

IMPROVEMENT IN FELTING MACHINES.

There is probably no operation in the mechanic arts which has so baffled the efforts of inventors to perform it by machinery, as that of felting, and the success that has finally been achieved is due to the longest and most persistent course of study and experiment, affording striking evidence that there is no merely mechanical operation, however complicated, beyond the power of mechanism to perform.

The invention here illustrated is the last yet made in this long series, and relates to one of the details in the construction of felting machines, effecting, however, an important modification in the manipulation of the felt. Within the hollow cylinder, A, are placed the four conical rollers, B B and C C (Figs. 1 and 2), being hung on journals eccentric to their axes; the journals of the rollers, B B, being in two horizontal planes, and the journals of the rollers, C C, being in two vertical planes, as shown in Fig. 2. The journals are connected at their ends, e e, by universal joints, with the shafts, D D, which have at their ends the pinions, f f, gearing into a common central cog wheel, g. Each shaft, D, is also provided with a pulley around which the belts, h h, pass, as clearly shown in Fig. 3. The hat-body or other article to be felted is placed between the rollers at their smaller ends, and is pressed into the oval form shown in Fig. 2, by the eccentric hanging of the rolls. As the rolls are rotated, the felt is carried along, its long axis constantly revolving, thus producing that peculiar motion of the fiber necessary to the operation of felting. The improvement here described consists in the eccentric hanging of the rolls, and it is said to produce excellent work, decidedly superior to that produced by the felting machines heretofore in use.

The patent for this invention was procured, through the Scientific American Patent Agency, on May 8, 1860, and further information in relation to it may be obtained by addressing the inventor, Martin R. Lemman, at Columbus, Miss.

ANTIDOTE FOR OVER-DOSES OF CHLOROFORM.—M. Ozanam

of Paris, has been making experiments in the use of oxygen to arrest death from an over-dose or from the incautious use of those precious resources of medical science. In all his experiments, M. Ozanam found that the animals awoke in one-half less time after inhaling oxygen than with simple atmospheric air. The result was just the same whether ether or chloroform had been used. Several animals were placed under the influence of chloroform until the beating of the heart was imperceptible and death was eminent, but on inhaling oxygen they quickly awoke. In one of the experiments the animal respired at the same time the vapor of ether and pure oxygen. It was twelve minutes before sleep was induced, and then it was so light that the animal awoke in a minute and-a-half, without the continuation of the oxygen. When chloroform and oxygen were breathed together, the animal became drowsy after eight minutes, but did not sleep, and after the inhalations were stopped, perfectly recovered in a few seconds. M. Ozanam believes that so long as respiration has not entirely ceased, the rarifying effects of oxygen will be produced, and recommends that the surgeon should always have at his command a supply of oxygen to reanimate his patient in case of accident. The Prussian physicians, however, are by no means sanguine of

this treatment. They are therefore going to give it further trials before they make a full report on the subject,

EXHIBITION OF A GREAT ACAMENE LAMP.

The reduced price and enormously increased consumption of coal oil has rendered the production of a lamp which will perfectly burn coal oil a desideratum of the very highest importance, and has arrested the attention of numerous inventors to the subject. One of them—W. H. Racey, of this city—has expended no less than \$20,000 in experiments, and has finally produced a lamp which does really burn coal oil well, without any chimney, producing a beautiful light, free from smoke or smell. The air is brought through a perforated plate

this pan for the purpose; thus preventing them from being burned and smoking the meat. The trough is deepened at H, and furnished with a spout, I, for pouring-off the gravy.

The inventors claim that the hot air, passing over the upper side of the meat, closes its pores, preventing the escape of its juices; that the separation of the fat prevents the smoking of the meat, and that the whole arrangement of the gridiron secures the more rapid and perfect cooking of the meat, whereby it is rendered more juicy, all smoking and scorching completely avoided, and its flavor greatly improved. At the same time, the odor of the cooking meat is prevented from spreading through the house.

The patent for this invention was granted on July 24, 1860; and further information in relation to it may be obtained by addressing the patentees, Brooks & Grover, at Rochester, N. Y.

