SCIENTIFIC AMERICAN

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

Vol. XXXVI.--No. 5. [NEW SERIES.] NEW YORK, FEBRUARY 3, 1877. [$3.20 per Annum. [POSTAGE PREPAID.]

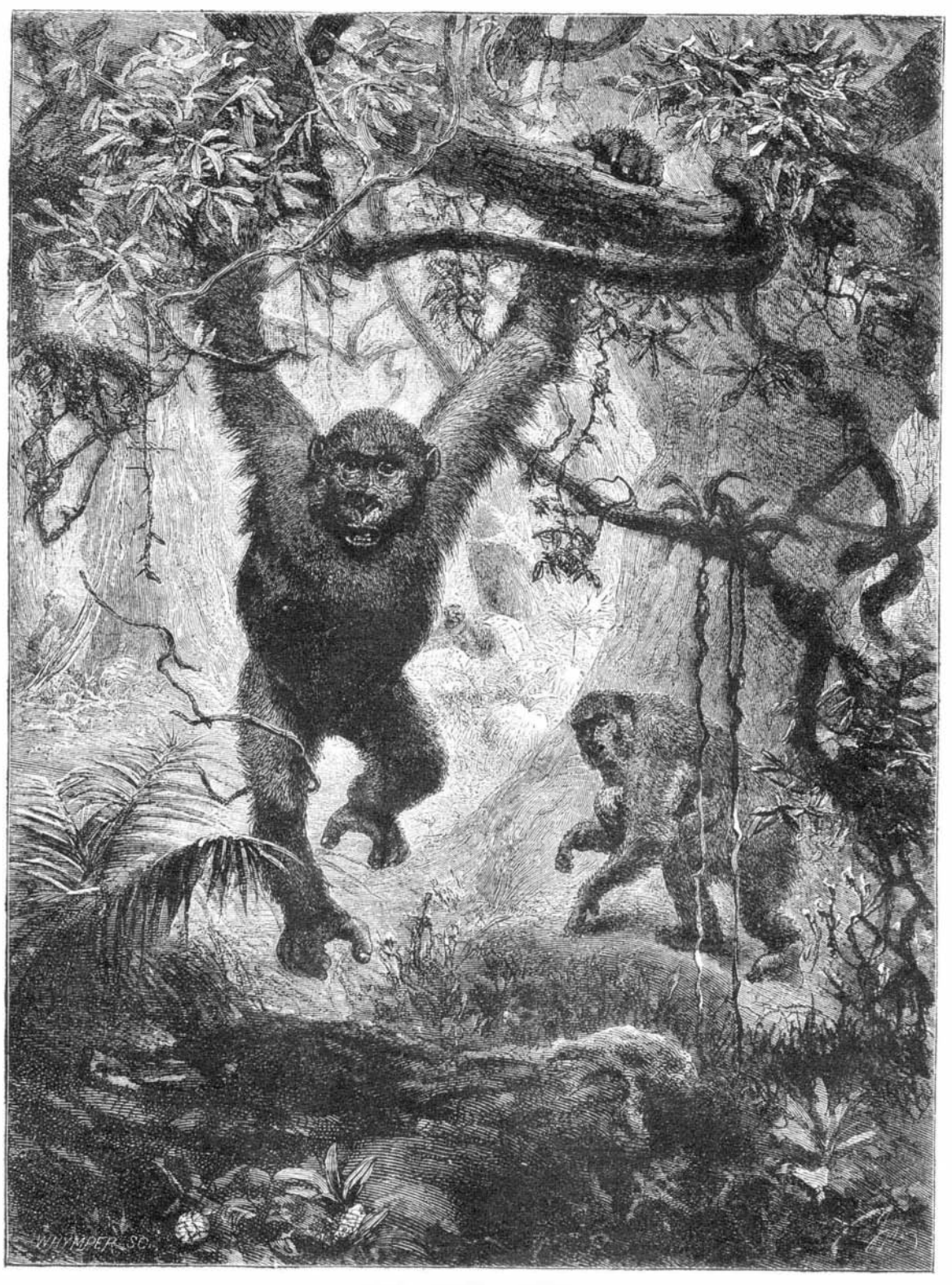
THE GORILLA.

The gorilla is the largest of the anthropoid apes; and since his discovery in 1847, by Dr. T. S. Savage, he has attracted much attention from naturalists. The writings of Du Chaillu have done much to familiarize us with this remarkable animal; and its strength, ferocity, and cunning have made it remarkable, even in these days of natural wonders. The gorilla is chiefly found on the west coast of Africa, both north and south of the equator. It is generally seen in troops of four females and one male; and these never associate with other animals. The muscular power of the gorilla is prodigious. He marches steadily towards his enemy, beating his breast with both hands and roaring terribly; when near enough, he springs upon him, and destroys him by tearing him to pieces. One of Du Chaillu's men was eviscerated by a single blow from the paw of a gorilla.

