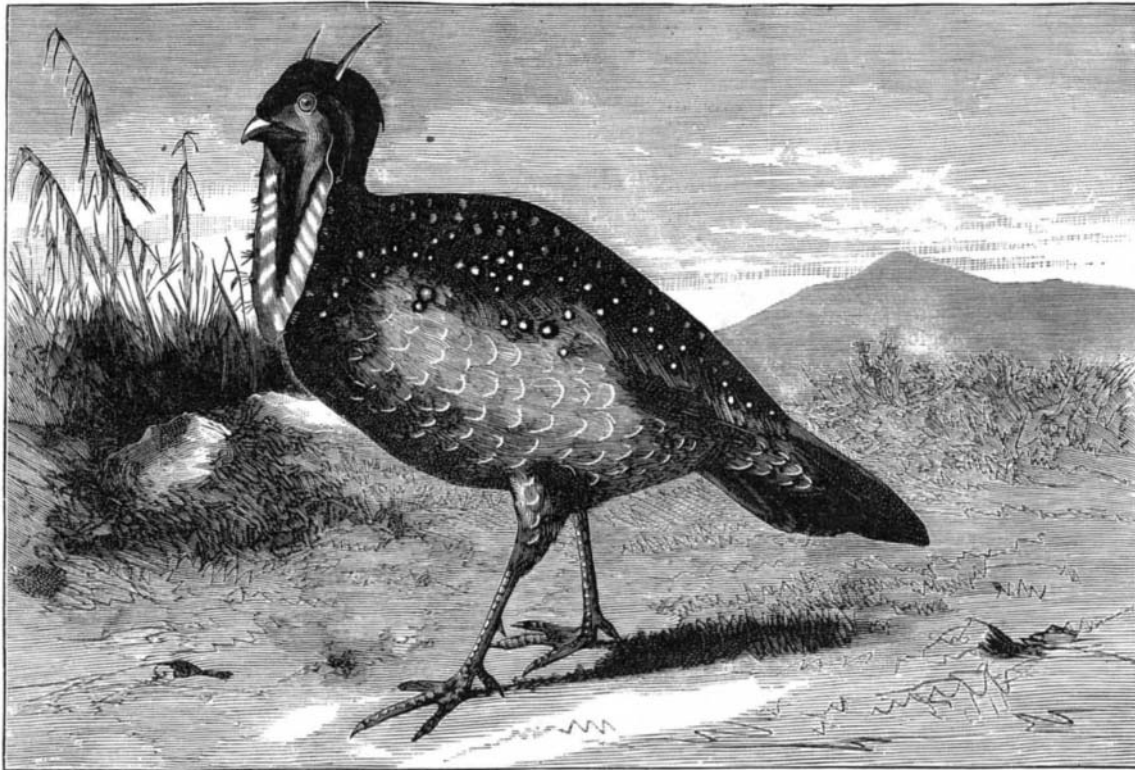


THE HORNED TRAGOPAN.

The horned tragopan is one of the most curious of Chinese pheasants, and is found in the higher and more mountainous districts of Thibet and the Himalayas. Its colors are of the most brilliant description and are of shades which are not usually found among birds; the delicacy and marking of the feathers are very pleasing to the eye. The males, at the time of mating, have bluish horns on the sides of the head and a band of bright colors on the forepart of the breast. The bare skin about the eyes and the wattles are bluish purple, and the feathers of the crest, together with the chin and back of the neck, are deep black. The upper part of the breast, the neck and shoulders are light cinnamon, with a dash of carmine and purple, and variegated by the white eye-like tips of the feathers. The wings and part of the back are rich amber mottled with brown, and decorated with pearlsh-gray spots. The tail coverts are also amber-brown, spotted with white, and extend to such a length as nearly to conceal the short rounded tail. The males are also remarkable for the loose pendent skin which hangs from the base of the lower mandibles and can be inflated at the pleasure of the bird. The horns hang listlessly down the cheeks and can be elevated at will. It conceals itself in the most thickly wooded regions, where the Chinese actively hunt it. They call the horned tragopan by the expressive names of ko-ky, kiad-ky (horned chicken), and of ling-tsiou-ky (starred chicken).



THE HORNED TRAGOPAN.

A TURKISH IRONCLAD.

The Payki Shereef is the name of an ironclad corvette with twin propellers, which was built for the Sultan's Government in England before the obligations of neutrality in the present war forbade English shipbuilders to supply additions to the Ottoman naval forces.

The accompanying illustration is taken from the London *Illustrated News*. The dimensions of this vessel are: Length,

245 feet; beam, 52 feet; depth, 22 feet; displacement, 4,700 tons. She has a central battery, in which she carries four 25-ton Armstrong guns, so arranged as to command an all-round fire, and when firing broadside to concentrate their fire within sixty yards of the vessel's side. The thickness of armor is 12 inches amidships, diminished, as usual, toward the ends, and extending from 5 feet below the water line to the main deck, which is entirely covered with armor 3 inches thick over engines and boilers, and 2 inches thick

beyond. The side armor also reaches to the top of the central battery, which it entirely encircles.

One important feature in the ship is her extreme handiness and quickness in answering the helm. In testing this quality the vessel was found to make the entire circle in a diameter of 420 yards, with engines going full speed, in 3 minutes 30 seconds.

