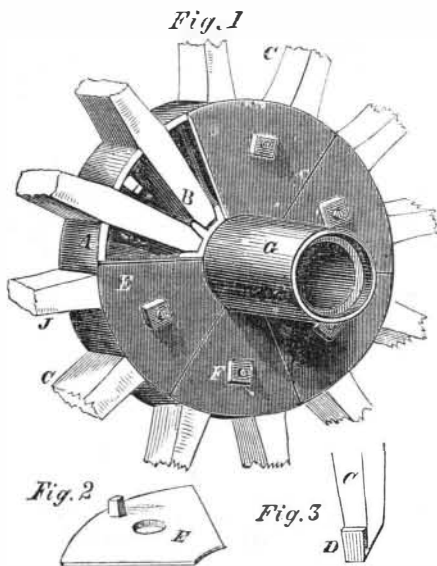


**BOARDMAN'S IMPROVED METALLIC CARRIAGE HUB.**

Various modifications of metal hubs for carriage wheels have been used, but great difficulty, has been experienced in rendering them easily fitted, adjusted, repaired and, at the same time, firm and not likely to work loose. The objects of the hub shown in this illustration are to obviate the defects pointed out, and to secure the advantages of durability and facility of adjustment in a very simple and effectual manner.

A is the cast iron hub, having grooved chambers, B, to receive the spokes, C, which are inserted and fitted into them. The ends of the spokes are beveled to an edge, and when one of them works loose, an angular-shaped wedge, D, of metal or other material, is inserted at the point into the chamber, B, which thus tightens the loose spoke, without interfering with any of the others. In this manner the tire may be always kept tight, without requiring to be re-set, which saves a great deal of trouble. E are clamps or metal plates secured to the hub by the screw bolts, F, for the purpose of securing the spokes in the hub. By means of these plates a single spoke may be taken out, if injured, and replaced with a new one, without taking the whole hub or wheel apart.



A loose spoke may be tightened by a wedge with equal facility. G is the box in the hub. We are informed that a set of these hubs have been in use on a heavy two-horse wagon for two years, and that they have required no repairs, and are apparently as good as new, although they have been subjected to very severe tests. These spokes, having no tenons at the hub ends, are inserted much further than in the wooden hub, and are consequently stronger. On a wheel having this hub a tire never requires re-setting. These hubs are equally well adapted to the lightest carriage and to the heaviest wagons and carts, and possess many advantages over the wooden hub. More information may be obtained by letter addressed to Spencer, Boardman & Co., Lancaster, Pa.

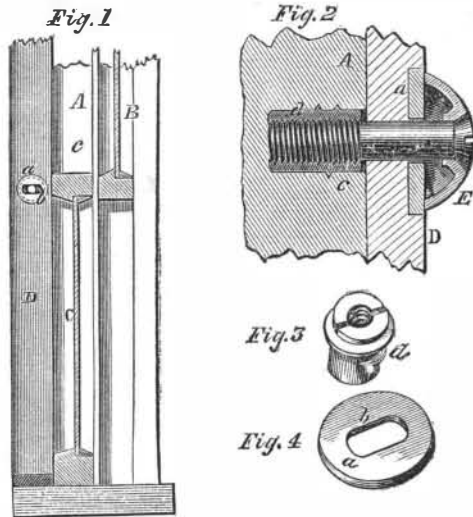
**NEW ADJUSTABLE WINDOW STOP.**

The sash of a window is kept in place by a vertical strip called a stop, which extends from the top to the bottom, and is generally fastened to the window casing with small nails. These stops are not adjustable to fit snug or loose, as may be desired; and they are not readily detached to permit the sash being taken out for the purposes of glazing, washing, painting, &c. In removing common stops, the paint is frequently injured, and the removal of the nails oftentimes causes the stops to be broken. The invention represented in the accompanying figures is designed to obviate these defects, by providing a simple fastening for securing the stops, by rendering them easily adjusted—tight or loose—and capable of easy removal and replacement.

Fig. 1 is a vertical section of a window, with the invention applied to it; Fig. 2 is an enlarged section of the invention applied to a window; Fig. 3 is a view of the screw socket; and Fig. 4 a view of the small slotted plate for the stop to render it adjustable.

