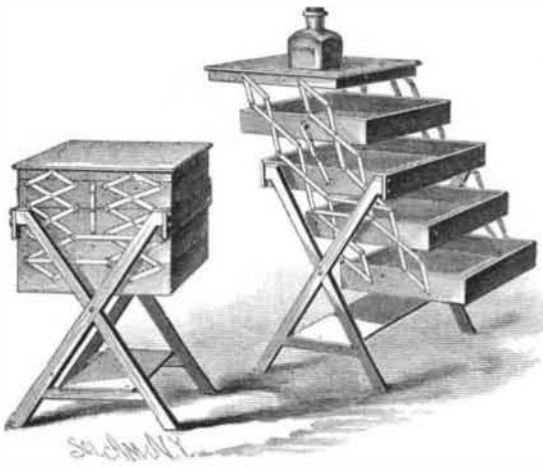


**CHEST OF DRAWERS.**

The accompanying illustration represents an invention recently patented by Mr. Abe L. Adams, of 264 Main Street, Bridgeport, Conn., in which the frames for the drawers to slide in are connected together at the ends by two systems of lazy tongs, thereby permitting the frames to be extended either vertically or as shown in one of the figures.

The two systems of lazy-tongs are connected by parallel bars that stay them laterally. The frames can be secured



**ADAMS' CHEST OF DRAWERS.**

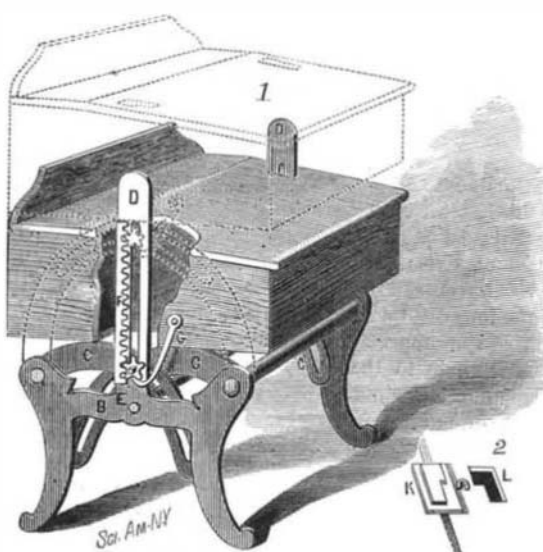
in an extended position by means of a latch. The middle frame serves as a fulcrum on which the others can swing into an inclined position. The frames may be placed in a chest or case consisting only of a bottom, ends, and removable top, the sides being closed by the front and back edges of the drawers; or a support may be formed of braced cross legs, as indicated in the engraving.

The drawers when loaded balance each other, and may be adjusted in open and closed positions, and, by attaching the frames to every alternate cross joint of the lazy-tongs, the drawers can be adjusted further apart in order to be more easily accessible. The various applications of this useful device and the ease with which it may be operated will be readily understood.

**IMPROVED DESK.**

The permanent bench is made in any approved form, and is of a suitable height to support the desk or table top sufficiently low for use by a person sitting in a chair. On the center of each cross bar, B, is fixed a slotted standard, D, one side of which is toothed, as shown at F. The standards extend through openings in the desk top, which act as guides, and rise about as high as the top is to be elevated. To the top of each leg is pivoted a curved slotted arm, C, thereby forming a pair of arms at each end. A shaft, extending from end to end of the table, passes through all the slots, and gears at each end by a pinion, E, with the toothed racks on the standards, so that by turning the shaft the desk may be raised or lowered. A hook pawl, engaging with one of the pinions, holds the desk at the desired height. When the desk is raised to the highest position, its top extends a little above the ends of the standards, so that the openings in the top can be closed by hinged covers, as shown in Fig. 2. The dotted lines show the desk in the raised position. The parts may be quickly disconnected, and packed in a small space for transportation.

Additional particulars regarding this invention may be



**KLAR'S IMPROVED DESK.**

obtained from the patentee, Mr. Jacob Klar, of Rodney, Miss.

DR. V. POULAIN believes that the reason that cow's milk so often disagrees with children is to be found in the fact that cane sugar is used to sweeten it. He says that for thirty-three years he has used the sugar of milk with the best results.

