UNITED STATES PATENT OFFICE.

JULIUS C. HURD, OF MEDWAY, MASSACHUSETTS.

IMPROVED PROCESS OF TREATING RAW COTTON.

Specification forming part of Letters Patent No. **17,279**, dated May 12, 1857.

To all whom it may concern:

Be it known that I, J. C. HURD, of Medway, in the county of Norfolk and State of Massachusetts, have invented a new and Improved Process of Preparing Cotton Previous to Picking and carding, which Process is also applicable to the preparation of unspun cotton waste previous to repicking and recarding the same; and I do hereby declare the following to be a full, clear, and exact description of my process and of the peculiarities which distinguish it from other things heretofore known.

All cotton in the state in which it comes to market has more or less of the seed, the boll, and the leaf adhering to it. Some lots of cotton are so foul in this respect that the waste made in the process of manufacturing is so great as to render it of little value, while the yarns and cloth made from it are of inferior quality on account of the motes which they contain. The rough surfaces of these fragments of seed, boll, and leaf adhere so tenaciously to the fibers of cotton that the willow picker and cards have heretofore been unable to remove them entirely.

My invention has for its object to loosen the hold of these fragments upon the fibers before submitting the stock to the mechanical action of the pickers and cards, and this I have discovered may be accomplished by carrying the material in its crude or raw state through the ordinary bleaching process previous to picking and carding it, whereby the hold of the beforementioned impurities upon the fibers is so far loosened that they are easily separated when subsequently submitted to the action of the pickers and cards.

By means of this process, from refuse and moty cotton, waste from the cotton gins, pickers and cards, damaged cotton possessing almost every complexion and color, and which has heretofore been almost worthless, even from the fibers which remain adhering to the cotton-seed after it has been ginned, may be produced the most perfect white material, and where the fibers are too short from the nature of the material operated upon to render them fit to work into spun and woven fabrics they are still applicable to the production of cotton batting and wadding, which possesses the additional advantage that it is free from motes and dust and perfectly bleached.

To enable others skilled in the art to understand my invention, I will proceed to describe the manner in which I have carried it out.

The refuse cotton or the waste after being opened and lightened by a willow is boiled with alkalies and carried through the steps of the bleaching process as practiced with manufactured cotton goods. After the final washing the water is removed by a hydro-extractor, and after being more thoroughly dried the stock is ready to be taken to the picker, which is now perfectly competent to remove the remaining motes, leaves, and other impurities which before adhered tenaciously to the fibers. From the stock thus prepared perfectly-bleached battings and waddings, and even woven fabrics, may be produced; and it is also found that the material will take the most perfect color, which is not the case with unbleached and unprepared cotton. In all cotton-manufacturing establishments much of the waste becomes oiled and unfit for manufacturing purposes. By my process this material may again be rendered available.

What I claim as my invention, and desire to secure by Letters Patent, is—

The treatment of cotton by bleaching previous to picking or carding it for the purpose of removing the motes and trash, as set forth.

JULIUS C. HURD.

Witnesses:
SAM. COOPER,
THOS. R. ROACH.