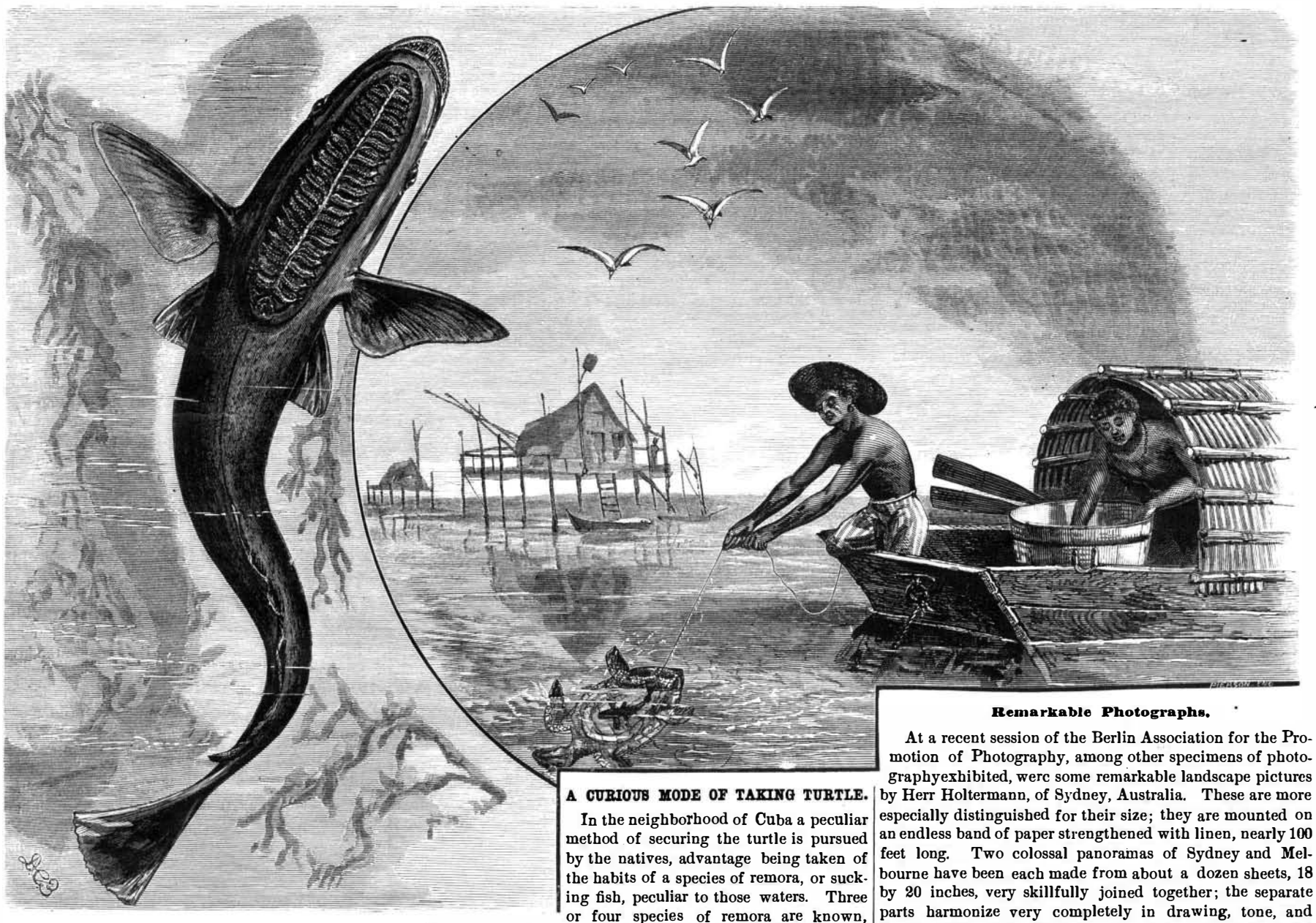
SCIENTIFIC AMERICAN

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

Vol. XXXIX.—No. 26. [NEW SERIES.] NEW YORK, DECEMBER 28, 1878 [$3.20 per Annum. [POSTAGE PREPAID.]



A CURIOUS MODE OF TAKING TURTLE.

In the neighborhood of Cuba a peculiar method of securing the turtle is pursued by the natives, advantage being taken of the habits of a species of remora, or sucking fish, peculiar to those waters. Three or four species of remora are known, having collectively a wide range. The white tailed remora (*Echeneis albicauda*, Mitch.) frequents our North Atlantic coast, and is sometimes taken in Long Island Sound, where is it known as the shark sucker.

