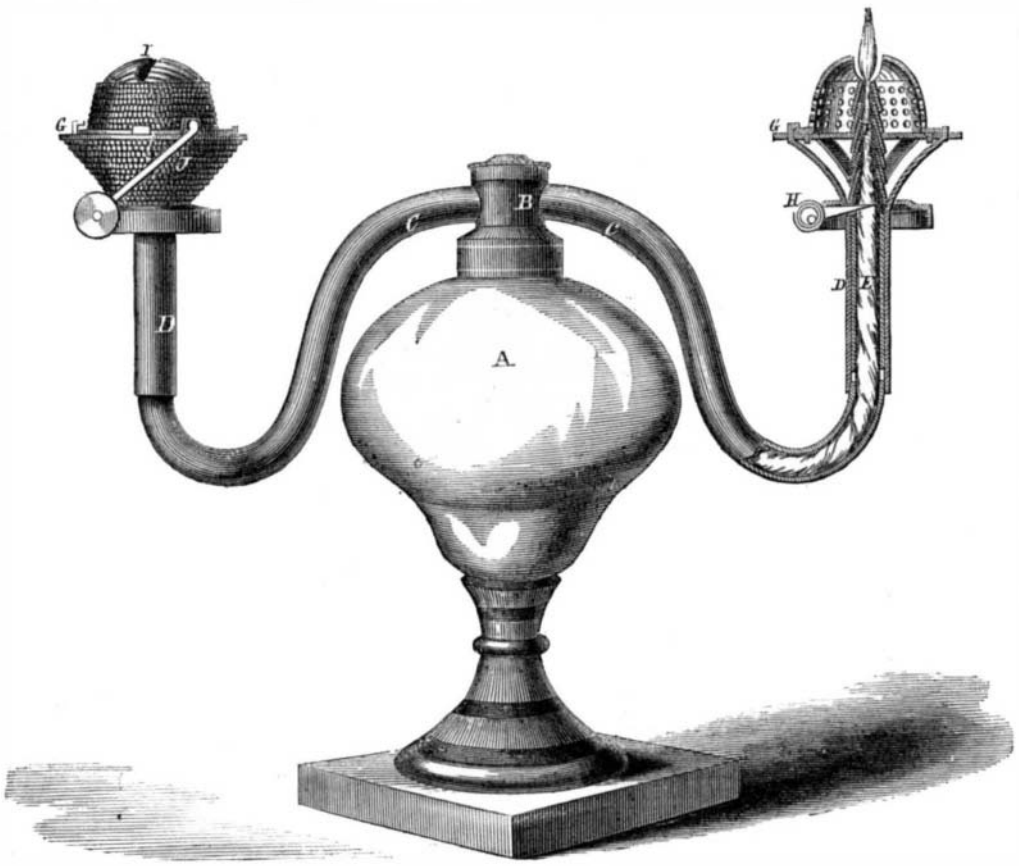
Lamp Chandelier for Burning Kerosene.

The difficulty of utilizing all the light from the common kerosene lamp is well known. If the light is required to be concentrated upon one spot, a shade is necessary, and then the shadow of the lamp interferes with the projection of the light. The usual lamp top also prevents a thorough combustion of the oil, from the inability to supply the flame with sufficient oxygen, thus requiring the use of a chimney to create a draught. The object of the improvements here illustrated, is to remedy these defects in the ordinary lamp, and to derive the maximum amount of light from the minimum of oil.



ADAIR'S KEROSENE CHANDELIER.

A represents an ordinary lamp, receiving in the top, in lieu of the usual cone, a cap, B, sustaining two branches, C, which are provided with larger tubes, D, at their extremities. These branches contain a wick, E, which can be met by that from a common burner, or extended, as at E, to the top of the tube. This branch shows a burner requiring no chimney. The tapering tube, F, is made of a sheet of metal, wound spirally, the edges overlapping, and the aperture at the top compressed to flatten the wick, thus presenting a large surface to the action of the atmosphere. The lower portion of the burner is formed by splitting the tube, D, longitudinally, and spreading the parts, which are secured in their expanded form by a circular plate, G. The spur, H, works eccentrically, entering the wick and, by a sliding motion, raising or depressing it, and then leaving it when the operation is performed. The cone, I, is corrugated at the top by lines running obliquely toward the opening, by which means the air traverses across the flame, spreading it over a larger area, and increasing the amount of light. As an addition to the brilliancy of the light, the cone is covered with an open jacket of glass beads, shown at J. The advantage of the spiral tube, F, is that the heat from the flame cannot pass directly down toward the oil, thereby rapidly volatilizing it, but is compelled to follow the spirals.

These are among the principal advantages claimed for this improvement, but there are other and different applications of the improvement which can be advantageously employed in many forms. Patented Oct. 13, 1863, by James Adair, Pittsburgh, Pa., to whom apply for rights and for further particulars, care of Hussey, Wells & Co.

Trial of One of the New Frigates.

The *Chattanooga*, one of the new steam frigates built to attain great speed, has had a trial trip at sea, and has performed well. She attained a speed of 15¾ statute miles per hour under steam alone. The amount of coal burned was 12,000 pounds per hour, and the engines, which were built by Merrick & Sons, of Philadelphia, averaged 44½ revolutions per minute, the highest number being 52. The diameter of the cylinders is 84 inches by 48 inches stroke.