**Dry Houses vs. Damp Houses.**

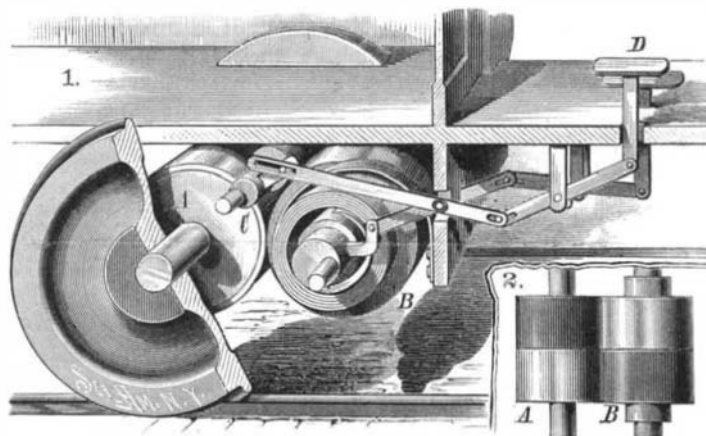
The importance of selecting dry locations for a residence is very aptly illustrated in the following extract from an address by Prof. R. C. Kedzie before the Michigan Tile Makers' Convention:

Two brothers in Vermont, of strong and vigorous stock, and giving equal promise of a long and active life, married wives corresponding in promise of future activity. They had both chosen the healthiest of all callings—farming. One of the brothers built his house in an open and sunny spot where the soil and subsoil were dry; shade trees and embowering plants had a hard time of it, but the cellar was dry enough for a powder magazine. The house in all its parts was free from every trace of dampness and mould; there was a crisp and elastic feel in the air of the dwelling; the farmer and all his family had that vigorous elasticity that reminds one of the spring and strength of steel; health and sprightly vigor were the rule, and sickness the rare exception. The farmer and his wife, though past threescore, have yet the look and vigor of middle life.

The other brother built his house in a beautiful shady nook, where the trees seemed to stretch their protecting arms in benediction over the modest home. Springs fed by the neighboring hills burst forth near his house, and others by his barns; his yard was always green even in driest time, for the life blood of the hills seemed to burst out all about him in springs and tiny rivulets. But the ground was always wet, the cellar never dry, the walls of the room often had a clammy feel, the clothes mildewed in the closets, and the bread moulded in the pantry. For a time their vigor enabled them to bear up against these depressing influences; children were born of apparent vigor and promise, but these, one by one, passed away under the touch of diphtheria, croup, and pneumonia; the mother went into a decline and died of consumption before her fiftieth birthday, and the father still lives, but is tortured and crippled by rheumatism.

**CAR STARTER.**

In the device shown in the engraving the power employed to stop the car is stored up in springs, and utilized for start-



**WILSON'S CAR STARTER.**

ing the car. Arranged on each car axle is a friction drum, A, directly in front of which is a second friction drum, B, fitted loosely on a shaft that has eccentric pivots in bearings in the frame, and is connected by levers with a foot treadle located above the platform of the car, so that pressure on the treadle will press the drum, B, on the drum, A. By this means the spring attached to the drum, B, is wound up and made to act as a brake to stop the car. The small roller, C, is fitted loosely on an eccentric shaft, and is connected by levers with a treadle. When this treadle is pressed down the roller, C, is made to bear alike on both drums. The springs turn the drum, B, the reverse of the way it was turned by the drum, A, and, driving back on the drum, A, through the roller, C, will start the car forward. Care must be taken to press the roller upon the drums before the foot is removed from the brake treadle, in order to keep the spring under tension. The drums are so constructed that paper on one will run against iron on the other, as indicated in Fig. 2.

This invention has been patented by Mr. John Wilson, whose address is P. O. Box 243, Chicago, Ill.

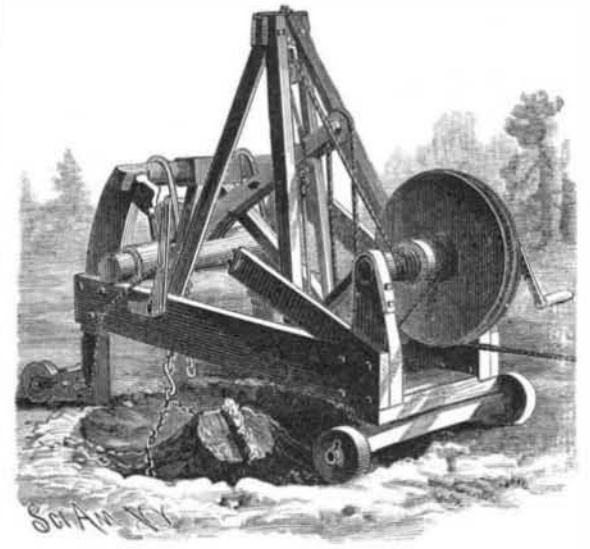
**A Chance for the Ingenious.**

In the May number of the *American Meteorological Journal*, a new monthly periodical published at Detroit, Mich., the editor, Prof. M. W. Harrington, suggests the need of the following invention:

