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(Illustrated articles are marked with an asterisk.)

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A CENTENNIAL COTTON EXHIBITION.

About a year ago the Cotton Planters' Association of America began to agitate the question of holding a grand Centennial Cotton Celebration, at New Orleans, in December, 1884. The first bale of American cotton ever exported was shipped to England in 1784, hence the significance in having such exhibition next year. But the idea has since grown into a world's fair project, on a larger scale than was even the Philadelphia exhibition of 1876.

ADULTERATIONS—WHAT THE WHOLESALE DRUGGISTS SAY.

Nearly every special line of business of any prominence now has its trade association or organization, for the purpose of discussing matters of common interest and endeavoring to secure united action therein, and also for friendly social intercourse in their more or less frequent gatherings.

This association has always taken advanced ground in its treatment of the matter of adulterations and sophistications, in food as well as in medicines, and has been urgent in its appeals to Congress for such legislation as shall be most effective for their prevention.

A delegate was also present from the American Pharmaceutical Association, and in his remarks indorsed the statement that it was "dishonorable and criminal knowingly to buy or sell adulterated articles that are used as medicinal agents upon which human suffering and life depends."

BEARINGS AND FRICTION.

A bright and well-known mechanic insists that on his swiftest moving journals he obtains the best results with cast iron on cast iron, and he is willing also to depend on an emery-ground fit. Another, perhaps equally authoritative, says that for exceptionally high speeds, as 4,000 revolutions per minute, cast iron and cast iron are inadmissible, but he employs untempered steel and hard Babbitt metal well hammered into the box and then bored out.

COTTON SEED OIL.

When Mr. Edward Atkinson, at the time of the Atlanta Cotton Exhibition, made a most able argument to show the great wealth certain to come to the Cotton States when they began to really utilize cotton seed, which had theretofore been principally a waste product, many people were really surprised that resources for such prosperity already to hand had not previously been employed.

PRESENT STEAM ENGINE PRACTICE.

It is generally believed that the improvement in steam engine economy that has been made within the last fifteen or twenty years has been owing mainly to the introduction of high speed practice—that all, or most of the increase of power for diameter and stroke of cylinder and piston, and most of the economy in fuel, are due to the increased piston speed.

Another instance of the improvements that have been made in engine building and engine practice was noticed at the same establishment, where an engine of the modern type, 11 inches by 21 inches, was performing all the work that had been done until recently by an engine 18 inches by 36 inches that was built about seventeen years ago.

SOME CURIOSITIES OF STEEL.

Eight master taps, or hobs, were made from the same bar of four-inch steel, each cut to a pitch of three to the inch, each scored, heated, hardened, and drawn to temper at the same time. Six hours after the tempering one of them "exploded," or at least cracked into three pieces with a report.

There seems to be a tendency of forged steel, under certain forms, to return to the shape of the original bar. This is shown especially when the forging from a square bar is flattened. Sometimes a flattened piece will curve in the hardening as though its fibers had been stretched, and, when relaxed by the heat and again placed under tension by the cooling process, contracted toward the original condensed square form.