

Transplanting Large Trees.

The superintendent of a cemetery in Chicago gives an account in *Garden and Forest*, of the removal of two trees, one of which was sixty feet high and more than two feet in diameter. They were removed in an upright position on rollers, with the aid of a heavy framework of timber. A part of the earth was retained on the roots. The cost was between five and six hundred dollars. It is pronounced too early yet to speak with confidence of the result. There is no probability, however, that the original vigor of the trees will be imparted to these monsters after removal. A tree sixty feet high has a circle of roots at least one hundred and twenty feet in diameter, and an old tree will not easily recover from the loss of most of them, as in a younger tree. We noticed this mode, or a similar one, in use at Chicago, in a former volume of the *Country Gentleman*.

The practice of removing very large trees has never been successful. In the experiments made many years ago on a liberal scale in the moist climate of Scotland, although the large trees survived the operation, they never recovered their luxuriance, but remained feeble and sickly. We have seen trees removed when eight inches in diameter without ever recovering from the operation. But much depends on preparing them beforehand by shortening the roots, and there would of course be much difference between giving a copious supply of carefully taken up roots, or only a scant quantity of badly mutilated ones.

As a general rule and for common planting, it is not advisable to attempt the removal of trees over an inch and a half in diameter. But with a previous preparation by one or more transplantings, it will not be difficult to remove those which are three inches. Occasionally it becomes desirable to secure by transplanting those which may be four or five inches. Evergreens especially may be required to be transplanted to new grounds. The practice of attempting the work on very large trees, or two feet or more in diameter, as in the Chicago experiment, is not to be recommended in any case. The same outlay of five hundred dollars under the direction of skill, with smaller trees, would accomplish many times more in landscape effect and in sylvan ornament.—*Country Gentleman*.

AN IMPROVED FOLDING UMBRELLA.

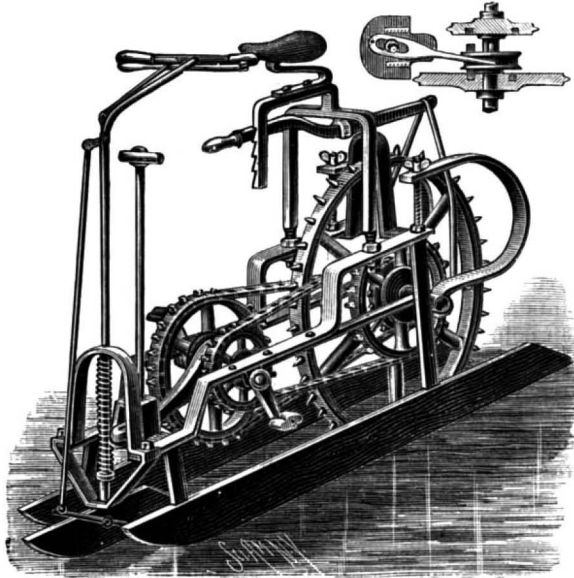
The accompanying illustration represents an umbrella which can be readily folded up when not in use (as shown in Figs. 1 and 3) for conveniently carrying it in a pocket, valise, or other suitable receptacle. The cane of the umbrella is made in three telescoping sections, of which the lower or handle section serves to push the upper section out of the middle section, suitable catches being provided for holding the several sections in an extended position when the umbrella is used, as illustrated in Fig. 2. On the upper or outermost section is secured the crown piece, to which are pivoted the ribs, each made in two parts connected with each other by a joint plate, shown in detail in Fig. 4, so that one rib part can fold on to the other, as shown in Fig. 1, thereby permitting a close folding of the umbrella. The ribs are pivotally connected by braces with a brace piece, which is fastened on or near the upper end of the middle section. The joint plates of the ribs are so constructed that when the umbrella is opened the rib parts are prevented from bending outward, and an accidental closing or folding of the rib parts cannot take place. At or near the joints of the ribs, at the inside of the covering material, is arranged a flexible cord or braid connecting the several ribs with each other and serving to prevent the covering material from becoming entangled in the joints of the ribs when the umbrella is closed. The umbrella can be readily extended by the operator pulling out the handle section of the cane to engage with its upper end the spring catch (shown in Fig. 5) of the uppermost cane section; by then pushing the handle section inward the upper cane section is pushed out of the middle section, which latter is held with the left hand of the operator, the right hand being used to manipulate the several parts. A spring catch locks the outermost cane section, when extended, to the middle cane section. The handle section is then again moved outward until it automatically locks itself to the middle section by a spring catch, shown in Fig. 2. At the time the outermost cane section slides outward the braces swing upward and outward, thus moving the ribs and the covering material into their proper places. The folding of the umbrella is readily accomplished by unlocking the spring catches and telescoping the cane sections, whereby the braces and ribs, with the covering material, fold up into the position shown in Fig. 1. The folded umbrella takes up very little room, and may be placed in an additional casing of a suitable fabric, as illustrated in Fig. 3. This invention has been patented and is manufactured by Mr. John Bergesen, 250 Wyckoff Street, Brooklyn, N. Y.



BERGEBSEN'S FOLDING UMBRELLA.

AN IMPROVED SLED PROPELLER.