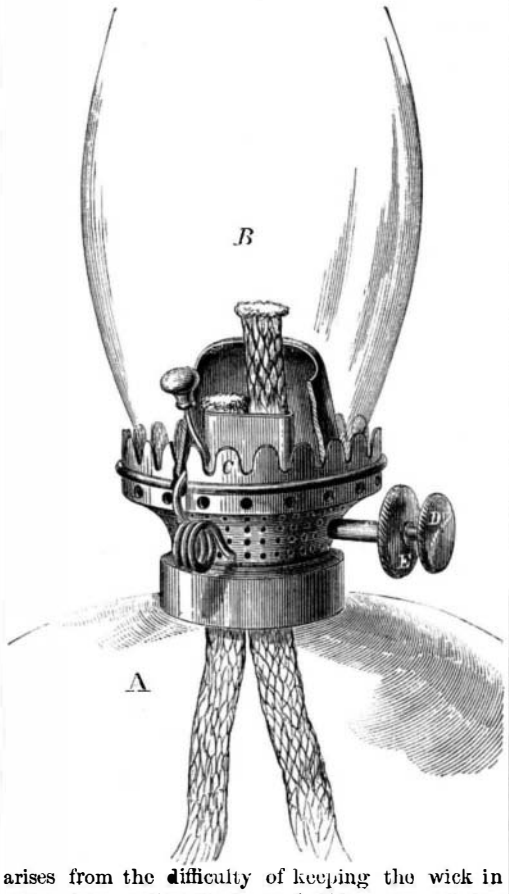
We hope soon to be able to give full details of the *Madawaska's* engines designed by Capt. Ericsson. They are expected to achieve great results.

Thread from Cotton-Plant Stalks.

An ingenious person in New Orleans has been engaged in making thread from the stalks of the cotton plant. It is very fine and strong, and looks very much like flax, being nearly as soft and pliable. He proposes to make this thread into cloth, which he says will be as strong and durable as that made from cotton itself. Forty pounds of thread can be made from one hundred and twenty pounds of stalk. A new factory will soon be established for the manufacture of cloth from this substance. The discovery is not a new one. It has been known for several years that there was a fibrous substance in the cotton stalk which very much resembles flax, but it has never before been put to practical use. Should this prove successful, it will double the value of the cotton plantations at the South. The next invention in order, for the development of the South, is a method of making paper from sugar-cane stalks. Whoever does this ought to make a fortune.

IRWIN'S LAMP TOP.

Much of the prejudice against the kerosene lamp



arises from the difficulty of keeping the wick in proper trim, so that the flame shall be even and give the largest amount of light without smoke. Even the most practiced hand frequently fails to cut the wick aright, and when the lamp is lighted, a stream of flame and smoke shoots up on one side, while the other side burns dimly. The annoyance of removing the heated chimney to repair the defect, the repeated failures, and the danger of cracking the glass, make together quite a sum of vexation.

The improvement illustrated herewith is designed to remedy these difficulties. Instead of one flat wick, two of half the usual width are used and moved independently of each other. A is the lamp; B is the chimney; C is a lamp top of the usual form, but having a double instead of a single feeder. D is the head or button of one feeder, furnished with the usual spur inside the wick tube, which raises one wick, and E is another secured to a sleeve that rotates on the shaft of D. This is also furnished with a lifting spur which moves the other wick. Either of these wicks, therefore, may be raised or lowered independent of the other, or both may be moved together by grasping both disks at the same time. A third spur can be used for a treble wick, the disk or button projecting from the opposite side of the top.

Patented Feb. 14, 1865 For further particulars address Lewis Hover, 50 State street, Chicago, Ill.

The Trichiniasis.

Our attention has been called to a very able paper on this subject by James C. White, M. D. published in the Boston *Medical and Surgical Journal*, which confirms the correctness of the idea that pork, raw or partially cooked, is unfit for food. The presence of trichinæ in pork, he says, can only be recognized by its effects on those who eat it, or by microscopic examination.

The well-authenticated account of the death of several members of a family in Marion, Linn county Iowa, from trichiniasis, caused by eating raw ham, ought to be a sufficient warning against the use of pork in an uncooked state. It seems, from this account, that salting and smoking is not sufficient to destroy these parasites. The only member of the family who escaped illness was one who had not partaken of the ham. It was discovered that the hogs which furnished the bacon had been afflicted with the "hog cholera," but being supposed to have recovered, were fatted and killed. The connection between "hog cholera" and trichiniasis seems thus to be sufficiently well established to render the flesh of diseased hogs a dangerous article of food.

Locomotive Boilers.

We believe our Yankee brethren make an engine better adapted to rough, and even to ordinary lines, than our own, and, on the other side, we consider our engines simpler and stronger for their work. A Yankee boiler would burst, by hydraulic pressure, long before ours would give way, and yet they carry as high steam as we do.—*Engineering.*

VANILLA.—A successful effort, it is said, has been made to raise this plant in France. The experiment was made in the public gardens of the St. Bruno, and the quality is affirmed to be equal to the best imported from the West Indies. The seed of the vanilla is remarkable for its fragrant odor, and yields an oil which is much used as a flavor. It is also employed in medicine in place of valerian, all the virtues of which it is supposed to possess, while it is at the same time far more grateful to the taste