

DOG POWER AS AN AUXILIARY IN WHEELING.

From time immemorial man has sought to utilize the dog as a beast of burden. This has been compassed in various ways. Sometimes the dog is put into shafts and made to pull small carts or sledges; this is a daily sight in many of the countries of Europe. The dog has proved useful for this purpose where other animals have proved worthless. For an example it is only necessary to cite the dogs of the Esquimaux. Inventors early recognized the possibility of impressing dogs into service by making them run dog motors. Ever since the days of the old velocipede, inventors have also sought for some kind of motor for bicycles and tricycles which would obviate the fatigue resulting from working the pedals; steam, compressed air, springs, electricity and many of the hydrocarbons have had their turn, but it remained for the Alsatian to adapt the dog to the needs of locomotion in the last decade of the nineteenth century.

We are indebted to Mr. Joseph Becker, of Washington, D. C., for the photograph from which our engraving was made. He took this photograph at Strasburg last summer expressly for the *SCIENTIFIC AMERICAN*.

The dog is hitched behind the tricycle to the end of an adjustable harness rod and is chained to a point under the saddle. An appropriate harness is provided for the dog. Mr. Becker says: "The first impulse is to pity this good little doggie and to blame his big, heavy master for working him so. But this is soon forgotten when you have seen this sturdy little fellow at his task tugging and clawing with the greatest earnestness, apparently delighted with his task." Possibly he is so, but, though he might have to work hard when the tricycle was going slowly, still, when the speed is increased, the opportunities for "soldiering" would be limitless.

THE DE LA VERGNE HUNTING TRAP.

In the *SCIENTIFIC AMERICAN* of December 14, 1895, we illustrated the "motor drag" made by the De la Vergne Refrigerating Company, of New York City. We now show a somewhat smaller conveyance of the same type, called by them a "hunting trap." The hunting trap is driven by a single cylinder motor of a modified Benz type. The motor makes from 350 to 400 revolutions and is of four horse power. The weight of the engine is 300 pounds. The carburetor and water tank are both done away with, a condenser being used, which renders thirty pounds of water sufficient for a run of eight or ten hours; the cylinder and water jacket are cast in one piece. The speed is controlled by means of a friction clutch, which was invented by Mr. J. C. Blevaney, superintendent of the De la Vergne works. The wagon can be reversed without stopping the engine by shifting one of the belts; a wagon brake is provided for use on hills or where a sudden stop is to be made. The noise of the exhaust is stifled in a muffler, in which is placed a condenser which prevents disagreeable odors by condensing the unburned gases. The power is transmitted to the wheels by means of a chain and sprocket wheels; the steering wheels are pivoted at the hub. The explosion is produced by an electric spark, the battery being placed under the front seat, where is also the gasoline tank, which contains enough gasoline for a long run. It is said that the cost of running is one-half cent an hour for each horse power. The hunting trap weighs about 1,500 pounds and has a seating capacity of four, with ample

space for guns and other hunting equipment. This vehicle received an award in the recent race for counterbalance on engine. The Emperor William, of Germany, has recently purchased a somewhat similar hunting trap.

The De la Vergne Company have, we believe, a new motor carriage in process of construction.



A CANINE AUXILIARY FOR A TRICYCLE.

They are also makers of the Hornsby-Akroyd oil engine.

Some Queer Mail Routes.

Probably the most unique way of transporting mails known to the United States Post Office Department is that in daily use between Telluride and Smuggler, Col. The mining town of Telluride is located at the head of a picturesque gulch. The mountains rise in majesty to cloud-piercing heights about the town, and from every precipitous draw between the giant peaks foaming cascades, waterfalls, and roaring streams come down from the snow-laden summits to swell the torrent of the San Miguel, which rushes through the town. Four miles above Telluride is Marshall Basin,

situated among the snowy peaks and far above the timber line, and in this basin is the little mining settlement of Smuggler, where the employees of the great Smuggler-Union and Tom Boy mines make their homes. Although the inhabitants have a post office of their own, the postal authorities do not guarantee a regular service, because of the difficulty of keeping a trail open in the winter time. The dangerous snowslides constantly threaten destruction to the hardy miners who scramble through the snows up the steep trails to the settlement in Marshall Basin. Until in recent years all supplies for the camp in Marshall Basin were transported thither by pack animals. Timber for the mines, coal for the boilers, and iron rails were dragged over the trails or packed securely about swaying pack saddles and carried to an elevation of 12,000 feet by the burro. When winter closed down and the burro trains could no longer be driven on schedule time, the miners would take turns in going down on snow shoes to get the mails and a few necessary supplies that could be carried upon their backs.

