

**A SIMPLE MOLD FOR COMPOSITION ROLLERS.**

The base-filling method of casting printing-press rollers is more desirable than the old method of top-filling, because it removes, to a large extent, the liability of flaws. A simple casting-outfit which employs the base-filling method and which is designed to meet the requirements of the average printing-establishment has been invented by Eugene Stough, of Sioux Falls, S. D. The combination-bases used in this device will cast three rollers simultaneously, an evident advantage if there be three sizes of presses using three sizes of rollers.

The combination-base at one end is turned to fit casting-tubes classed as "eighth medium," and the opposite end is adapted to fit tubes classed as "half medium." The intermediate size is produced by means of a ring or bushing whose inner diameter permits it to fit over the crown end of the base for the eighth medium size of tube, and whose outer diameter corresponds with the "quarter medium" tube. The base of each mold is formed with a longitudinal opening which contracts at the center. This opening receives the shank of the roller-stock, the contraction at the center facilitating the seating of the shank. Extending longitudinally through the base of each mold is a feed-orifice leading to both crowns and communicating with a feed-pipe. The various feed-pipes are connected with a central supply-tube surrounded by a funnel of sufficient capacity to enable all the molds to be filled simultaneously, a tapered wooden plug being used to close the outlet until the funnel has received its supply of composition and to control the feeding of the liquid mass. Caps are used to close the tubes when the composition has risen to the top. When set, the rollers are withdrawn in the usual manner.

STOUGH'S MOLD FOR COMPOSITION ROLLERS.

The Eastman "electro-cycle" is built along the lines of the bicycle, indeed, it might be called a "bicycle-carriage." In the words of its designer, "The bicycle was the principal incentive that has again inspired invention to solve the problem of self-propelled road vehicles, and must be the starting point in the evolution of the new automobile that is to come and stay. The bicycle, taken as a whole, embodies grace and completeness, yielding a maximum of speed with the expenditure of a minimum of power, and these features are eminently essential in the automobile."

**THE EASTMAN "ELECTRO-CYCLE."**

The "Electro-cycle," shown in our engraving, was designed by Mr. H. F. Eastman, of Cleveland, Ohio. The frame is of steel tubing, the side panels of sheet steel, muffled and insulated, so as to be noiseless and practically indestructible. The construction admits of great rigidity combined with extreme lightness. The battery and motor weigh more than three-quarters of the total amount. There are three speeds forward, and one backward. Speed is regulated, the carriage reversed, and the coasting brake is applied all by means of one lever. There is also a powerful band brake applied by the foot. The steering is accomplished by handle bars and a steering head, as in the bicycle. Three wheels ride



THE EASTMAN ELECTRO-CYCLE.

lighter and with greater steadiness than four, and also steer out of ruts and over car tracks with greater ease. It would appear that there is a considerable future for light vehicles of the kind we have described.

**The Height of South American Mountains.**

The results of the hypsometric measurements recently made, by Sir William Martin Conway, of the High Andes of Bolivia seem to determine definitively that Aconcagua, in Argentina, is the loftiest summit of the American Cordilleras, and accordingly the culminating point of the entire Western Hemisphere, says The Nation. Although this was the general assumption of geographers, the rival claims of the Nevado de Sorata and Illimani, which in the older geographies were represented to have altitudes respectively of 25,200 and nearly 24,000 feet, and even quite recently to approximate these heights, have left the question an open one. The present observations reduce these elevations to 21,710 feet (for the highest peak of the Sorata or Illampu) and 21,015 feet, a result strikingly in accord with that obtained by Minchin—21,470 and 21,224 feet—and about equally correspondent with that derived by the English geologist Pentland from his revised triangulation conducted in 1838, which gave 21,286 feet for the Sorata and 21,145 feet for Illimani. The absolute altitude of Aconcagua is, perhaps, still in doubt, but the measurements of Fitzgerald and Zurbriggen, made during their late successful and unsuccessful attempts to attain the summits, would seem to give the mountain a height fully equal to that which had been assumed for it by Fitzroy and Darwin, 23,200 feet, and about a thousand feet more than was claimed by the Spanish engineer Pissis (22,422 feet). The Sorata and Illimani now not improbably also yield second place, as a number of summits, both in northern Chile and in Bolivia, are close competitors, and have at least the advantage of being reputed to be more lofty.