A device to facilitate the propulsion of a sled over ice or hard snow, and by which different rates of speed may be maintained, is illustrated herewith, and has been patented by Mr. John Stanford, of Chester, Lunenburg County, Nova Scotia, Canada. The main runners are held spaced apart by front and rear yoke frames, the latter frame having an upwardly extending contracted portion over the propelling wheel, which is centrally mounted between the runners upon a short transverse shaft, the wheel having suitable teeth or spikes in its periphery to insure a strong hold on the ice or snow. The bearings of the propelling wheel shaft are in the lower portion of rearwardly and



STANFORD'S SLED PROPELLER.

upwardly curved spring bars, the upper terminals of which are held on standing screw-threaded bolts extending upward from side bars of the frame, whereby, by means of winged nuts, a regulated pressure may be held upon the spring bar ends to cause the propelling wheel to bite more or less upon the ice. Directly forward of the standing bolts is mounted an arched seat support, the uprights of which are adjustable for height, the base plate for the seat spring receiving a rider's saddle, and being bent downwardly in front to provide a depending notched locking bar. To the rear surface of the seat standard is secured a bifurcated bracket arm in which is pivoted a lever having a rearward connection with a pendent link loop, the outwardly inclined limbs of which at their lower ends have a hooked engagement with the spring bars near the journal supports of the propelling wheel, while the forward end of the lever terminates in a handle within easy reach of the rider. By depressing this lever, and interlocking it with one of the notches of the locking bar, the spring bars and the propelling wheel will be raised, and the wheel may thus be removed from contact with the ice or road bed. On the treadle shaft, which is located at a convenient distance in advance of the propelling wheel, are two sprocket wheels of different sizes, connected by proper chains with wheels on the shaft of

the propelling wheel, to afford a change of speed without any acceleration of treadle movement, and a clutch and clutch-shifting mechanism are provided whereby such changes of speed may be readily effected. The steering mechanism consists of a forward intermediate runner secured to a vertical steering rod, bent rearwardly and terminating in a handle within easy reach of the rider, a spiral spring on the rod holding the steering runner in yielding contact with the road bed.

To check the speed of the sled a brake is provided consisting of a loop-shaped bar, pivoted to the steering runner, and its limbs loosely embracing the sides thereof, while its forward ends are engaged by an upright rod extending to one arm of a bell crank, the other arm of which is pivoted to a horizontal connecting bar, loosely secured at its opposite end to a brake lever hinge-jointed by one end to the handle bar of the steering rod. A movement of the free end of this lever toward the handle bar depresses the pointed ends of the brake bar limbs and causes them to engage the road bed to impede the forward motion of the sled.

A Cyclone at Wilkesbarre, Pa.

On the afternoon of the 19th of August this thriving city was visited by a whirlwind, which resulted in sad loss of life and destruction of valuable property.

One of the most painful scenes was at the Hazard wire rope works. The cyclone struck the rear of the large brick building. About two hundred men are employed in the works. The roof and side walls were crushed in. The bricks and ponderous machinery were scattered all over. When the storm was imminent the men rushed for the door, but many of them were caught in the ruins. As soon as the calm succeeded the cyclone, men rushed into the ruins and rescued the injured. One by one they were dragged out from under the debris. The number seriously injured at these works exceeds twelve, and there were two killed.

St. Mary's Catholic Church, in South Washington Street, is a total wreck, as is also St. Mary's parochial school, brick, on Canal Street, opposite the church. Father McAndrew's parochial residence was considerably damaged. The solid tin roof on St. Mary's convent, on South Washington Street, was torn off and blown into the street, and a part of the brick wall taken away.

A car on South Washington Street was overtaken by the cyclone near the Catholic church. In the midst of the terror a large tree fell on the roof, and the passengers gave themselves up for lost.

The Barber Asphalt Company works are blown down. S. L. Brown & Co.'s mammoth business block on Market Street, containing ten wholesale stores, is among the ruins. The Murray coal breaker was partly destroyed, with heavy loss. The mammoth Hollenback breaker is a complete wreck. The fans were stopped while twenty-seven men were at work in the Hillman vein, but luckily they were able to start them immediately. It was a very narrow escape.

The number of the dead is about thirty. A careful estimate places the number of buildings demolished and partly destroyed at nearly four hundred, and some estimate that it will exceed this figure. The loss will probably reach nearly if not quite \$1,000,000.

Corrosion of Zinc in Contact with Brick.

A German paper mentions the fact that, under some conditions, sheet zinc, when in direct contact with brickwork, suffers to an appreciable extent from rapid corrosion. In building the Berlin city market halls, a portion of the zinc work which rested upon brick walls was found to be deeply pitted at a number of places, particularly where the metal was close to the bricks.

Chemical examination of these resulted in showing that they contained as high as 1.14 per cent of soluble salts, of which the destructive effect increases by moisture. The proportion of such salts varies with different kinds of brick, while in some there may be nothing to induce any such corrosion. As a preventive, roofing felt or similar material may be placed between the zinc and brickwork.

Guimbobo.

The Belgian legation at Mexico has recently reported to the Belgian government on the subject of *guimbobo*, known also as *angu*, which is found in the State of Vera Cruz, a plant which should be included in the category of all the varieties of Mexican textiles. The *guimbobo* or *angu* produces not only a fiber of very superior quality, but can be easily and cheaply cultivated; moreover, the fruit of the plant constitutes a nutritious food. It appears from experiments that have already been made that the *guimbobo* differs essentially from the ramie, cotton, and hemp, as in the *guimbobo* the covering of the plant surrounds the fiber, and is not mixed up and interlaced with it; this constitutes a decided economy, added to great facility in extraction and utilization. The structure of the plant permits of the operations of separating and removing the bark being performed by machinery, while in the other fibrous plants these operations are difficult, at the same time very costly, and only possible in countries where there is a large number of hands available and cheap. The fiber of the *guimbobo* has a luster similar to that of silk, and is undoubtedly finer and stronger, with a creamy color between white and straw color.