be determined by applying pressure with a small plate number of our cheerful and sanitary open fires, compared ble shape and arranged in almost every conceivable way of glass to the fingers, ears, or other accessible parts till pallor with which steam radiators present few attractions. Every and place. Many patents have been granted for using is produced. In this way he finds that the pressure in the charm of a hickory fire-the bright blaze and the radiant the screw as a means of steering as well as propelling, which capillaries of the fingers is ordinarily from 37 to 38 millime- embers-can be had from a grate burning gas, with none of is usually accomplished by connecting the screw to the ters of mercury; if the veins of the arms be compressed, the the evils and inconveniences of a wood fire; while with the shaft by a universal joint, and providing it with appropriate pressure in the capillaries is increased three or four fold. use of the same ever ready and perfectly controllable fuel in guiding mechanism so that it may be turned at any desired Röhrig finds that the secretory activity of the mammary the kitchen, all the uncertainties and no small part of the angle to the keel of the vessel. gland varies directly with the blood pressure.

Taking advantage of a fistulous orifice communicating powers of that organ, and finds that it possesses no power of should not have given it the preference for public heating. are made in many different forms, but consist essentially in for the most part putrefactive decomposition, only a small draw upon ? It would be a good plan for some of the towns (usually a screw) of drawing in water at the bow and expelpart being probably absorbed. The practical lesson to be near flowing gas wells to immortalize themselves and lessen ling it at the stern. Sometimes the tube forks at the stem and drawn from these observations is that, in cases where it is their expenses by utilizing in this way the precious products stern, so that the water may be expelled at either side for necessary to introduce nourishment per anum, pancreas tri- of Nature's laboratory, now going to waste. A large iron turated with meat is the best material to use.

discovery of the power of salicin and salicylic acid over the natural well nineteen miles away, through pipes laid down course of rheumatic fever. Salicylic acid is preferred by by themselves. Any enterprising town, in the neighborhood in a channel beneath the boat between two keels, many difsome, salicylate of soda by others. They all have the power of one of those splendid natural reservoirs of fuel, might do ferent styles of which have been patented. of wonderfully reducing temperature, and appear to bring likewise, tapping a gas well for a public fuel, supply, just as the process of rheumatic fever to an end in as many days as other towns tap a lake or a river for a public supply of pellers, in which air pumps are employed to draw in air and it formerly took weeks. These remedies also give the pro- water. The example, once set, would be sure to be followed force it out against the water at the stern. In some cases fession new hopes of controlling others of the large class of elsewhere, with public gas works where no natural source is steam from a boiler, or the force of gases generated by the diseases characterized by high temperatures. Of great im- to be found. It is one of those inevitable advances in pub- firing of some explosive substance, is substituted for air and portance too, are the notes of Cattaglia of Rome, on the cure lic economy which it is safe to predict; and men now living air pumps. of diphtheria by the local use of chloral and glycerin, with may see it carried out in all well regulated towns. the internal administration of chlorate of potash. The local use of carbolic acid and glycerin, in the proportion of one part of the former by weight to six of the latter, has also been highly commended in the treatment of this fearful dis- noble army of subscribers to the SCIENTIFIC AMERICAN have the other, and is acted on by a wheel or drum on board the ease.

Much careful and laborious work has been done in the domains of surgery and pathology, but no important discoveries have been announced in either. The subject of lunacy Lancet makes the pertinent remark that each year it becomes more strikingly evident that what has been miscalled "mental disease," and erected into a specialty, is in fact an essentially component part of general medicine. Mind symptoms cannot successfully or safely be studied apart from the phemust be fought at close quarters by general practitioners while cases are still recent and curable.

The International Medical Congress at Philadelphia was one of the important events of the Centennial year. It was set at an angle diagonal to the shaft, others showing pointed the boiler with the locomotive. attended by many respected representatives of foreign medicine and surgery. The impression made on the British visithis country is more advanced than might be supposed from them to enter and leave the water perpendicularly, so as not in principle. the chaotic state of medical legislation, and from the great to beat it when entering or lift it when leaving, as do the Air propellers, or screws which act in the air instead of the

WHOLESALE HEATING.

heating cities by steam is soon to be put to the test of practi- few of such wheels have been and are still used, but have tention; and one of thepatentees of such an arrangement has cal trial in that place. The scheme involves the division of met with comparatively small favor from practical men, as provided an endless chain horse power as an auxiliary force. regulate the temperature of their homes by the simple pro- zontally during the remainder of their motion. cess of turning a faucet.