**Trouble with Electric Cars in Corea.**

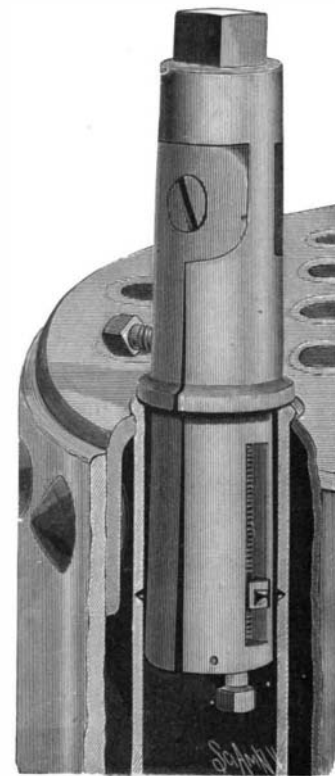
A young American, in the employ of the contractors of the Seoul-Chemulpo Electric Railroad, writes interestingly of the new electric road in Seoul, Corea. The road was well built, the cars coming from America and motormen were imported from Japan to run them. For some reason the fenders and gongs did not arrive, and this was the chief cause of the trouble. Those who were interested in the railroad insisted that the opening of the road should not be postponed, and, accordingly, the citizens were out in crowds to see "the devil wagon run by a wire." Soon after the car started, a child ran across the track, became excited, and was run down and killed. A mob soon gathered, which began to pelt the car with stones, and all on board fled for their lives. The car was torn to pieces and then burned. The wires were pulled down, but, fortunately, a serious accident was averted by turning off the current at the power house. Another car was sent out later in the day and met the same fate. A mob started for the power house, but was dispersed by the police. According to The New York Sun, Oriental advices state that twenty ringleaders of the rioters who destroyed the electric tramway cars at Seoul have been executed. The inhabitants of this strange land have been speculating for weeks on the cause of the drought, and many thought the electric wires cut off the influence of heaven. This probably accounts in a manner for the fanatic outbreak.

**A SIMPLE TOOL FOR CUTTING PIPES.**

In removing pipes or flues from boilers of the locomotive pattern a short piece is usually cut from the end of the flue in order to facilitate the work. A tool adapted for this use forms the subject of the accompanying illustration.

The tool comprises two hinged arms adapted to lie alongside of each other and to enter the pipe, each arm being provided with a collar to abut against the end of a pipe. The two arms can be adjusted toward and from each other by means of a set-screw passing through one arm and engaging the other. That portion of the one arm which enters the flue is formed with a slot in which a sliding block having a cutting-point is mounted. The block is perforated to receive a threaded bolt by means of which it can be adjusted in position.

In using the device the block is adjusted so that its cutting point is at the desired distance from the arm-collars. The set-screw previously mentioned is then turned until the two hinged arms are in contact. When the arms have been inserted in the pipe or flue, the set-screw is turned in the opposite direction until the cutting point of the slide block is in contact with the flue. The entire tool is then turned by engaging the squared end with a wrench. As the cutting proceeds the set-screw is gradually turned inward to force the sliding-block point deeper into the metal until the pipe has been severed.



FLETCHER'S TOOL FOR CUTTING PIPES.

The inventor of this implement is Mr. John Wm. Fletcher, of Tocapilla, Chile.

**The Tuberculosis Congress.**

One of the American delegates to the recent Tuberculosis Congress at Berlin, who has returned, is preparing a report for the Navy Department on the work of the Congress. Dr. Boyd considers that the results will be very important. The chief question which now interests the profession is the preparation of an effective serum to combat the disease. The most promising work is that of Dr. Behring, one of the most celebrated of the European specialists. He is pushing on his experiments as rapidly as is consistent with careful scientific work. The development of consumption sanitariums in Europe has also attracted much interest in this country. Preparations are now being made for the establishment of a consumption ranch in the high and dry region of the Southwest for the benefit of the merchant marine, in which there is a large percentage of consumptives.

**Russia Purchases American Machinery.**

Orders to the amount of \$150,000 have just been placed with American firms for machinery ordered by the government of Russia for the temporary machine shops now being built at Harbin, Manchuria, on the Chinese Eastern Railway. It includes a 42,000 pound lathe, double axle lathes, boring mills, steam hammers, drills, etc.

THE Hungarian novelist Maurus Jokai is going to make an exhibit of his literary works at the Paris Exposition. It is said that he has written over three hundred books, and he will display his novels in every edition and in every translation that has been printed. It will undoubtedly be an interesting exhibit, though in rather poor taste.