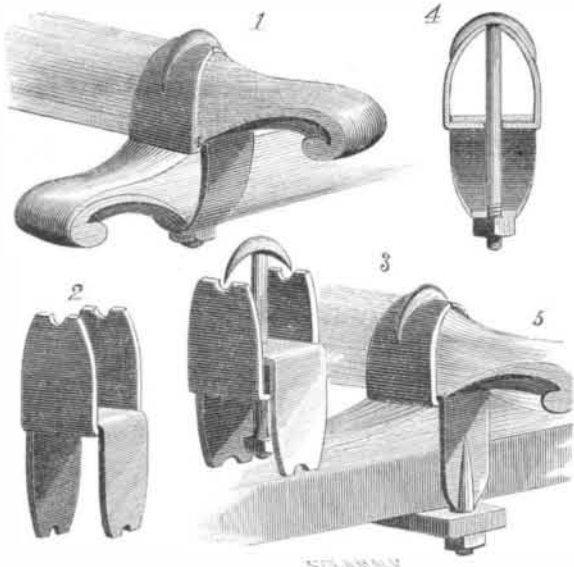


CLIP COUPLING FOR VEHICLES.

The clip coupling shown in Figs. 1, 3, and 4 is made of two suitable metal plates shaped as clearly shown. In using this coupling to clip a wagon side bar to a head block, the side bar is placed between the side parts of the upper plate, and the head block between the side parts of the lower plate. The clip bolt is then passed through suitable holes, and the side parts are bent inward to conform to the surfaces of the side bar and head block, the end notches in the plates inclosing the bolt immediately beneath its curved head and inside of its nut. When the nut is tightened, the curved head will hold the sides of the upper plate to the side



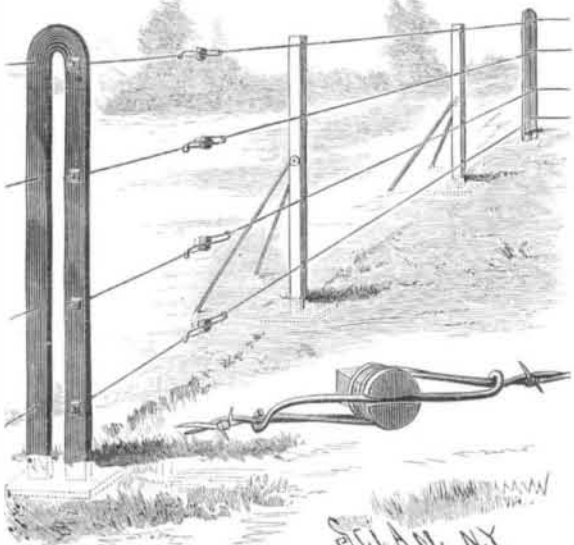
TYLEE'S CLIP COUPLING FOR VEHICLES.

bar, and the nut will hold the sides of the lower plate. It is evident that this coupling is very light and strong, of a neat appearance, and its use prevents splitting of the wood. The clip may be made of a single piece of metal, as shown in Fig. 2. How a side bar may be clipped directly to an axle is very clearly shown in Fig. 5.

This invention has been patented by Mr. James E. Tylee. Further particulars may be had by addressing Mr. Ben. S. Clarke, of Ashland, Neb.

FENCE WIRE TIGHTENER.

This simple and effective device, wherewith the undue slackness of fence wires may be taken up at any time, is the invention of Mr. T. C. Histed, of Cherry Vale, Kas. The wires pass through holes in the end posts of one section of the fence, and project far enough to receive spiral springs between the posts and buttons fixed to the ends of the wires. These springs provide for the expansion and contraction of the wires by changes in temperature. Upon each wire of each section of fence is placed a tension roller, formed with a squared hub at one side, to which a wrench may be applied for turning it. Its opposite end has a diametrical slot to receive the fence wire. After the wire has been tightened by and on the roller, the latter is prevented from turning by a clamp, the form and



HISTED'S FENCE WIRE TIGHTENER.

application of which are clearly shown in the small view. By means of this device a fence may, with very little attention, be kept in good condition as long as the wires last.

The Eruption of Etna.

