

Scientific American.

A JOURNAL OF PRACTICAL INFORMATION IN ART, SCIENCE, MECHANICS, AGRICULTURE, CHEMISTRY, AND MANUFACTURES.

VOL. II.—No. 10.

NEW YORK, MARCH 3, 1860.

NEW SERIES.

IMPROVED COTTON-PACKER.

Custom requires Sea Island cotton to be packed in round bags about 8 feet long and 30 inches in diameter. This is a heavy tax upon the planters. It often takes a man and helper a whole day to fill a single bag. It takes some sixty or seventy thousand bags to hold the yearly crop of these fine cottons in the United States.

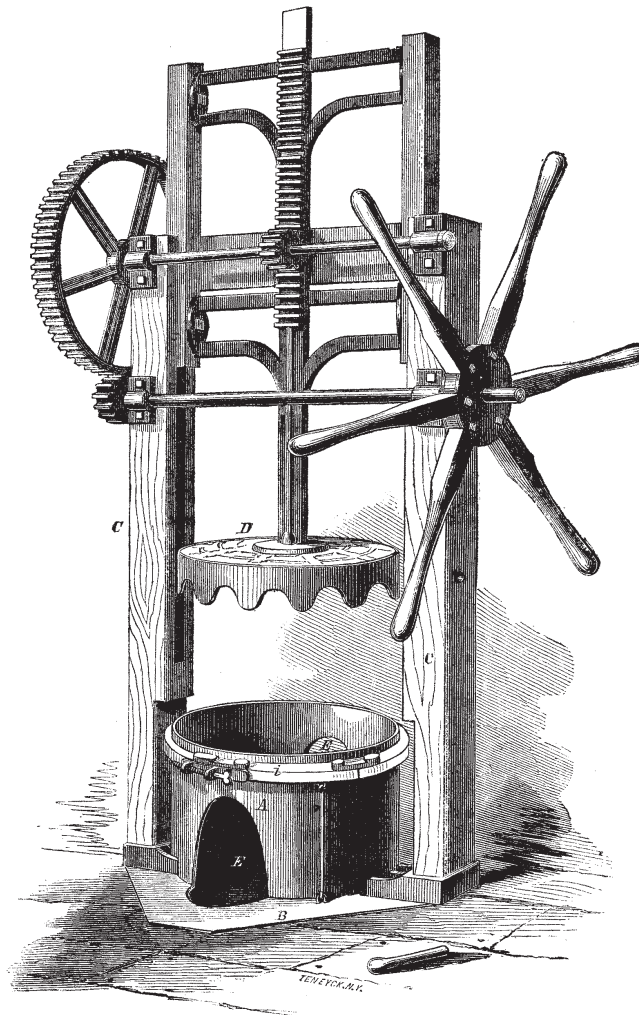
As no suitable machine has hitherto been supplied for this work, it has been necessary for the negro to get into the bag while it is suspended through a hole in the floor, and as the cotton is handed to him to pack it down with his feet, and also pound it with a long, heavy, iron pestle. The strongest and most reliable hands are required for this work. The stifling dust and fine particles of cotton beaten up by this mode of packing and necessarily inhaled by the negro, and the exposure of his person after becoming heated by labor to the cold air which strikes upon him when he has worked himself partly out of the bag, often results in pneumonia, which has thus destroyed many valuable lives. Mr. Lewis S. Chichester, a mechanical engineer of this city, has invented a simple and efficient machine for this work, which we will proceed to describe.

A thin, cast iron cylinder, A, something less than 30 inches in diameter, and 20 inches high, is placed over a corresponding opening in the floor of the gin house. The bottom of this cylinder is surrounded by a broad flange, B, which sustains, from opposite sides, two strong vertical posts of wood, C C. These posts furnish guides for the arms of a rack, to the lower end of which a circular plunger, D, is secured. This rack and plunger are worked up and down by a pinion suitably geared. Openings, E E, are left in the wall of the cylinder and through the flange at two opposite points, midway between the posts. These openings allow the end of the bag to assume its proper shape, and also allow it to stretch out to its full size as it is packed throughout its length.

The bag to be filled is turned inside out and slipped down in folds over the outside of the cylinder, bringing the bottom of the bag into position to receive the cotton. The bag is then clasped to the outside of the cylinder by means of a jointed hoop, F, which surrounds it and is drawn tight by means of a thumbscrew arranged for that purpose. The cotton is thrown into the bag and is pressed into it by the plunger as it is worked downward. The plunger is then raised and a new supply of cotton thrown in, which is likewise pressed into the bag by the return of the plunger. As this operation is repeated the bag is packed, and the hoop being so adjusted as to allow the bag to slip or render over the top edge of the cylinder, at each return of the plunger, it is forced down gradually through the cylinder and floor, and when fully

packed falls into the room below. A bag of cotton is thus properly packed in about an hour by one man, without injury to the staple.

The patent for this invention was secured, through the Scientific American Patent Agency, Dec. 20, 1859, and



CHICHESTER'S COTTON-PACKER.

persons desiring further information in relation to it will please address the inventor, Lewis S. Chichester, or H. G. Evans, 85 Maiden Lane, New York, who has an interest in the invention.

Messrs. Erwin & Hardee are proprietors of this patent right for the States of Georgia and Florida, and inquiries in relation to the matter in those States may be addressed to them at Savannah, Ga., where they manufacture the presses.