reason of having conducted his experiments on a loom owned and used by the two defendants last named they obtained a knowledge of the process, and almost immediately started the manufacture of these rugs also. He gave notice to them that they were infringing his patent, but circumstances prevented his taking action at that time; but he served formal notice on them in July, 1896. Defendants paid no attention to this, but continued to make the rugs, and showed them at the Toronto Exhibition in that year. Plaintiff applied for an injunction but was refused. The present action was taken, in which plaintiff claimed damages, and sought to have the defendants each and severally restrained forever from making or selling the rugs in question.

The defendants denied the novelty of the invention, and held that the operation of the device was purely mechanical, and related to the functions merely of the machinery employed. They held that the description of the alleged invention was vague, and the specifications were too wide in their claim, and therefore the patent was invalid. They also held that the invention was known to and used by defendants and others prior to the date of patent, and if the process was patentable, the invention belonged to themselves, as the defendant Bullock had obtained the information used by him in procuring his patent from the defendant, Andrew Murray. Further, the alleged invention, which was a mere aggregation of elements, and not a subject for patent, was described in a book, and was in fact set forth in various patents previously granted in the United States; among others, patent No. 520,400, date 22nd May, 1894, to Edward Cattlon, of Philadelphia; patent No. 184,637, date November 21, 1876, to Jesse B Lincoln, of Providence, R.I., and patent No. 456,147, date July 21, 1891, to Joseph F. Kieswetter, of Toledo, O.

It appeared from the evidence that the patent was taken out in the name of Fred. Bullock and Wm. Douglas, manager of the Toronto *Evening News*, who appears to have supplied the money to Bullock to carry out his designs, and who invested in it to the extent of about $500. The patent claim reads as follows: "The method herein described of producing a reversible rug from old carpets, consisting in cutting the old carpets into strips of suitable length and width, extracting a sufficient number of the upper and lower warp threads on each side of the strip, so as to leave a central core, then twisting each strip in the form of a spiral upon such core and introducing this spiral twist as a waft (weft ?) between the upper and lower warp threads of the loom, then crossing the warp thread in front of the spiral weft, and finally bringing each weft home as set forth." The process of making the rugs consisted in taking an old Brussels carpet and cutting it into strips lengthwise of the piece, each strip being about an inch wide and of a length equal to the width of the rug to be made. The warp threads are then pulled out from each side till only a couple of the centre ones are left, leaving the cross threads of wool filling loose on each side, so that when the strip is twisted the cross threads stand out in all directions, and when put in as a filling thread, forms a thick pile on both sides of the fabric.

It appeared that the defendant, Andrew Murray, removed from Toronto to Chicago, where he was making these carpets, and that the plaintiff also went to Chicago, and while there worked for him, and having got an elementary knowledge of the process, came back and got out his patent. But it was proved that John Murray,