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Bound volumes of the SCIENTIFIC AMERICAN and SCIENTIFIC AMERICAN SUPPLEMENT, for 1879, are now ready, and for sale at the office of publication. Orders are also filled by all News Agents.

NOVEL SIEVE.

The engraving shows an improvement in flour sifters recently patented by Mr. L. H. Thomas, of Reading, Mich. It may be used for sifting the flour, and after it is sifted the

**IMPROVED SIEVE.**

flour may conveniently be carried in it from the bag or barrel to the tray in which it is to be mixed. A series of annular projections are formed on the handle, and marked with the quantity or weight the sieve would contain when filled to that point.

The method of using the sieve is to take it by the handle and plunge it into the flour or other material to be sifted, giving it at the same time a rotary motion. The flour passes inward through the meshes of the sieve, filling it to the point desired.

NOVEL TAP FOR TIN CANS.

We give herewith an engraving of an improved tap for tin cans recently patented by Messrs. John T. Cooper and Julius Wagner, of Silver Reef, Utah Ter. The invention is shown in perspective in Fig. 1, and in section in Fig. 2, and it consists of a bell-shaped body, A, provided with a stopcock, E, and having a central spindle extending through it, carrying at one end the triangular sharp-edged head, B, and at the other end a wing nut, D, for drawing the bell-shaped body against the head of the can. The body, A, is provided with an annular packing which insures a tight joint between it and the can, and a packing ring is placed upon the spindle, B, below the nut, D.

The tap is applied to a can by projecting the triangular head some distance beyond the body, then forcing it through the can top and turning it through a quarter of a revolution, and finally drawing the body, A, tightly against the can top by turning the wing nut.

After the tap is once in place the contents of the can may at any time be drawn out through the stopcock, E.

This device is of great utility when it is desirable to use only a portion of the contents of the can at a time, as it prevents the remainder from evaporating or becoming spoiled by contact with the air. Aside from this it has the advantage of convenience, being capable of ready application to cans of any kind.

A Large Merchant Steamer.

A steamship which promises to be the largest and finest vessel in the world is now building at Barrow, England, for the Inman line. Her dimensions are to be as follows: Length of keel, 546 feet; length over all, 590 feet; breadth of beam, 52 feet; depth of hold, 38 feet 9 inches, and depth from top of deck houses to keel, 52 feet. Her measurement will be 8,300 tons, or over 2,000 tons larger than either the City of Berlin or the Arizona, and 800 tons larger than the Servia, the Cunard steamship now under construction.

The vessel will be finished in about a year, and will bear the name "City of Rome." Her engines will be of 8,500 horse power with six cylinders, three of which are high pressure and three low pressure. There will be eight boilers, heated by 48 furnaces, and a speed of over 18 knots is expected.

The City of Rome is to be built of steel, with a double bottom, and 11 bulkheads. Two longitudinal bulkheads are to be run through the engines' and boilers' space to decrease the danger of the vessel's sinking in case of collision. The top decks are to be of the best teak. The saloon and state rooms will be placed amidships, and accommodations provided for 300 first class passengers.

Was Adam a Peruvian?

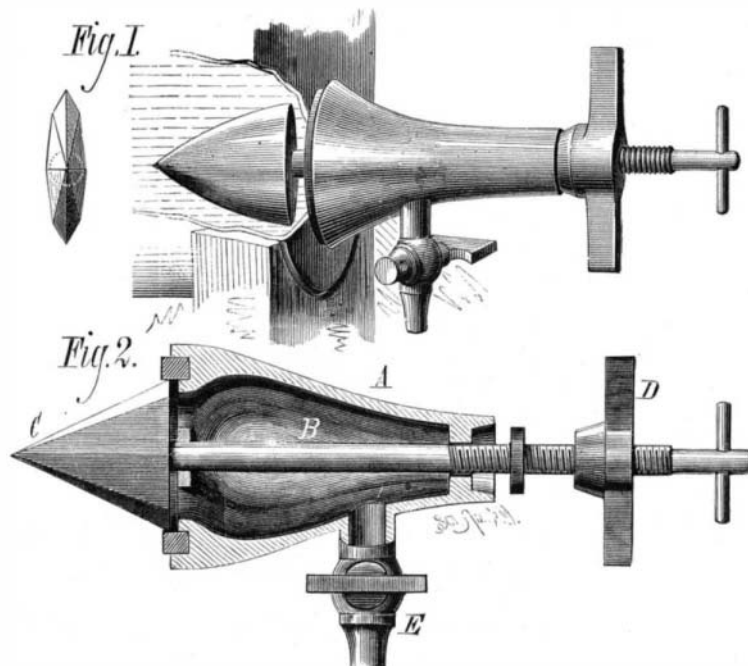
Dr Rudolf Falb, whose linguistic researches in South America have already been noticed in this paper, has lately sent to a Vienna paper a summary of his conclusions. He says that the language spoken by the Indians in Peru and Bolivia, especially in Quichua and Aymara, exhibit the most astounding affinities with the Semitic languages, and particularly with the Arabic—in which tongue Dr. Falb himself has been skilled from his boyhood. Following up the lines of this discovery, Dr. Falb has found, first, a connecting link with the Aryan roots, and, second, has arrived face to face with the surprising revelation that "the Semitic roots are universally Aryan." The common stems of all the variants are found in their purest condition in Quichua and Aymara, from which fact Dr. Falb derives the conclusion that the high plains of Peru and Bolivia must be regarded as the point of exit of the present human race.

John Bright on the United States.