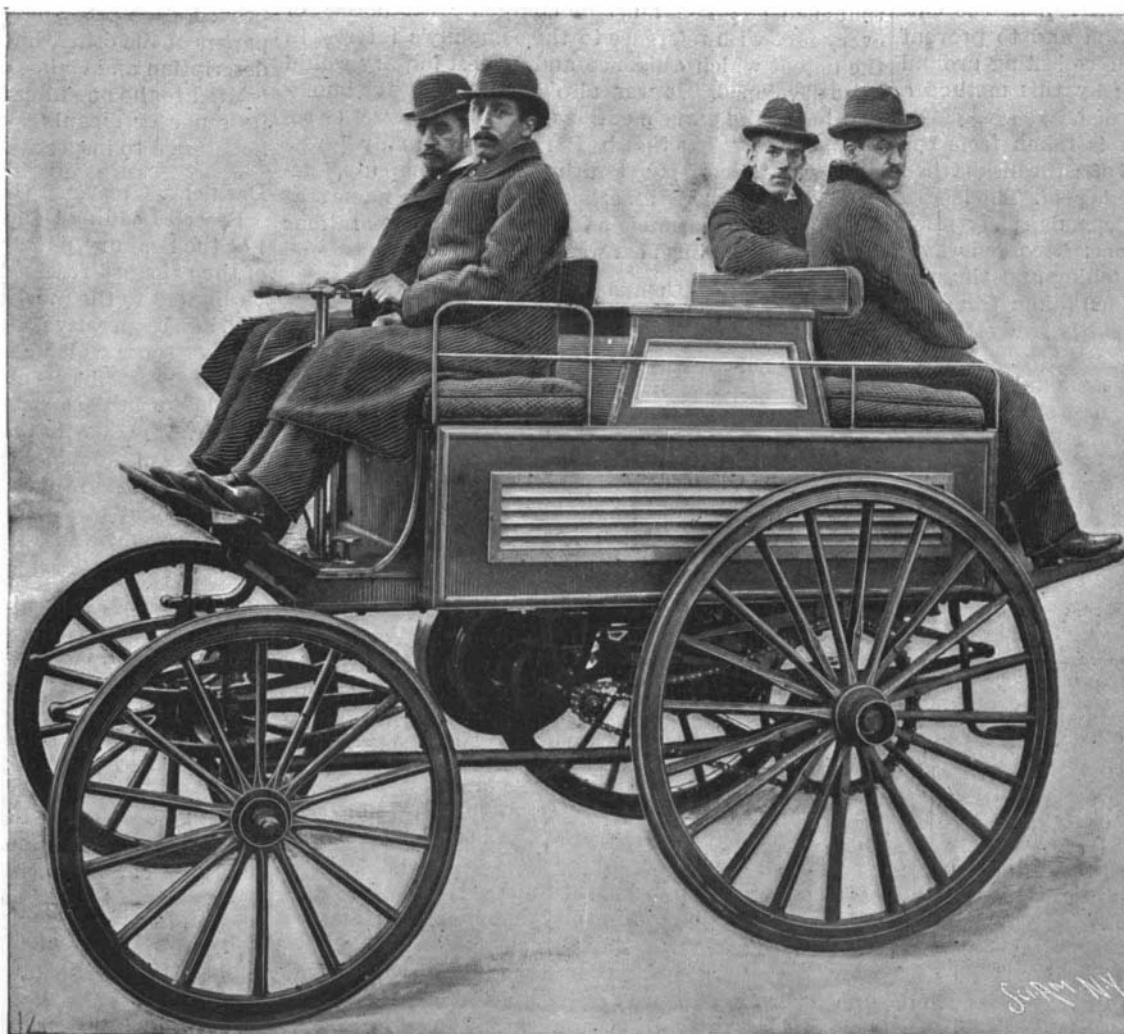
But the practical application of the endless chain by the inventor of the Huson tram has greatly facilitated the transportation of supplies from Telluride up to Marshall Basin. Great iron buckets, each carrying down the mountain a half ton of ore, furnish by their weight the active power which drives the endless chain from which they are suspended. In these buckets, upon their return, the necessary supplies for the camp are placed. One of these buckets is painted a bright red color and the letters "U. S. Mail," in black, designate the use to which it is put. The daily

mail for the Smuggler post office is now delivered as regularly across the four miles of precipice, snow-buried gulches, and giant mountain ruggedness with as much safety as between two settlements on the prairies of western Kansas or Nebraska.

A free delivery system is in vogue in the mining districts, though the postal authorities have nothing to do with it. From every mountain post office trails diverge up every draw and gulch. A miner setting out for his cabin, perched somewhere far up on a mountain, will take with him all the mail belonging to his neighbors, though they may live miles from his place. At each turning point a small box will be found nailed securely to the trunk of a stout old pine tree, and upon this box is scrawled the names of all miners

who must pass that tree in going to their respective cabins. In this box the last man from town deposits all the mail belonging to miners living up that particular gulch. From that gulch a miner will occasionally descend for mail, and as he returns up his trail he deposits in turn the several pieces of mail in other boxes placed at convenient points. In this manner one man can save many a weary step to other miners who live out the long winters in the very heart of the Rocky Mountains. Mails are collected in a similar manner, and often small errands are likewise done. Money deposited in mail boxes for the purchase of stamps, tobacco, and other notions light in weight is always properly respected, and the mission fulfilled, no matter how much the snowshoe pedestrian may be under the influence of good fellowship as he returns from town. — San Francisco Post.

A SERIOUS landslide is said to have taken place at Trub, about twenty miles east of Berne, Switzerland. A landslide is also reported to have taken place at Bondesir, Saguenay County, Province of Quebec, Canada.



DE LA VERGNE HUNTING TRAP.