IMPROVEMENT OF THE MISSISSIPPI.

Capt. Eads is lecturing upon a plan for the improvement of the Mississippi, which would render it navigable for large vessels as far as the mouth of the Ohio. In a recent lecture in Cincinnati, he said:

"Any system of levees which attempts to inclose these wide places in the river, will retain the fruitful cause of its own failure and entail untold cost for maintenance, because the levees are the cause of the rapid destruction of the banks, the crevasses and the cut-offs. They arrest the uniform and speedy passage of the floods to the sea, for at each one of them the current is retarded and the flood hight elevated.

"I do not propose to grapple with the floods, but with the causes which produce them. Throughout the entire basin we see repeated illustrations of the fact that the greater the volume the lower the slope. Turn the waters of Red river down the Mississippi, by closing Atchafalaya, and we will increase the volume and reduce the slope. If it were reduced from the Passes to Red river only a quarter of an inch, it would lower the high-water mark nearly seven feet at Red river, and the same amount all the way up. It would then be steeper than it is for 100 miles below New Orleans. Outlete are pernicious, and inevitably raise the flood line. The river should be brought to a uniformity of width, and where its volume is subdivided by islands, it should be confined to a single channel. I do not propose to shorten or straighten the river. Mature study has convinced me that no cut-offs will be needed to reduce the flood line below the level of the land. I once thought that one or two might be required. The treatment I propose is distinctly a high-water treatment. A uniformity of width of its banks will insure a uniformity of depth, and not less than 20 feet from Cairo to the sea in low water. A uniformity in width will bring a uniformity of current, which will more rapidly discharge the flood, and it will stop the caving of the banks.

"This plan is radically different from the plan of the United State Commission of Engineers. It is different in design, in the theory and in the assumption of existing conditions in the bed of the river. The Commission believes there exists in the bed of the river strata of 'hard blue clay of older formation,' which resists the action of the current 'almost like marble.' I believe the river made the bed it flows in from Cairo to the sea, and that the current can take from it and add to it with rapidity and ease wherever it is made quick or slow. The Commission does not believe there is any and the quantity of sediment carried in the water. I believe that every atom of sand or earth from the moment it enters the river until it is bathed by the salt waters of the Gulf, is controlled by laws as fixed and certain as those that rule the planets.

"In anticipated results these plans are immensely different. One contemplates the flood waters rising from 10 to 20 feet above the surface of the land between levees, which must involve an enormous and never-ending outlay for repairs and maintenance, with no improvement of the channel. The other, in effect, lifts above the floods forever an area equal to the States of Massachusetts, Vermont, Rhode Island, Connecticut and New Hampshire, and opens up 1,100 miles of navigation to the largest ocean shipping into the very heart of the Mississippi valley. It removes from the channel the snags that now infest it, prevents cut-offs and caving banks, and dispenses with the costly and uncertain system of levee protection, without imposing any important burden of maintenance upon the country."

Wonderful as these promises seem, there is little doubt in the minds of those who have intelligently studied the action of the currents in rivers flowing through alluvial soils, that the relation between the velocity of the current and the results mentioned can be attained and 20 feet of water carried from New Orleans to the Ohio.

THE ANTIQUITY OF MAN.

