

A NEW Pedometer.

Walking, especially in the open air, is acknowledged to be the most economical, the most enjoyable, and in many respects, the most healthful form of physical exercise. It is an exercise, too, which is growing more and more in popular favor, and as the season for summer rambling approaches, when many will be seeking health and amusement in rural excursions, the advantage of a simple means for recording distances walked need not be insisted on.

To a great extent the value of walking as an exercise depends upon the proper adjustment of the amount of walking to the walker's physical capacity, that there may be no overdoing nor any deficiency through fear of overdoing. On the other hand the satisfaction attending the knowledge of just how far one has walked in a day's excursion, always adds a relish to the performance. Accordingly not a few of those who, for pleasure, or in the pursuit of health, have cultivated this most delightful of recreative exercises, have so felt the need of a simple pedometer that quite a demand has arisen for such an instrument.

The pedometer made abroad for surveyors' use has failed to meet the wants of walkers generally. It was expensive, and, besides, could not be adjusted to suit the varying step of men, women, and children. The instrument illustrated in the accompanying engravings meets these wants fully and cheaply.

The American pedometer is shown in Fig. 1; the working parts, which are few and simple, may be seen in Figs. 2 and 3. The recording apparatus is impelled by the oscillations of the weight, A, which is nearly counterbalanced by an adjustable bow spring. The arm that supports the weight carries pallets that engage the ratchet wheel, B, at every oscillation of the weight. The small pinion connected with the ratchet wheel engages a pair of differential wheels on the back of the dial, C, one of which is secured to the dial, while the other is placed on a hollow stud, carrying an index hand in front of the dial, as shown in Fig. 1.

The wheel that carries the index hand has one less tooth than the other, so that, when the dial has been turned through one revolution, the wheel that carries the index hand will



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have gained a distance equivalent to one tooth, recording one revolution of the dial.

The instrument may be readily adjusted to any length of step, from 17 to 35 inches, the varying scale on the dial being constructed to admit of this adjustment.

This pedometer is the invention of Mr. Benj. S. Church. Messrs. Tiffany & Co., of Union Square, New York city, are the sole agents for its introduction and sale.

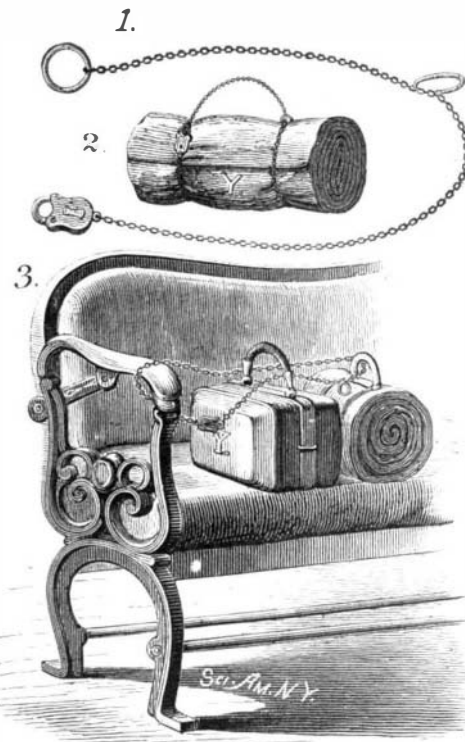
A Singular Storm.

The storm of sleet which lately caused so much havoc in the forests of France by overloading the trees with ice, was more than paralleled by a recent storm in Oregon. The *Ashland Tidings* reports that one morning, on looking towards the mountains south of Ashland, the people were surprised to see the pine trees all bending in one direction, as though bowed by a terrific wind storm, while the morning was clear and calm—not a breath of air in motion. Upon a closer inspection the phenomenon was easily accounted for. During the night before a heavy wind-storm had swept over the mountains, accompanied by rain and snow, and the steady force of the wind held the branches of the trees in the bending, crouch-

ing position, while the snow weighed them down, and the rain freezing upon them as it fell fastened them in that shape with unyielding bonds of ice; and so they remained until old Sol mercifully set them free.