WATER CISTERNS.—The

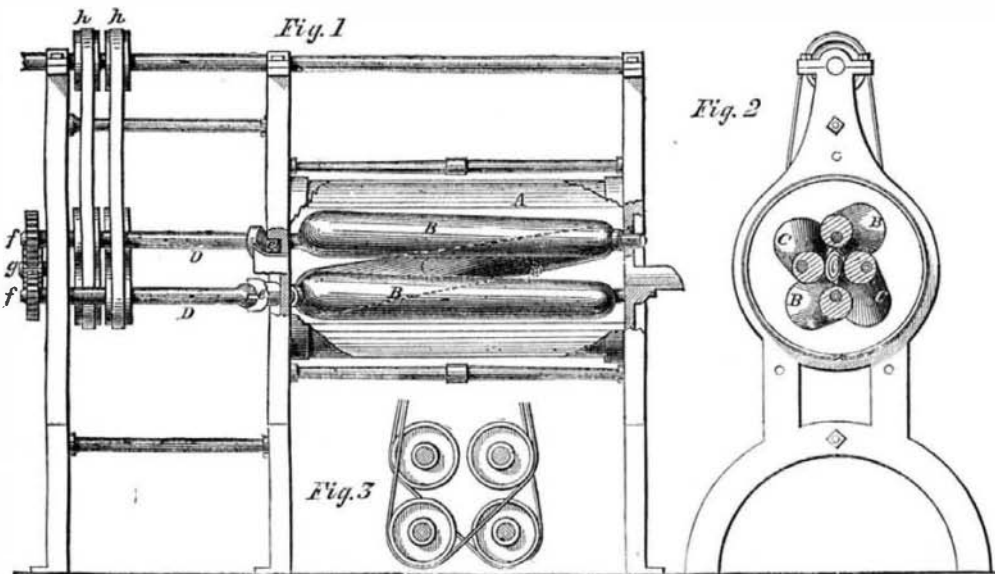
city of Venice is supplied with rain water, which is carefully collected in cisterns and filtered for both public and private use. There are no less than 2,000 large public cisterns in the city, and these supply the inhabitants generally with good, pure water. A description of their construction was recently given by M. Grivand in an address before the Paris Academy of Sciences. In the first place a hole is dug about 10 feet deep (the nature of the soil prevents a greater depth), and in shape of an

inverted truncated pyramid. The earth surrounding the sides is kept in its place by a strong wooden frame, which covers also the bottom of the cistern. Upon this is applied a layer of compacted clay, the thickness of which is in proportion to the size of the cistern, but never over a foot. It is considered very important to have no cavities whatever in this layer. On the middle part of the bottom is laid a circular stone, hollowed out in the center. On this is erected a hollow cylinder, built of dry bricks,

well-laid, those at the bottom being pierced with conical holes. This cylinder comes a little above the level of the soil. The space between the cylinder and the clay walls of the pyramid is filled with washed sand. Before covering the whole with the pavement, there is laid at each angle a sort of stone box, the cover of which, also of stone, is pierced with holes. These boxes are joined with each other by a small canal of dry bricks, resting in the sand. When it rains, the water enters by these boxes, penetrates into the sand through the jointures of the bricks of

the canals, and finds its level in the interior of the cylindrical well, having passed through the little holes at the bottom. A cistern so constructed is said to give very pure water, and to retain it perfectly, operating not only as a cistern, but also as a perpetual filter to purify the water.

FACTS ABOUT SEWING MACHINES.—No other class of inventions has attracted so much attention for the past seven years as the sewing machine, and owing to the great success which has attended its general introduction, the public feel a deep interest in all that relates to the history and development of this truly wonderful machine. We shall soon commence the publication of an interesting series of articles on the subject, which will embrace much valuable and interesting information, not accessible to the general reader.

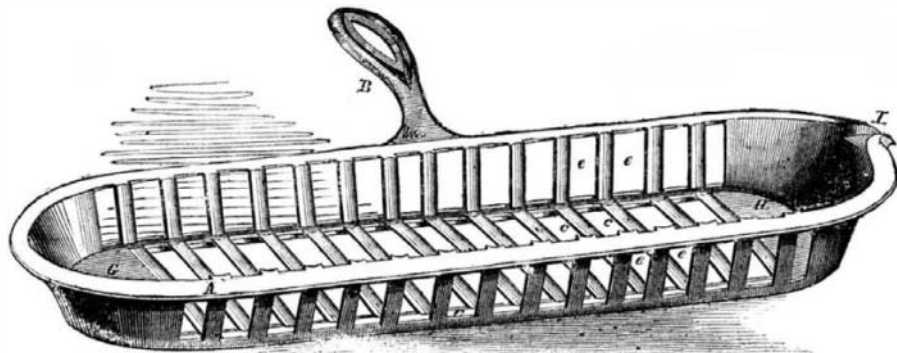


LEMMAN'S IMPROVED FELTING MACHINE.

on the sides of the flame, and is heated before it comes in contact with the flame, thus insuring perfect combustion. The lamp is now on exhibition at the office of H. Eagle, 254 Canal-street, this city.

BROOKS & GROVER'S IMPROVED GRIDIRON.

In broiling meat on hard-coal stoves or ranges, the fat is apt to drip into the fire, and, flashing up, to smoke the meat and scorch it upon the lower side; at the same time, filling the house with an unpleasant odor. To



BROOKS & GROVER'S IMPROVED GRIDIRON.

remedy these inconveniences, and to secure a neat and rapid broiling, giving the meat a clean, juicy and delicious flavor, the improved gridiron here illustrated has been devised.

The flange, A, rests upon the top of the stove around the opening in which the bars, e e, are suspended, two or three inches below, by the vertical or inclined bars; it being designed that the heated air should be drawn through the openings, e e, between the vertical bars in its passage to the flues, thus partially cooking the top of the meat at the same time that the bottom is being cooked. The bars are surrounded by a trough, f, in the usual manner, for collecting the juices of the meat, and are curved upward in the middle and grooved for conducting the gravy into the trough. The trough, f, is widened out to a broad pan at G, for frying the fatty portions of the meat, which are cut off and placed in