The following particulars of the recent eruption of Mount Etna have been furnished by M. Silvestri, the well-known authority on these matters. The eruption began at half an hour after midnight on May 19, and lasted twenty days, that is to say, until June 7. The climax of the eruption took place on the night of the 23d of May, and after an intermittent action for several days, the phenomenon gradually abated. The erup-

tion emanated from a "crater of ejection" and a system of "mouths," or as they are locally termed *bocca di fuoco*. The crater of ejection was formed at an altitude of 1,400 meters above the level of the sea, and in the valley between Mont Nero on the north and Mont Grasso on the south. This crater soon became a hillock, however, owing to the matter ejected. The mouths emitting lava were also in this part of the mountain, and it is calculated that they poured out from 40 to 60 cubic meters of lava a second. During the first three days the lava flowed about 4 kilometers, with an initial speed of 40 to 60 meters per minute near the mouths. This speed, however, was reduced to from 18 to 20 meters per hour on the extreme front of the advancing flow. After the 24th of May the crater threw out great quantities of sand, which produced a thick fog, and fell in abundance during several days in Sicily and Calabria. This ejection of sand characterizes the decreasing phase of a volcanic eruption. On the 29th of May, the eruption having declined, repeated earthquake shocks were heard; one of special violence on the night of June 2, when some houses in Aci-Patane were fractured. The strongest shock, however, was felt on June 5, about fifteen minutes after noon. This brought some buildings to the ground, and was characterized by an undulatory movement lasting from eight to ten seconds. The central crater of Etna also emitted great volumes of thick smoke and fine ashes on June 2, and the air is still charged with these emissions.

Oil Fuel not Economical.

From Glasgow, the *Shipping World* says, "comes evidence of an unmistakable character that oil has been tried and found wanting. The managers of the Laird line, after a long trial of oil on board one of their steamers, have decided, on purely economic grounds, to abandon altogether the use of oil as a fuel, having ascertained from practical tests extending over a considerable period that coal is the cheaper fuel of the two. Accordingly, they have had the oil tanks taken out of their vessel, and have returned to the use of coal, notwithstanding the fact that the oil tanks and the apparatus for accomplishing complete combustion of the oil cost a considerable sum of money. Although considerable ingenuity has been displayed, and several difficulties have been overcome, there is nothing in the latest apparatus and arrangements which have been adopted in Southeastern Russia, where petroleum has been extensively used as fuel, which appears likely to expedite the adoption of liquid fuel in our mercantile marine. There is little probability of petroleum being sold in this country at a price which will enable it to take the place of coal."

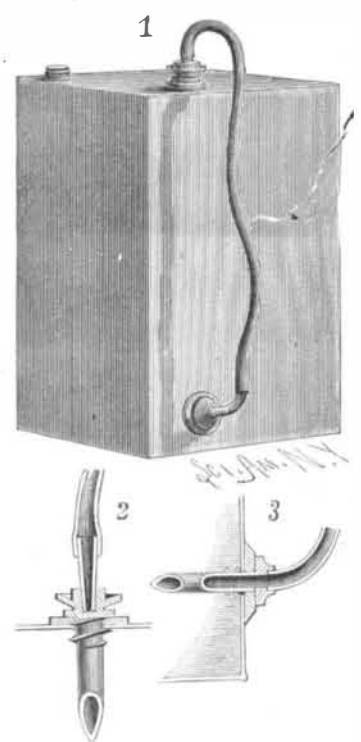
Panama Canal.

The Panama Canal Committee resolved on the 28th of June to ask five of the Ministers to confer with it. Although the Committee, which was nominated by a very thin attendance in the Bureaux, is hostile to the scheme, these explanations may modify its views. Even, however, should its report be adverse, it will be difficult, if not impossible, for the Chamber to refuse to sanction the lottery loan of 600,000,000f., required by the company for the completion of the canal. It is admitted that M. De Lesseps did not foresee all the technical and climatic difficulties with which he would have to cope. If the works commenced, and now far advanced, had to be abandoned by the present company, the Americans would take its place, reaping the entire fruits of what has been done; while the French investors would have no equivalent whatever for their sacrifices. The *Times* Paris correspondent says: "It being certain that if France abandons the enterprise, America will take it up and complete it for her own exclusive profit, it cannot be supposed that the Chamber will debar the shareholders from their chance of sooner or later being recouped for their outlay when the canal begins, like that of Suez, to realize profits. The inference is therefore that, despite all the difficulties springing up in the company's way, the bill will pass the Chamber, which can scarcely pretend to be more mindful of the subscribers' interests than the subscribers themselves are."