NOVEL BAGGAGE FASTENER AND SHAWL CARRIER.

In the old times a valise, shawl, package, or parcel deposited in a car seat sufficed to secure it if left by the trav-



YOUNG'S BAGGAGE FASTENER AND SHAWL CARRIER.

eler for a moment. It was then only a matter of ordinary courtesy to regard this custom, but in this fast age the traveler not only risks losing his seat, but his baggage also, if he chances to step out of the car or lose sight of it for a minute. This is especially the case at meal times while traveling by rail, or in waiting for trains, or in making transfers in the course of travel, either by rail or steamboat.

To obviate this risk of loss of baggage and the annoyance of carrying or watching it, Mr. Geo. M. Young, of El Paso, Ill., has devised and patented the fastener shown in the accompanying engraving. This invention, although very simple and inexpensive, must prove of great value to travelers. It consists of a chain carrying a loose link, and having upon one end a large ring, and upon the other a padlock. The lock and the ring at the ends of the chain are of such size as to retain the loose link, as will be seen by reference to Fig. 1.

In employing this device as a shawl carrier a loop is made in one end of the chain to receive the shawl or other article, by passing the portion of the chain near the end through the end ring; the loose ring and lock form another loop, and the portion intervening between these loops serves as a convenient handle. The device as thus arranged is shown in Fig. 2.

When used as a baggage fastener either end of the chain may be passed through the handles of the valises, baskets, or whatever it is desired to secure, and then passing them around a car seat arm, chair round, or other object, when the lock is engaged with either or both of the rings, as shown in Fig. 3.

Mr. Young, the originator of this device, is an old railroad man and an experienced traveler, and having seen the necessity of a thing of this kind he invented it. Its advantages need not be further stated, as it recommends itself.

A NEW DOUGH KNEADER.

The improved dough kneading machine shown in the accompanying illustration is capable of rapidly and thoroughly mixing and kneading large quantities of dough. Probably few of our readers realize the great advantage in mixing dough so thoroughly that every particle of the flour is utilized. We are informed that actual experiment has proved that where this machine is used there is a considerable saving in flour, besides producing a finer quality of bread, which readily commands a better price than the hand-made article.

The construction of the machine is quite simple, and seems well adapted to the purpose. The large annular trough, which contains the dough, is supported upon rollers, and rotated by a bevel pinion on the horizontal driving shaft, the latter being driven by a small steam engine, secured to the same base that supports the trough. There are in the trough two peculiarly shaped kneaders secured to horizontal shafts, and a breaker which is supported by an arm and carried by a vertical shaft. The shafts of the kneaders and mixers receive their motion from the driving shaft by an ingenious combination of gearing, which is concealed by the middle portion of the trough. In this machine the dough is rapidly and uniformly mixed by the joint action of the revolving trough and the kneaders and breakers.

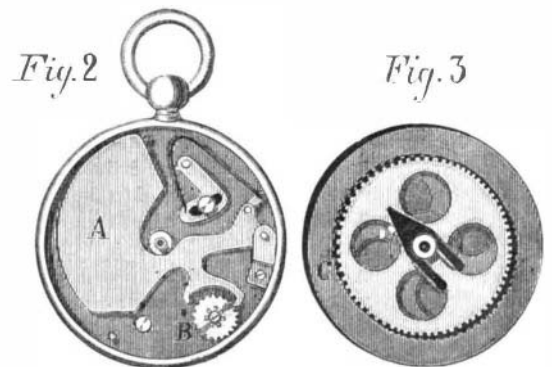
The manufacturer says that the machine does not require a skilled mechanic to run it; an ordinary baker can learn to run it in an hour.

Further information may be obtained from Mr. H. C. Bosse, Quebec, Ontario, Canada.

RECENT AMERICAN PATENTS.