"Some one should now invent some mechanical and continuous register of cloudiness. The present eye-estimates are unsatisfactory, and when we get ready to make up the earth's accounts of receipts and expenditures of heat, we must have some more trustworthy record of cloudiness. The sunlight-recorder sometimes employed is defective in that it registers only direct sunlight and gives no indications of clouds at night, or even daylight clouds which do not directly intercept the sun's rays. It bears about the same relations to the nephelometer which we should have that the sun-dial bears to the clock. There is a notable difference in the radiation of clear sky and clouds, and this must be capable, in some way, of instrumental measurement and record."

**STUMP PULLER.**

The engraving shows a stump puller for which letters patent have been granted to Mr. Charles A. Blume, of Union City, Indiana. The rear end of a strong frame is mounted upon two legs that are provided with caster wheels which

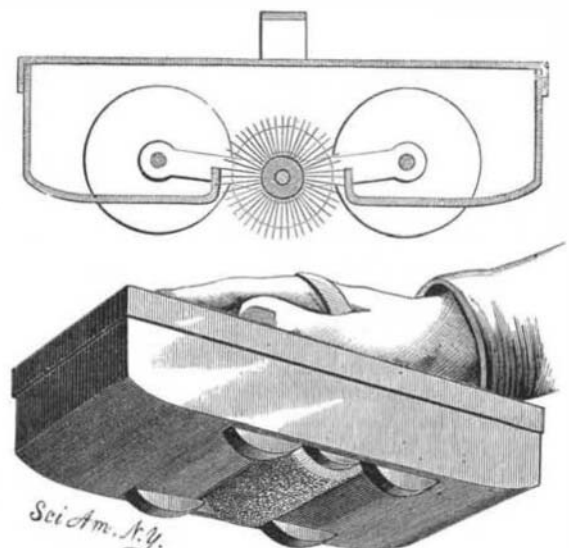


**BLUME'S STUMP PULLER.**

shift up and down, in order that the legs may rest upon the ground while the stump is being pulled, and upon the wheels when the machine is to be drawn over the ground. The front of the frame is supported upon an axle furnished with wheels. Extending across the top of the rear end part is a beam from which hang stirrups to support the center of an axle having pivot bearings at the end of the side timbers. Resting on this axle is the pulling lever, which has a semi-circular block to work the chain—the block being placed a little eccentric to the axle for drawing up the chain quickly at the beginning, and for increasing the pulling effect when the greatest resistance occurs. The free end of the lever is suspended by a cord and pulley from a derrick mounted on the frame for raising the lever to lower the chain for hooking on to the stump. A strong rope, secured to the lever extends down around a pulley on a cross beam, thence around a pulley in the end of the lever, then under a roller supported in the frame, and then around the axle of a powerful windlass. On this axle is a drum about which is wound the rope to which the horses are attached. The axle is also provided with a hand crank for unwinding the main rope and winding up the other when the lever is to be set again. This construction gives great pulling power, since the force applied passes through, first, the windlass, second, the cord and pulleys, and then the lever.

**HORSE CLEANER.**

A sheet metal box, having a cover provided with a handle, has a transverse slot in the bottom. In the slot is a brush mounted on a shaft, on each end of which is a small wheel, against which rest two larger wheels mounted on shafts journaled in the sides of the box; these shafts carry links, at the middle of which the brush shaft is journaled. The rims of the wheels are made of rubber. The cleaner is held in the same way as the common horse brush, and as it is



**FARR'S HORSE CLEANER.**

rubbed over the animal's skin the large wheels are revolved by friction, as they project slightly from the bottom of the box. This imparts a rapid motion to the small wheels, and the revolving brush sweeps the dust, etc., into the box, from which it can be removed after the cover has been taken off. Our engraving shows a perspective view and a sectional elevation.

This invention has been patented by Mr. Eugene M. Farr, of North Muskegon, Mich.