A represents a window casing; B is the upper and C the lower sash; D is the stop of the window (there is one at each side) secured in the inner sides of the casing to retain the lower sash, C. In each stop, at about its center, there is fitted the small metal plate, a, Fig. 4,

with an oblong slot, b, in it, and a corresponding opening is made in the stop. In the stile or jamb, c, of the casing, and in line with the plate, Fig. 4, a socket nut, d, Fig. 3, is fitted. It has a screw on its outside to secure it in the case, and it has a thread cut in its inside to

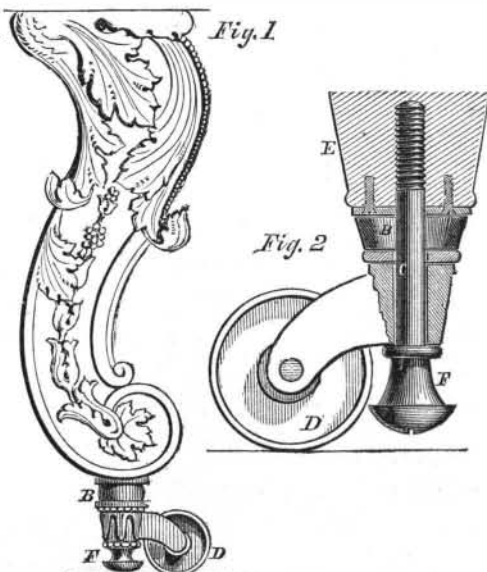


receive the adjusting screw of the stop. A notch is cut on its outer end for screwing it in with a driver. E is a small sectional globe washer, Fig. 2, through which the screw, F, passes, and is made to fit snugly, and secure the stop, D, to its place in the casing. This is the entire fastening. In order to remove the stop, D, to permit the sash being taken out, the screw, F, has but to be turned fully backward; and in order to adjust the stop close to the sash, the screw, F, has just to be slightly unscrewed, when the oblong slot of the plate, a, will permit the stop to be set nearer to or further from the sash, and thus a ready adjustment is effected. It will be readily perceived that from the application of this simple fastening to windows, the stops can be easily detached and adjusted for the purposes stated. The invention is simple and efficient, and may be applied to any window, and either one or more to a stop, according to the size.

The patent for this invention was granted on the 20th of March last. More information may be obtained by letter addressed to the inventor, Mark Howland, of Waterbury, Conn.

**FRY'S IMPROVED FURNITURE CASTER.**

The chair and sofa caster in common use is very defective in its construction, and is therefore attended with several disadvantages. The point of bearing of the chair upon the wheel of the common caster is so far from the center that it is liable to get out of order, by bending the central stock. The legs of chairs—especially those which are slender or curved, embracing those which



are the most costly—are frequently broken by persons sitting down upon them suddenly, or when the chairs are drawn across a carpeted floor and meet with some obstruction. To overcome such defects, also to insure the caster rolling straight, when moving, are the objects of the invention illustrated in the accompanying figures, representing a side elevation and a vertical section.

C is the central stock or spindle which passes through the collar of the caster, D, and into the metal socket,

E, in the leg of the chair. The stock has a permanent cap, F, in its base, and the wheel revolves on the stock with freedom. A spring of india-rubber or metal, B, is placed around the central stock, C, to operate with the caster, D, in such a manner as to support the weight of the chair when it is empty, thus upholding it on the spring. When, therefore, a heavy person sits on such a chair, the springs will permit the caster or wheel to slide up, and the chair will then be supported firmly on the floor by means of the cap, F.

This improvement also permits the bearings of a chair to be placed at a proper distance from the central stock, as the wheels have great freedom to present their proper sides to the line of travel. To avoid strain on the legs and stocks, some casters have been made with their bearing points upon the wheel, so near the central stock that the roller could not turn round readily, but presented flat sides to the line of travel, thus making them slide, instead of rolling upon the carpet. These defects are obviated by this useful improvement, for which a patent was granted, on the 10th of April last, to Mr. Thomas Fry, No. 120 Fulton-street, Brooklyn, L. I., from whom more information may be obtained by letter.

**A WIND WAGON.**—A western genius lately constructed a wind wagon to bear him to Pike's Peak, which has realized his most sanguine expectations—carrying him through in 20 days. Encouraged by this success, other parties in the same town set about the construction of the same kind of wagons, and a party of eight started out on the prairies to try one which had been finished. The wind was blowing a gale at the time, and everything worked to a charm. The occupants, gliding swiftly over the prairies, were delighting themselves with anticipation of a speedy and comfortable trip to the mines, when the velocity of the vehicle created a lively alarm for their safety. The wagon sped onward before the driving wind faster and faster, until the axletrees broke and deposited them all on the ground, and in a somewhat damaged condition, from broken heads, bruised limbs and bodies. The speed of the machine is said to have been 40 miles per hour. We suggest the use of brakes.

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