Mr. Thomas B. Taylor, of Mount Meigs, Ala., has invented an improvement in cotton presses, by which slackness of the bale band is obviated, and the bale is retained at the smallest size to which it was compressed, and the old ties may be removed without cutting.

An improved looping attachment for sewing machines, patented by Mr. Alfred W. Cochran, of Harris, Ala., forms a loop in the upper thread above the presser foot, so that when the needle descends in making the last stitch in a seam, a knot is formed, which prevents the unraveling or loosening of the end stitches.



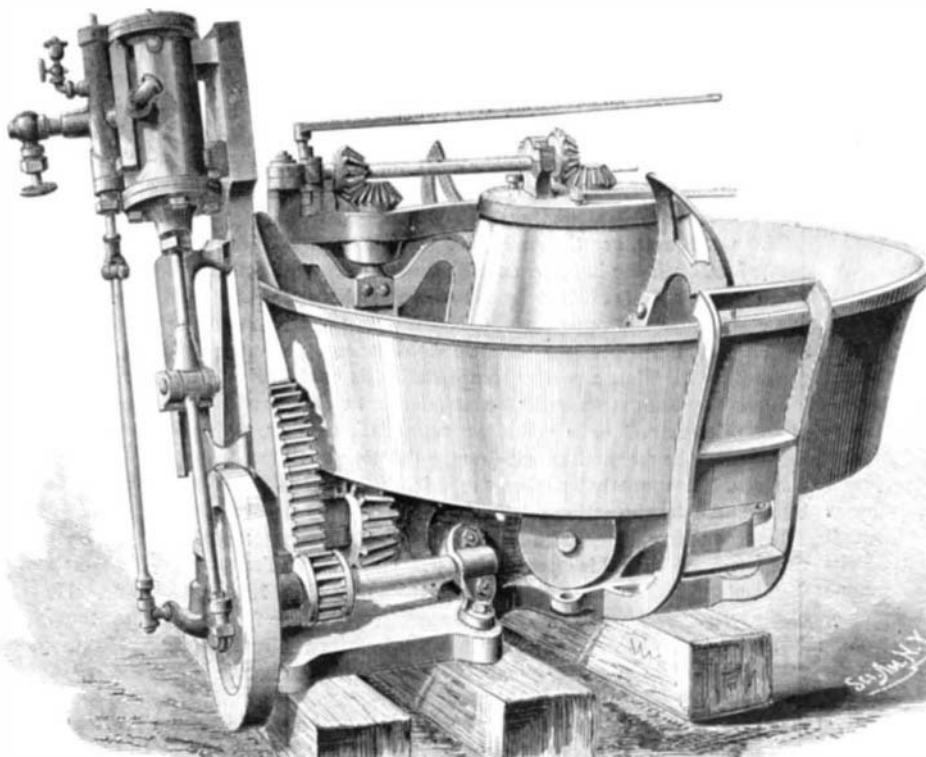
THE AMERICAN Pedometer.

Mr. Francis W. Long, of Philadelphia, Pa., has patented a novel bird cage support, which consists of a spring-acted drum, on which is wound the cord which supports the cage. The spring in the drum is sufficiently powerful to sustain the cage, and the cord is clamped in any desired position by a peculiar fastener.

An improved thill coupling, patented by Mr. R. Houghtaling, of Great Valley, N. Y., has a rubber pressure block fitted into the hinged cover for preventing rattling and taking up wear. The coupling permits of readily attaching and detaching the thills or pole from carriage.

An improvement in vehicle axle lubricators has been patented by Mr. James M. Smith, of Sycamore, Ill. It consists of a box having grooves and recesses filled with packing material for retaining the oil, and in an oil box of peculiar construction, which communicates with the packed grooves.

Messrs. P. J. Clark and Joseph Kintz, of West Meriden, Conn., have patented an improvement in hanging lamps, which consists in connecting rubber tips to the underside of the weights upon the edge that rests upon the shade or ring holder, the object being to prevent the jar resulting from the contact of the weight with the shade ring.



THE DURAND DOUGH KNEADER.