The London *Times* correspondent is mistaken in asserting that the Americans will take up the Panama Canal project if the French abandon it. There is not the slightest evidence of any such desire or intention on the part of the people of this country. The Americans, with their new dredgers, have dug out, for good pay, employed by the French, the short section of the canal that goes through soft ground, on this side of the isthmus—the only part so far completed. The Americans built the Panama Railroad, and sold it out to the French at an enormous profit. They have also built three lines of railway across their own domain; and they expect soon to construct a great ship railway over the Isthmus of Tehuantepec. But they have no idea of undertaking such an unprofitable scheme as the Panama Canal.

LAMP FILLING ATTACHMENT FOR OIL CANS.

The attachment consists of a flexible tube, one end of which is connected to a metallic tube, Fig. 3, formed with a sharp steel point. This tube has a collar, below which is a prominent screw thread, and its extending end is bent to form a handle or lever. The other end of the flexible tube is secured to a nozzle Fig. 2, fitting within the socket of a venting attachment consisting of a steel pointed tube formed with a collar, thread, and milled thumb nut. The attachment is secured to the can by forcing the steel point through the can and then turning, to make the collar firmly clasp a rubber gasket placed between it and the can. The venting attachment is placed in the top, and the other in one side, near the bottom of the can. When the liquid is to be drawn from the can the nozzle is inserted in the vessel to be filled, which is lowered below the level of the liquid in the can. After the vessel has been filled, the nozzle is placed within the socket, as shown in Fig. 1, thus practically closing the can, and preventing the evaporation of its contents.

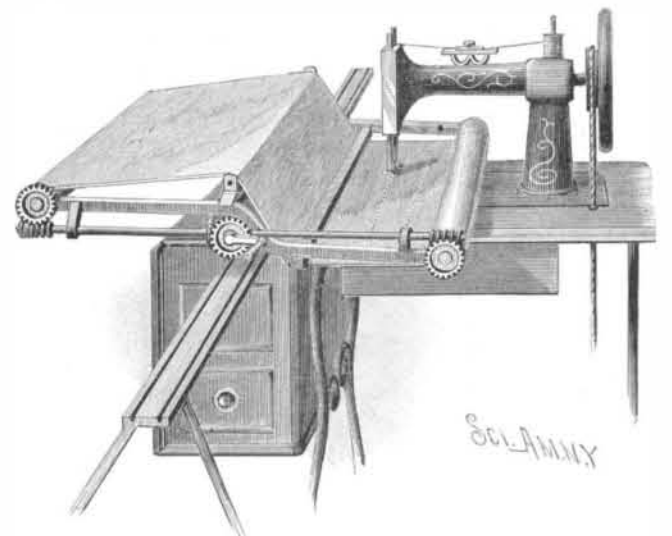


McFARLAND'S LAMP FILLING ATTACHMENT FOR OIL CANS.

This invention has been patented by Mr. James M. McFarland, of Virginia City, Nevada.

IMPROVED QUILTING FRAME.

Journaled in one end of the side pieces of the frame is a roller, on which the quilt is first wound, while at the other end is a second roller, on which the quilt is wound as the quilting proceeds. The second roller is of larger diameter than the first, in order to always keep the quilt taut. In passing from one roller to the other the quilt passes first under a cross bar or brace, and thence over a roller. Journaled in blocks on one of the side pieces is a shaft formed with a worm at each end; these worms mesh with wheels on the ends of the rollers, so that when the shaft is revolved the rollers turn in opposite directions. When at rest, the worms prevent the rollers from revolving, and the quilt is thus kept taut without the use of ratchet and ratchet wheels. The shaft is revolved by means of a crank and suitably arranged gears. The side bars are bent as shown in the engraving, and the frame is thereby permitted to be moved readily across the machine table



WRIGHT'S IMPROVED QUILTING FRAME.

with but little friction, and the quilt is brought close to the table. This quilting frame is very easy to operate, as it is only necessary to turn the crank to shift the quilt as the work proceeds, and it is durable and not liable to get out of order.

This invention has been patented by Mr. John E. Wright, of Corydon, Iowa.

LIGHTNING struck an oak in Tippecanoe County, Indiana, and tore it into splinters. It is said that each year's layer of the growth seemed to have been separated from the other, and split into strips about half an inch wide. After completing its work on the oak, the lightning ran thirty yards along a wire fence.