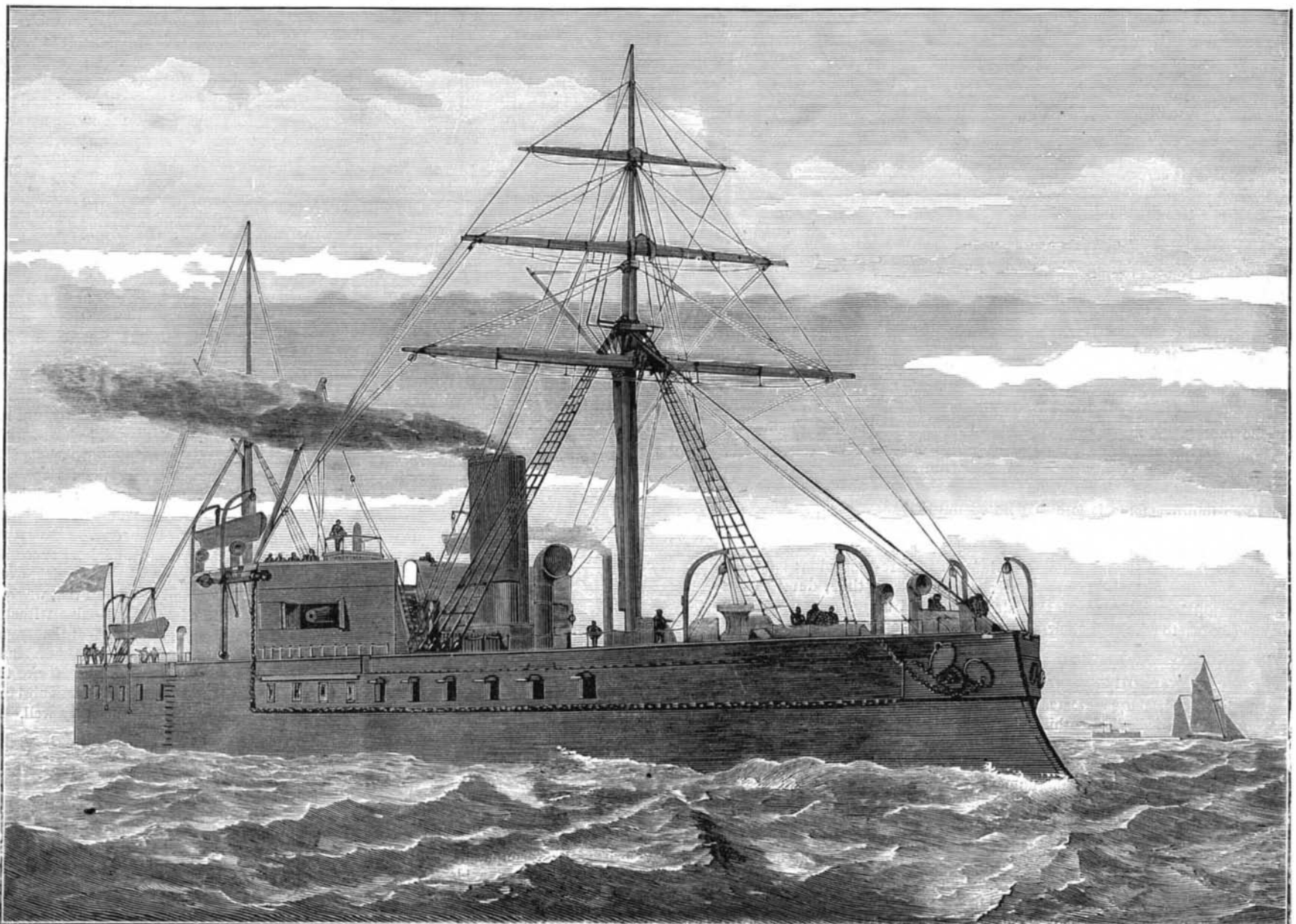
The number of applications for patents in England, last year, was 5,069, the largest yet recorded.

Toughened Glass.

Some experiments were lately conducted by Messrs. Bennett, Royle, Hickson, and Holden, of the Manchester Society of Architects, England, on the strength of thick glass of ordinary manufacture, and also after having been toughened by the Toughened Glass Company's process. A sample of ordinary rough plate glass half an inch thick was first subjected to a test of its transverse strength. A piece, 8 inches by 4½ inches, was laid upon supports 6½ inches apart, and was broken at the first trial by a lead ball, 1½ lb. weight, falling on its center from a height of 2 feet. A piece exactly the same size, which had been toughened, was then tried under similar circumstances. The lead ball, 1½ lb. weight, was dropped upon the center of this plate from a height of 3 feet without effect, and afterward from increased heights up to 8 feet, also without effect.

The weight was then increased to 3 lbs. 10 ozs. which was dropped on the center of the plate from a height of 2 feet without effect, and afterward from increased heights up to 10 feet 9 inches, when the piece broke up. Nine trials were made on the piece with the 1½ lb. weight, and 18 trials with the 3 lbs. 10 ozs. weight, or 27 in all. The next experiment was on ordinary rough plate glass, 1 inch thick. A piece 8 inches by 4½ inches was laid upon supports 6½ inches apart, and was broken at the first trial with a lead ball of 3 lbs. 10 ozs. weight falling on its center from a height of 2 feet. A piece of the same dimensions, which had been toughened, was then tried without alteration of circumstances. The lead ball of 3 lbs. 10 ozs. was dropped upon the center of this plate from a height of 2 feet without effect, and afterward from an increased height up to 20 feet without effect.

In Queensland (Australia) 300 miles of railway, with a gauge of three feet six inches, have been opened to traffic. The weight of the rails is forty pounds to the yard.



THE NEW TURKISH IRONCLAD PAYKI SHEREEF.