

UNITED STATES PATENT OFFICE.

HENRY HAIGH AND RICHARD HEATON, OF HUDDERSFIELD, ENGLAND.

IMPROVEMENT IN DYEING COTTON, &c.

Specification forming part of Letters Patent No. **41,153**, dated January 5, 1864.

To all whom it may concern:

Be it known that we, HENRY HAIGH and RICHARD HEATON, of Huddersfield, in the county of York and Kingdom of England, dyers, have invented new and useful Improvements in Dyeing Cotton or other Vegetable Fibrous Substances; and we do hereby declare that the following is a full and exact description thereof.

This invention relates to the dyeing of cotton or other vegetable fibrous substances brown, or what is commonly called "catechu brown;" and our improvements consist in dispensing with the bichrome or bichromate of potash, which has heretofore been employed in the after or fixing process of such dyeing, and instead of which we use a solution of lime or other alkaline solutions. By this means we effect a saving in the cost of dye-wares, and the cotton or other fibrous substances are rendered more soft and free from dust, or better adapted for the manufacturing processes.

The manner of performing or putting this invention into practice is as follows: After the fibrous substances have been subjected to the action of a strong decoction of catechu, whether in a hot or cold state, we then place the same

in a bath of lime-water or a solution of lime, which produces a good shade of brown. Other alkaline solutions will answer this purpose; but lime being the cheapest and best for the purpose we prefer to adopt it. If the shade is required to be darker or sadder, then we subject them to bath or a decoction of log-wood, peach-wood, fustic, or other coloring-matter or combinations thereof, according to the particular shade of brown required to be given to the said substances.

We claim—

The use of a solution of lime or other alkaline solutions instead of bichrome or bichromate of potash in the process of dyeing cotton or other vegetable fibrous substances catechu brown.

Done at Manchester, England, this 29th day of October, in the year of our Lord 1863.

HENRY HAIGH. [L. S.]
RICHARD HEATON. [L. S.]

In presence of—

WILLIAM TASKER,
Patent Agent, Old Market, Halifax.

JOHN BLOODWORTH,
Patent Agent, 20 Cross Street, Manchester.