The chief peculiarity of all these fish consists in an oval disk on the top of the head and the adjacent parts of the back, the surface of which is crossed by transverse cartilaginous plates, arranged somewhat like the slats of a Venetian blind; on the middle of the under surface are hook like projections, connected by short bands with the skull and vertebræ, and their upper margin is beset with fine teeth. According to De Blainville, this organ is an anterior dorsal fin, whose rays are split and expanded horizontally on each side instead of standing erect in the usual way. By means of this apparatus, partly suctorial, partly prehensile by the hooks, the remora attaches itself to rocks, ships, floating timber, and the bodies of other fish, especially sharks, which it uses either for anchorage or for labor saving transit.

The species of remora inhabiting Cuban waters (called Revé, that is, reversed, by the Spaniards, because its back is usually mistaken for its belly) is employed by the native fishermen in the curious manner shown in our illustration. The boatmen in quest of the turtle carry several revés in a tub, and when they approach their game a properly tethered revé is cast off. On perceiving the turtle the fish quietly attaches itself so firmly that the prize can be easily secured.

Colcomb states that the fish's hold is so strong that it will allow itself to be torn asunder without letting go. This living fish hook is held by means of a ring attached to the remora's tail, and a stout line made of the fiber of palm bark. By a peculiar manipulation the fish is induced to let go its hold upon the turtle when both have been hauled into the boat. The remora is then returned to its tub, to await the discovery of another turtle.

The Trouble with English Cottons.

In an address to his constituents touching the condition of the cotton trade, Mr. Mellor, member of Parliament, lately said that the trade had gone down because of the rascality practiced in the English manufacturing districts. In support of the charge he told a story brought out by a recent county court case at Rochdale. A suit had been brought to recover a sum of money "for sizing 27 warps" for the defendant, a cotton manufacturer. The judge did not understand what "sizing" meant. He asked for an explanation. The plaintiff asked that the court might be cleared while he answered the judge. He was evidently ashamed of the business. The judge would not comply with his request, and he had to explain that "sizing" was "loading" or adulteration of cotton goods. The size consisted of flour, China clay, Epsom salts, chlorate of zinc, chlorate of magnesia, and glue. This was put into the cotton to the extent of 70 per cent, and he had used the size to as high an average as 130 per cent. Indeed, he confessed that there were manufacturers who adulterated their goods with this size as much as 230 per cent. When the witness first commenced business, 20 years ago, he said flour alone was used for sizing, in the proportion of 1 to 20, or about 5 per cent.

Mr. Louis J. Jennings tells, in a recent letter from London to the New York *World*, a story which aptly supplements Mellor's:

"A lady friend of mine was told to-day, on inquiring for some calicoes for children, that the 'Americans were the best—they could be worked on the sewing machine more easily than the English.' 'Why?' 'Well, they are softer. The English goods are stiffened up with size, and consequently do not lend themselves very readily to the sewing machine.'

"When English shopkeepers talk like this," adds Mr. Jennings, "all Mr. John Morley's theories count for very little. In art work, also, American firms are making good headway."

In some parts of Algeria steam plowing has resulted in an increase of 50 per cent. in the yield of wheat.

Remarkable Photographs.

At a recent session of the Berlin Association for the Promotion of Photography, among other specimens of photographyexhibited, were some remarkable landscape pictures by Herr Holtermann, of Sydney, Australia. These are more especially distinguished for their size; they are mounted on an endless band of paper strengthened with linen, nearly 100 feet long. Two colossal panoramas of Sydney and Melbourne have been each made from about a dozen sheets, 18 by 20 inches, very skillfully joined together; the separate parts harmonize very completely in drawing, tone, and depth. The last on the list was a picture which, as could easily be seen, had been printed from a single negative, and its size, 150 by 93 centimeters, showed it to be quite an uncommon photographic feat.

An Insoluble Cement.

A very valuable cement has been discovered by Mr. A. C. Fox, of which details are published in *Dingler's Polytechnisches Journal*. It consists of a chromium preparation and isinglass, and forms a solid cement, which is not only insoluble in hot and cold water, but even in steam, while neither acids nor alkalies have any action upon it. The chromium preparation and the isinglass or gelatin do not come into contact until the moment the cement is desired, and when applied to adhesive envelopes, for which the author holds it to be especially adapted, the one material is put on the envelope covered by the flap (and therefore not touched by the tongue), while the isinglass, dissolved in acetic acid, is applied under the flap. The chromium preparation is made by dissolving crystallized chromic acid in water. You take:

Crystallized chromic acid.....	2·5 grammes.
Water.....	15 "
Ammonia.....	15 "

To this solution about 10 drops of sulphuric acid are added, and finally 30 grammes of sulphate of ammonia and 4 grammes of fine white paper. In the case of envelopes, this is applied to that portion lying under the flap, while a solution prepared by dissolving isinglass in dilute acetic acid (1 part acid to 7 parts water) is applied to the flap of the envelope. The latter is moistened, and then is pressed down upon the chromic preparation, when the two unite, forming, as we have said, a firm and insoluble cement.

An Evener, provided with rubber blocks placed in recesses for the clevis and hammer bolts to rest against, has been patented by Mr. M O. Smith, of Chenango Forks, N.Y.