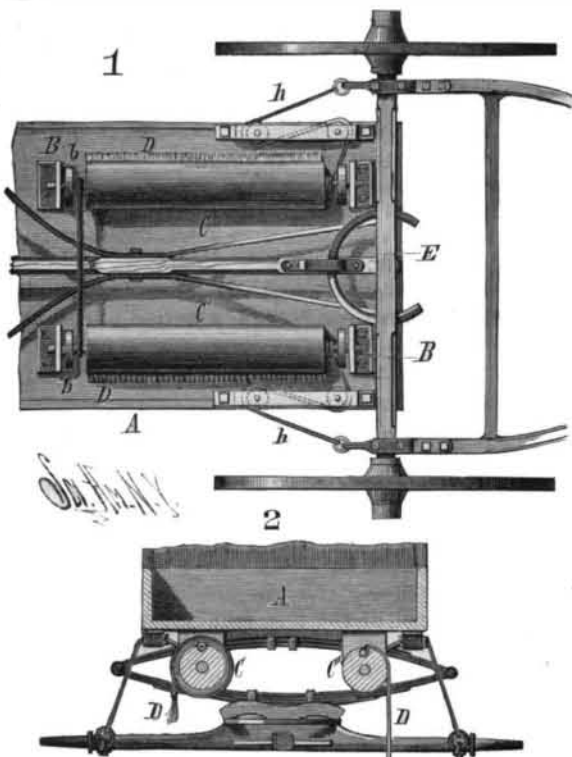


CARRIAGE SCREEN.

The object of the invention herewith illustrated is to provide screens to be operated by the forward axle of a carriage when turned or cramped, for screening from the view of bystanders the limbs of persons entering the carriage or descending from it. The rollers, C C', are placed in hangers secured to the floor of the body, as shown in the inverted plan view, Fig. 1, Fig. 2 being a cross section. Between the ends of the rollers and hangers are disks, *bb'*, and on the spindles between



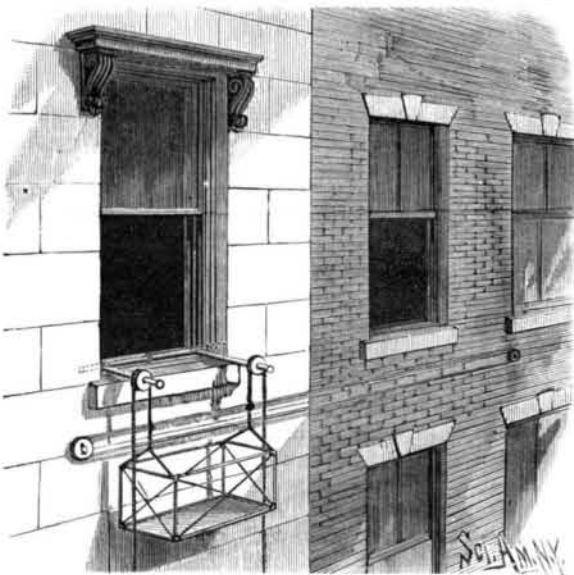
MOORE'S CARRIAGE SCREEN.

the disks and rollers are thus formed spaces for receiving cords. The screens are held to the rollers by means of spring clips. A rubber cord or spring is so arranged as to rewind the screens when they are released. Around the spindle of each roller is wound a cord, *h*, which is led around pulleys as shown, and attached to the outer part of the forward axle. These cords are oppositely arranged with respect to each other, so that when the axle is turned the cord of the advancing end of the axle will be pulled and unwound from its spindle, thereby causing the roller with which it is connected to turn in a direction to unroll the screen, while the cord connected with the opposite end of the axle will be rendered slack, thus allowing the rubber spring on the roller connected with that end of the axle to wind up the screen. In this manner, whenever the wagon is cramped to permit a person to enter or leave it, the screen is automatically unrolled.

This invention has been patented by Mr. W. M. Moore. Further particulars may be obtained from Messrs. Hanchett & Moore, of Empire City, Colo.

FIRE ESCAPE.