out, cannot fail to effect an enormous saving in trouble and passing over two drums at a considerable distance apart so thusholding the boat obliquely to the rope and the current, so fuel. It is open to the serious objection, however, that the as to have more action on the water than the ordinary wheel. that the force of the latter acting on the side of the boat will general introduction of steam for household purposes will In some cases, the chain is very long and is supported be- propelit across the stream. Another planthat has been suglocal boilers and attendants required to supply a town of any the pulleys. In some forms of this device for propelling, at some distance above the place where the boat is to cross, considerable size with the necessary steam must make the there is a single chain of paddles, passing over the center of in which case the boat travels in an arc, of which the rope system altogether too complex and costly. Obviously a the vessel and underneath its center in a channel between forms the radius. cheaper and more economical system of wholesale heating two keels. could be established by means of gaseous fuel. Gas is al-

common mishaps in cooking might be entirely obviated.

PROPELLING VESSELS.

vention of many old and exploded notions.

paddles; others have the paddles set obliquely to the central i Ground traction propellers of various styles have also been with guides of various descriptions that compel them to re-

ready supplied to most houses in towns of any size; and wheel by substituting disk wheels, or solid wheels without sists in a fixed cable lying in the bed of the river, which cable but few and comparatively inexpensive changes would be paddles, acting only by friction as they revolve in the water. is acted on by a wheel or drum driven by a paddle wheel or required to carry this self-propelling fuel to existing fire- These wheels have sometimes been made with single plain screw impelled by the current. The cable may either have es, stoves, and cooking ranges, and burn it there. Now disks, others have been provided with corrugated or undulat- one end coiled up on board the boat, or have both ends a that gas can be manufactured for less than twenty cents a ing surfaces; in other cases, two or more disks, set at vary- chored, as in rope traction before referred to. thousand cubic feet, the economy of its use for domestic ing distances apart, have been employed; and in some inheating is beyond question. No other fuel can be burned so stances these wheels have been formed of one or more disks, means devised by the ingenuity of man to propel vessels. completely or to so good an advantage, while nothing can set in an inclined position on the shaft. be simpler than the means required for its distribution. Vibrating and sliding paddles have also received much at-Once introduced, the gas required for heating our houses tention from inventors, some of whom so arrange their deand cooking our food need not exceed what is now paid vices, that, like oars, the paddles descend into and pass simply for the cartage and handling of the coals we burn, through the water, and then rise clear of it before returning after they have been laid down at the door. to the starting point; others, usually called duck's foot propellers, have their motions all the time in the water, but Among the minor advantages of gas over steam for household uses, not the least are the facility with which the amount open out when travelling in one direction, and close up when taken by each consumer can be determined, and the ease going in the other, in the manner of a duck's foot; and still the inventor of the clock propelled by a wind wheel, dewith which the supply can be adjusted to the demand, withothers are made of flexible material and work like the tail of a fish. In connection with vibrating propellers, we may state out waste. Gas will keep indefinitely without loss of heating power: steam will not; and it is not easy to see how pro- that several patents have been granted for devices for operat- decision of an interference suit. vision could be economically made with it for any sudden ing oars arranged in such a manner as will allow the oarsincrease or diminution of the amount of heat which consum- man to face the bow of the boat that he may the more readily ers individually or collectively might require. Besides, with see in which direction he is travelling. gaseous fuel, it would be possible to retain and increase the Screw propellers have been made in almost every imagina-

Hydraulic propellers have also had their full share of at-It is surprising that Lockport, which has the credit of traction for inventors, and especially for those who wished with the larger intestine, Markwald has studied the digestive taking the lead in the matter of public lighting with gas, to pocket the \$100,000 canal boat prize. These propellers converting starch into sugar, while fibrin appears to undergo Are there no more natural wells in that neighborhood to the use of a tube through the boat provided with some means steering purposes. By reversing the water-forcing apparatus, manufacturing company in Western Pennsylvania write us and in some cases by changing valves in the tube, the course Perhaps the most important event in therapeutics is the that all their smelting is done with gas brought from a of the water is reversed, for backing the vessel. Something on the same principle as the above is the use of a wheel or screw