On returning from his visit to this country Mr. T. B. Potter, M. P., was given a demonstrative welcome by the Rochdale Reform Association. In the course of his remarks with regard to his visit, Mr. Potter said that after coming here from the commercial depression of England and its policy of imperialism he seemed to regain faith in the future of humanity and confidence in the English race. In America, if not in England, the people were untainted by the shallow doctrines of Jingoism and free from the benumbing social influences of privilege in church and state. He would advise all of them to go and take their wives with them. It was his pleasing duty to convey to Mr. John Bright the messages of affection and gratitude with which he had been charged from meetings in every part of the United States which he had visited, and the ardent hopes of all, from the President to the artisan, that "he will not die until he has seen America."

After expressing his regret that he had been and probably would be unable to visit America, Mr. Bright spoke at great length and with great eloquence upon the present condition and future prospects of the United States. Touching the size of the United States, he said:

"You know that France is considered rather a big country in Europe, but the United States would make fifteen times France, it would make fifteen times Germany, it would make twelve times Austria, and it would make twenty-five times Great Britain and Ireland. If you look at the map of the United States you will find in the extreme south a State which is called Texas. The size of the single State of Texas is 274,000 square miles. Austria is only 240,000, Germany is only 212,000, France is 204,000, the United Kingdom is

**IMPROVED TIN TAP.**

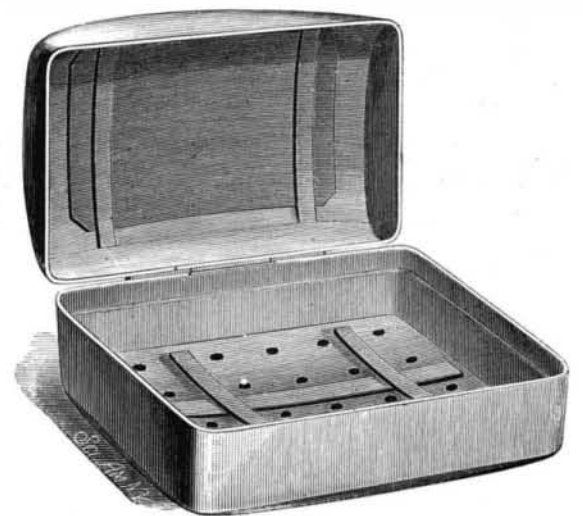
120,000. Texas can afford 2,000,000 acres of land to grow 12,000,000 bales of cotton, which is now about equal to the whole production and consumption of cotton each year over all the globe. This country that I am discussing has only been a country in a certain sense for one hundred years. A hundred years ago it consisted of thirteen small colonies dependent upon this country. Its population now has reached 50,000,000, which is about one-half more than the whole population of Great Britain and Ireland at this date, and I have no doubt but that there are scores in this room, if they live to the age to which I have attained, who will live to see the day when the population of the United States will pass in numbers 100,000,000 of people."

Coursing through the Air.

We have been written by a party who proposes to guarantee to any person of known responsibility, who wishes to take an interest in it, that he will produce a method by which he can direct his course through the air, the activity of which will be in proportion of the weight to the power used.

SOAP AND SHAVING BOX

The combined soap and shaving box shown in the accompanying engraving is the invention of Mr. Anton Hopfen, of New York city. It is composed of three main parts, the lid, the body, and the bottom. The latter is perforated to admit air, provided with cross bars to hold the soap up, and it may be pushed out or extended if required. The cross bars prevent the soap from stopping the perforations in the bottom. The cover of the box contains a piece of flexible rubber, held in place by two straps.

**COMBINED SOAP AND SHAVING BOX.**

This box is especially intended for travelers, and can be used as a shaving box by extending the bottom and covering the perforations with the flexible rubber.

PIGEONS BY THE MILLION.—The celebrated pigeon roost in Scott County, Indiana, is now, as it has been for seventy-five years, the roost of millions of pigeons. They fly away in the morning to their feeding grounds, many of them going to such a distance that they do not return until midnight. The timber on thousands of acres covered by this roost is broken down badly, large limbs being snapped off like reeds, by the accumulated weight of the birds. Thousands are killed nightly, but the slaughter seems to make no diminution in the vast flocks that congregate there.

A New Marble Working Machine.

The *Herald and Globe*, of Rutland, Vt., describes a new marble cutting machine, lately tried in that town, and pronounces it the most effective it has seen.

The principle of the cutting tool consists in the pivoting of one or more toothed wheels or disks to an upright revolving spindle (the teeth of the wheel flush with the end of the spindle), with the axis of the wheels on a different line (in some cases at right angles) to that of the spindle. The revolutions of the spindle, with the teeth of the wheels pressing upon the material to be cut, cause the wheels to revolve so rapidly that the teeth chip the marble at the rate of sixty thousand strokes per minute. The wheels are set at various angles to the line of the spindle, depending upon the work required to be done, and as this arrangement will channel, turn, and flute a column, countersink, mould, panel, letter, and do filigree work, quite a number of different settings are required. Each spindle has about thirty-eight chisels or teeth, and revolves from 1,500 to 3,000 times a minute, thus giving the number of strokes stated above.

Power is communicated to the tool by means of a flexible shaft. The machine is said to work with astonishing rapidity and very economically.

Pig Iron Advancing.

Prices of pig iron are bounding upward again, and, according to the *Hardware Reporter*, some of the more thoughtful iron-makers are feeling uneasy. They fear that values are going to reach a point from which they will drop with a thud one of these days. It was thought some time ago that the English market would regulate ours, but this is proving a delusion, as prices there are bounding upward to as giddy a height as they are here. In other words, instead of the English market controlling ours, the reverse is the case. The cause of the whole trouble is a scarcity of ore. If all the American furnaces were in blast they could meet the enormous demand; but many of them cannot blow in for want of ore—and we notice by our late English exchanges that the same is true with many furnaces in Wales.