The outer ends of two bars united by a telescopic joint are arranged to enter sockets formed in the window casing, and each bar carries an outwardly pro-



FOGARTY'S FIRE ESCAPE.

jecting arm, upon which a sheave is mounted. The inner ends of two wire ropes, passed over the sheaves, are attached to a car made of piping, and the other ends are within reach of persons standing upon the ground. By means of this device, which may be quickly put in position at any window, persons may be easily raised or lowered; and by means of the horizontally placed wire rope, which passes over suitable pulleys, as shown, goods or persons may be passed from one house to another, and when necessary this

rope may be arranged between windows not upon the same level. The simplicity in construction and the ease and rapidity with which this fire escape can be operated are apparent.

This invention has been patented by Mr. Patrick Fogarty, of Milwaukee, Wis.

One and One-quarter Pound Boats.

On the 24th of July the new screw steamer Somali, recently built by Messrs. Murdoch & Murray, Port Glasgow, and engined by Messrs. J. Gilmour & Co., Glasgow, had her official trial trip at Wemyss Bay, on the Clyde. She is a vessel measuring 160 ft. by 26 ft. by 10 ft. 9 in., and is intended chiefly for employment in transporting the native troops from depot to depot (as required by the Indian Government), together with passengers, pilgrims, cattle, and goods. Her engines are of the triple-expansion type, the cylinders being respectively 13½ in., 21 in., and 34 in. in diameter, with piston stroke of 24 in., and working at a steam pressure of 150 pounds per square inch. Her fittings and arrangements for artificial ventilation are very complete. On the measured mile, and at high water, the speed developed was 10 knots per hour, the engines indicating 395 horse power, with 110 revolutions per minute, at a pressure of 145 pounds per square inch, and the vacuum at 27 in. The fuel consumption was at the rate of 5 tons of good coal per 24 hours, or 1¼ pounds per indicated horse power per hour. After running the measured mile twice she proceeded on her voyage with a full cargo for Aden. She is owned by the Somali Company, of Liverpool.

July 31, the magnificent steel screw steamer Saale, the eighth vessel built by the Fairfield Shipbuilding and Engineering Company for the North German Lloyd's, had a trial of her steaming powers on the Clyde, the run extending from Wemyss Bay to Ailsa Craig and back. She is a vessel of 5,400 tons, measuring 455 ft. by 48 ft. by 36 ft. 3 in., and is fitted with triple-expansion engines of about 8,000 horse power. A speed of nearly 18 knots per hour was obtained, the fuel consumption being only 1¼ pound of Scotch coal per indicated horse power per hour. The boilers are of steel, and six in number, working at a pressure of 150 pounds per square inch. The vessel is constructed to carry 224 first class, 94 second class, and 850 third class passengers, with a crew of 170. Eight first class steamers, of which the Saale is the last, have been placed on the Atlantic within five years.

Natural History at Central Park.

Several fine specimens of the "masked" quail, a newly discovered species, have arrived at the Museum of Natural History, Central Park, New York. The species is called "masked," or Arizona Bob White (*Colinus ridgwayi*). The male is colored below like a robin, while the adult female is lighter or grayer.

The masked quail is properly a Mexican bird, being found only in the southern portion of Arizona. It has, however, been long known in Arizona, but mistaken for the Bob White of the East.

A live specimen of the scarlet-faced monkey, a rare and curious species, and the first of its kind ever brought here, has been on private exhibition in the Zoological Collection at Central Park for several weeks. There being no available funds for its purchase, it was sent last week to the Philadelphia Zoological Garden.

His face is a bright scarlet; the top of his head is gray, the back vermilion, and long grayish whiskers grow under his chin and curl up over it. The coloring is so bright that, when first seen, the animal looks as if he had been daubed with paint.

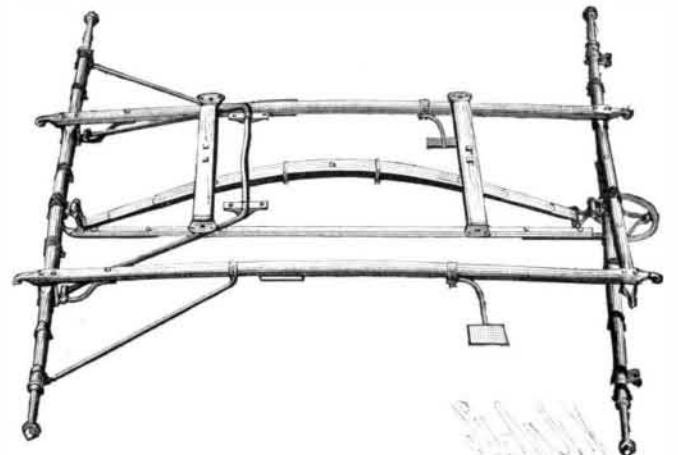
The scarlet-faced monkey, or, technically speaking, the *Brachyurus rubicundus*, is, as its name would denote, short-tailed as well as red-faced, and is comparatively new to the naturalist. It is found near the upper Amazon, in South America, and when several stuffed specimens were taken to England, a year or two ago, it was supposed, so general is the long tail among monkeys, that these specimens had been partly denuded of tail in order to make them appear the more curious. It is definitely known now that this was not the case, and that the scarlet-faced monkey has only a rudimentary tail. The animal has reddish-yellow eyes, and its body, from neck to flank, is covered with long whitish hair. There is another species, of which specimens have not yet been obtained, which has long red hair.