Several patents have also been granted for pneumatic pro-

In addition to the above there are various styles of propelling devices adapted to shallow or small bodies of water, as rivers and canals, among which may be classed rope or rail It is probable that many who have recently joined the traction, in which a rope is laid from one end of the route to no knowledge that there are many other methods of propelling boat around which the rope is usually passed. The rope vessels besides the use of the oar or paddle, the sail, the screw, generally lies on the bottom of the canal or stream and either the paddle wheel, and animal towage; and that many who passes over the bow of the boat to the driving power and have been our readers for years have no idea of the variety drops into the water at the stern, or over a wheel at the side has received much attention, and in connection with it the of styles of propellers devised by the ingenuity of the many of the boat. Sometimes the rope is suspended above the inventors who have labored in this field. We therefore think water, and then is usually clamped between two driving thata brief description of some of the most prominent varie- wheels, or between a driving wheel and an idler; and in ties may be acceptable to our readers and prevent the re-in- other cases a chain or a fixed rail (either over the canal, or

on its bank, or the canal bottom) is substituetd for the rope, Leaving out of further consideration the ordinary use of In some cases the rail takes the form of a rack, on which nomena of physical disease, organic and functional; and if the means mentioned above, as too well known to require runs a pinion driven by power on the boat. As somewhat the terrible onslaught of insanity is to be resisted, the battle description, we would state that many patents have been ob- analogous to this, we may mention that some inventors have tained for different forms of and arrangements of the buckets proposed to lay rails on the tow path on which a light locoin paddle wheels, some having them adjustable on the arms motive, driven by a boiler on board the boat, shall run and to give them the proper amount of dip, others having them tow the boat by means of the flexible steam tube connecting

line of the spokes or arms of the wheel, and still others show tried, some of which show driving wheels running in selftors by the members of the profession whom they met here the paddle wheels made in the form of drums to assist in adjusting frames, so that they will always bear on the bottom was, the Lancet has reason to know, of a very satisfactory floating the vessel; but the favorite change from the ordinary of the canalor stream; others have poles driven by cranks or kind; and that critical representative of British medicine is style is that known as the feathering paddle wheel, which eccentrics; and still others have legs with shoes pivoted at glad to believe that the condition of medical education in consists in such an arrangement of the paddles as will allow the bottom: but the two last styles are essentially the same

number of medical schools purporting to grant qualifications. fixed paddles. This is accomplished generally by journalling water, have also been tried and patented, the object being to the paddles to the arms of the wheel, and providing them avoid the washing of the banks in steam propulsion on canals.

Windmill propellers, or rather the use of windmills to According to the Lockport papers, Mr. Holly's plan of tain a vertical position on entering and leaving the water. A drive screws or paddle wheels, have also received some atthe city into districts, and the establishment of a separate the loss from the beating and lifting of the water is not near. Several patents have been granted for wave power prosystem of boilers in each district, with mains leading to the so much as is generally supposed. Some of these feathering pellers, in which the waves, in rocking the vessels, are suphouses to be heated. That done, the citizens of Lockport' paddle wheels are submerged and run on vertical shafts, in posed to drive the screw or paddle wheel. The force of a runwill be enabled to dispense with stoves and fireplaces, as which case the paddles are set vertically during that portion ning stream has been availed of to drive a boat across it with they already have with private wells and candlesticks, and of their revolution when they act on the water and lay hori-considerable success. In one case, there is a rope stretched across the river, on which run two pulleys connected with the One of the favorite ideas of would-be improvers on the bow and stern of the boat. The pulley at the bow is connected The plan is undoubtedly feasible, and, if properly carried paddle wheel is to convert it into an endless chain of paddles by a very short cord and the one at the stern by a longer one, necessitate the abandonment of almost all the appliances for tween the drums by friction pulleys; and in other cases the gested consists in attaching one end of a rope to a boat and heating and cooking now in use. Besides, the number of chain is made so short or is so constructed as not to require the other end to an anchor located in the middle of the stream,

> A method of making a boat travel against the stream by Several attempts have been made to displace the paddle the power of the stream itself has been proposed, and it con-

The above gives but an incomplete sketch of the various through the water, as a description, be it ever so brief, of the different modifications of the various plans for propulsion would fill a good sized volume, there being probably upwards of eight hundred United States patents for propelling devices, to say nothing of the many foreign inventions for the same purpose.

MR. R. HITCHCOCK, of Watertown, N. Y., states he was scribed in our issue of January 20 as the patent of C. B. Hoard. The patent was granted to Mr. Hitchcock after the

An excellent backing for fine harness can be made by dissolving five or six sticks of black sealing wax in a pint of alcohol.