This heavy topic has been last discussed by Prof. Dawkins, of the Manchester, England, Geological Society. He thinks that in taking stock—to use a mercantile term—of the net results of geological and palæontological inquiry during the last session, the additions to our knowledge had consisted in detail rather than the discovery of great principles; and the ground already conquered from the region of the unknown had been resurveyed and more minutely parcelled up, instead of being increased by large slices of territory. He referred to the recent discoveries at Creswell Crags, on the borders of Derbyshire and Nottinghamshire, by which the fact was established that even in the palæolithic age the hunters of the reindeer, horse, mammoth and other creatures were progressive, and that the cave-dwellers of the pleistocene age were to be looked upon from the same point of view as mankind at the present time—as one man, always living and incessantly learning. Among the additions made by these caves to the fauna of the north of England was that of the great saber-toothed *Machairodus latidens*, which hitherto had only been met with in two caverns —in Kent's Hole in Devonshire, and that of Baume in the Jura. The figure of a horse upon a rib bone was identical with those left behind by the hunters of reindeer in the caves of Auvergne, and therefore proved that the inhabitants of the Creswell caves during the time when the same stage of artistic culture as the cave-dwellers of southen France and of Switzerland. From the discoveries in the caves in France, he (Prof. Dawkins) had arrived at the conclusion that these people were represented in the present age by the Eskimos. This, however, must be viewed as a probable hypothesis rather than a well ascertained fact. The evidence offered by all the caves in the area from the Alps and the Pyrenees, as far north as Derbyshire, was clear that paleolithic man lived in Europe while large numbers of reindeer were also living here; or in other words, in the pleistocene state, when the Arctic animals were abundant.

JONES'S CHRISTMAS DINNER.

He delayed his departure for home in the morning until the 10.30 train, arriving there about 12. When he reached the station no one was there whom he could ask with propriety to take his baskets and turkeys home. "Never mind," thought he, "My neighbors will see what a model family man I am, carrying my own dinner home." He experienced some little difficulty in arranging his load, being unaccustomed to carrying more than his coat or umbrella; but started on his walk with the turkeys around his neck, as herewith shown, and numerous bottles sticking suggestively out of the basket.

Meantime there had been a terrible and unlooked-for commotion in Jones's domestic circle, unknown to him, as he came triumphantly up the road followed by a little black dog sniffing at the contents of a bottle of wine which had been broken, and was making a ready track behind him. Biddy, becoming suddenly offended in the morning from some unknown cause, had declined further service, and no "Chinee" being available, and no new girl to be had at that late hour, Mrs. J. was in a state of despair, and was going to get the assistance of some of her neighbors when her husband met her at the door. Wife was very much astonished at the extent of preparation, while her husband's appearance suddenly reminds her of the "Ancient Mariner:"

"Instead of the cross, the albatross,
About his neck was hung."

JONES'S CHRISTMAS DINNER.

Japanese Botany.—An interesting evidence of Japanese education and enterprise was brought to the *Alta* office the other day—a book containing samples of 100 species of Japanese wood, with the botanical name of the genus and the species in Latin and in Japanese, and notes in Japanese. Three samples are given of each species; one transverse and two longitudinal, and of these one radial and the other tangential, or at right angles to the radius. Thus the grain of the wood is shown in every position. The samples are very thin, some of them not the hundredth part of an inch, so that when pasted in the book, they do not make it clumsy. We presume that it is entirely the work of natives of Japan, and though the idea is not original with them, the manner of its execution does great credit to their country. The *Alta* announces that Justin P. Moore has for several years been working at intervals to produce a similar book of the woods of California.

The London *Telegraph* says it has received information that Kars fell through the treachery of a Pasha, who admitted the Russians to a commanding fort, and was paid for it.

The Second National Bank at Lafayette, Ind., has closed its doors on account of a defalcation by the Cashier.

Some of the Supervisors of Rensselaer county, New York, have been indicted for fraudulently auditing bills against the county.

Honey and the Microscope.—Under the microscope, the solid part of honey is seen to consist of myriads of regularly-formed crystals; these crystals are for the most part exceedingly thin and transparent, and very brittle, so that many of them are broken and imperfect; but when entire they consist of six-sided prisms, apparently identical in form with those of cane sugar. It is probable, however, that these represent the crystals of dextrose, as they occur in honeys from which cane sugar is nearly or wholly absent. Intermingled with the crystals may also be seen pollen granules of different forms, sizes, and structure, often in such perfect condition that they may be referred to the particular plant from which the juices have been gathered.

"What do you know about the prisoner?" asked the judge. "Only he's bigoted." "Bigoted?" "Yes, sah." "What do you mean by bigoted?" "Well, jedge," explained the witness, "he knows too much foh one niggah, and not 'nuff foh two."