Superintendent Conklin, of Central Park, has made a "wallow" for the herd of twelve elephants now there, and every afternoon one of the keepers turns a hose on to the animals, much to their delight. They have come to understand the use of the hose, and each, in turn, comes up to take it with his trunk and turn it first upon himself and then upon his mates.

When the "wallow" is filled with water, the hose is removed, and the animals spend the balance of the day rolling about in the mud.

IMPROVED SINGLE SPRING FOR VEHICLES.

The illustration herewith shows a means of arranging a single spring for four-wheeled vehicles in such way that, when the box and spring are depressed, both sides of the box must be depressed equally, whether the load is located in the center of the box or not. The front and back axles are connected by the reach in the ordinary way, and upon the front axle is a bolster connected with the rear axle by the side bars, the bolster and the rear axle having each a shackle, to which the ends of a flat upwardly curved spring are secured, the box or body of the vehicle being attached to the spring by suitable bolts and plates. The equalizer is a bail-shaped iron rod, the middle portion of which is pivoted at each side to the under side of the body, in rear of the attachment of the spring, and the wrists of which are journaled in boxes formed upon the irons which brace the side bars to the rear axle. Constructed in this manner, the vehicle is a practical one in all respects, and is cheap and durable.



SCHIEDT'S VEHICLE SPRING.

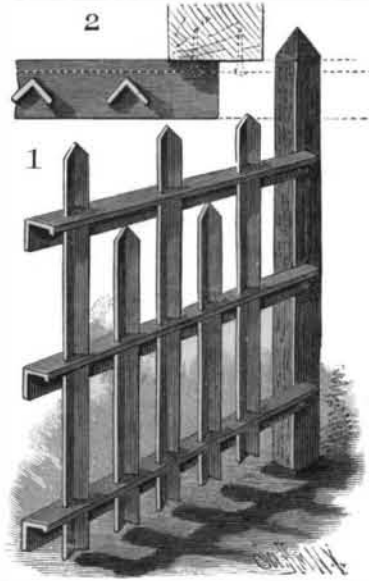
This invention has been patented by Messrs. Peter and Charles Schiedt, of Saranac, Mich.

Bakusine.

The patent of Herr Albert Muller (described in the *Chemiker Zeitung*) consists in mixing 100 parts of petroleum or crude naphtha and 25 parts of castor oil, or any other vegetable oil, with 60 to 70 parts of sulphuric acid at 66° B. The whole is well stirred, and is mixed with two or three times its own bulk of water. After standing for some time, the watery layer underneath is removed. The whole is let stand for some days, and is carefully neutralized with soda or potash lye. The lubricant thus produced (known as bakusine) is then packed in casks or cases.

SHEET METAL PICKET FENCE.

This light, durable, and simple sheet metal picket fence is the invention of Mr. John H. Crisp, of 519 Clinton Street, Chambersburg, Trenton, N. J. The bodies of the horizontal rails, which are shaped as shown in the perspective view, may be placed horizontally or may have a slight lateral inclination. In the bodies are formed V-shaped slots to receive similarly shaped pickets, as shown in the plan view, Fig. 2. In forming the panels, the pickets are driven up through



CRISP'S SHEET METAL PICKET FENCE.

the slots, thereby forcing the V-shaped tongues of the slots upward. When the pickets have been forced into place, the tongues are driven back into the planes of the bodies of the rails, so as to firmly clasp the pickets. The completed panels are then galvanized, the galvanizing material filling the joints, and acting as a solder to further secure the pickets in place. The ends of the rails are nailed to the post, or the ends may be bent at right angles and nailed to a post set in the line of the fence.