In the dense forests of the African continent, man can only advance with difficulty; and the miasma that pervades them is sooner or later fatal to mankind. But here the gorilla takes up his abode, and his long arms and prehensile toes enable him to swing himself over long distances between the trees, and thus to wander over large tracts of country, passing each night in a rudely constructed nest made for the purpose.

Some of the antics of the gorilla are amusing, and resemble certain human characteristics to a remarkable degree. Mr. A. R. Wallace had one in Borneo; and when he gave it a piece of food to its liking, it licked its lips, drew in its cheeks, and turned up its eyes with an expression of supreme satisfaction. If it disliked a morsel, it would roll it round on its tongue, and then push it out between its lips. If it could not get the food it desired, it would scream like a baby in a passion.

The specimen shown in our engraving, in his sagacious watchfulness against strangers, is at once on the alert on the approach of a strange footstep; and the intruder who will face such a sentinel must be either very ignorant or very incautious. The picture is so vivid and life-like that it seems almost like a portrait taken on the spot; it is the work of Mr. Joseph Wolf, the eminent naturalist and artist, whose book, "The Life and Habits of Wild Animals," we have heretofore had occasion to notice.



WHO COMES HERE?

A New Wall Paper.

It is now proposed in Germany to make wall paper which will adapt itself to the degree of illumination of the room, becoming darker as the room is more lit up, and *vice versa*. The *Papier Zeitung* suggests to this end paper printed or coated with oxalate of copper, which acts in the manner above described. It is believed that very curious and novel effects of color and shade may in this way be produced on wall papers, and possibly on other materials.

Manganese.

Messrs. Hobbs, Pope & Co., of Boston, Mass., state that the rumored discovery of a mine of pure manganese in Georgia is probably erroneous. They say: It is well known that nearly every State in the Union produces manganese to a greater or less extent, as well as all the provinces of the Dominion of Canada. The mines of England, Saxony, Spain, and Turkey mainly supply the European markets with ore. Manganese of high test and superior quality is obtainable only in limited quantities; while the medium and lower grades of ore, which are obtainable in almost any desired quantity, will often not pay to ship. It is found in inexhaustible beds, like coal; but its deposits are very unreliable, it being almost always found in pockets, or in veins or seams, which can never be relied upon as carrying ore for any specified distance; it is, in fact, next to impossible to estimate the yield of a manganese mine for a specified time.

NOVEL CAVALRY EQUIPMENT.—It is intended to supply slabs of gun cotton as part of the cavalry equipment, to be carried in a sort of waist belt, and used, if necessary, for the destruction of railways, stockades, etc., for which purposes gun cotton has proved the most powerful of all explosive agencies, while it is the safest and most convenient to carry.

Late Theories on the Earth's State.

Is the inside of the earth fluid or solid? Even in such an apparently simple question as this we are still in some degree of doubt. You may think this is strange, because we find volcanoes throwing out lava, which is liquid rock, and because we find much other geological evidence to show that solid rocks, such as basalt and trap, have been protruded as molten masses within recent geological epochs; but it has recently been shown by Mr. Malletthat the fact of volcanoes throwing out liquid rock may not be inconsistent with the view that the earth as a whole is solid. Mr. Mallet's investigations go to prove that this liquefaction of the rocks which we observed may be produced at no very great depth from the earth's surface by the shifting and rubbing together of the rocks, owing to cracking due to the alteration of the temperature, just as boys at school rub a button on the bench until it is hot, when they often place it on to their neighbor's cheek. Applying the laws of the mechanical theory of heat to this problem, Mr. Mallet believes that the friction of the rocks, caused by the secular cooling of the earth and the consequent shrinkage, is a sufficient and a satisfactory explanation of the occurrence of the high temperature of volcanic action.

Sir Wm. Thomson, also, than whom no one is more capable of expressing an opinion, decides in favor of the earth's solidity. He tells us in his address to the Physical Section at Glasgow, that the conclusion concerning the solidity of the earth originally arrived at by Hopkins is borne out by a more rigorous mathematical treatment than this physicist was able to apply; so that the idea of geologists, who were in the habit of explaining underground heat, ancient upheavals, or modern volcanoes by the existence of a comparatively thin solid shell resting on an interior liquid mass, must now be given up as untenable.—*Professor Roscoe.*

A New Ornamental Panel.

Mr. William Bleiss, of New York city, has patented through the Scientific Patent Agency, December 5, 1875, a very tasteful frame or tile for decorative purposes, which he prepares from a glass plate having a roughened or crystallized surface, on the back of which the design is traced in suitable colors to represent the seams between the pieces composing a mosaic. Transparent colors are then laid over portions of the work, and gold leaf is laid over the entire surface of the glass, and a backing added, which is composed of any material that will protect the surface and form a durable coating. The effect is very handsome; and as the paint will not crack or blister, the panel may be used in place of encaustic or other tiles for the exterior ornamentation of buildings.

THE head of a bolt is usually about twice the diameter of the spindle, and of a thickness which is generally greater than five eighths of that diameter.—*Rankine.*