

A NEW MACHINE FOR MAKING EXCELSIOR.

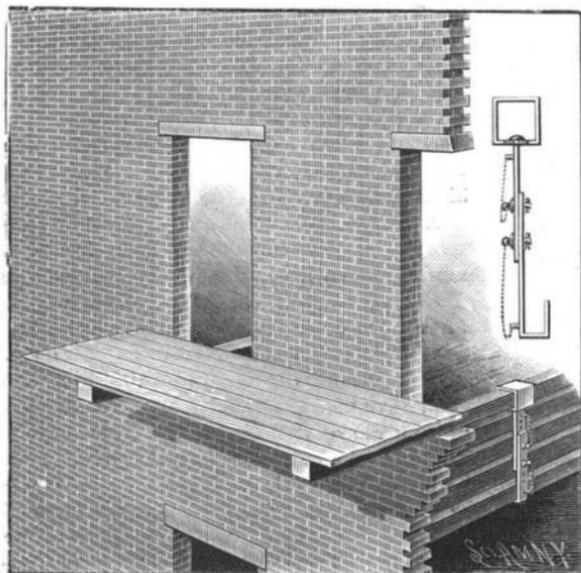
An improved machine for making excelsior, or the curled shreds of wood used as a substitute for curled hair in mattresses, and for stuffing cushions, packing furniture, etc., has recently been perfected by the S. C. Forsaith Machine Company, of Manchester, N. H., and is shown in the accompanying illustration. The machines built by this company are in use in various parts of the country, and have an excellent record as being strongly built, without superfluous material, while being very economical machines to use, as attested by a long list of testimonials. The frame of the machine shown in the cut is of Georgia pine, 7 inches square, and is 6 feet long, 4 feet 11 inches high, and 2 feet 7 inches wide. It is a double machine, cutting two blocks at one time. There is one set of knives and spurs in each crosshead or slide, so arranged that one set of knives and spurs operate on one block when going one way and the other set on the opposite block when returning. The blocks may be 12 to 20 inches long, 2 to 6 inches thick, and any width up to 14 inches. The knife plates are steel plated, and the slides are adjustable to take up the wear. The feed screws are of Norway iron, and the boxes are of iron, babbitted. The knives are set at an angle, so as to curl the excelsior as it comes off. The holding heads or dogs are so arranged that when the block is used up as far as possible, the feed is thrown out automatically, while by moving a shipper the head is run back by power to take a new block, such block being put in without interfering with the other head, which will be feeding all the time, and can be supplied with a new block in the same way, the two heads on the machine being worked independently.

With the machine is furnished a countershaft with tight and loose pulleys, and a balance wheel with wrist pin adjustable to different lengths of stroke, counterbalanced so that it can be run at great speed. The connecting rod is made of hard wood, with heavy straps, bolts, and brass boxes, being light and strong. The machine is designed to run about 200 revolutions a minute, at which rate it will cut 1,000 to 1,200 pounds of excelsior per day of ten hours, though in some cases, with skilled operators and nice stock, they have produced 1,500 to 1,600 pounds per day; while by placing two machines facing each other, to be attended to by one man, considerable saving in labor may be effected. The excelsior made on these machines frequently commands a higher price in market, from \$2 to \$3 per ton, over that made on upright and other machines, it being so nicely curled. A cord of wood should make from 1,800 to 2,000 pounds of excelsior, according to the quality and condition of the wood. It is calculated that the waste wood is sufficient to furnish power if steam is used. The woods considered best for the manufacture of excelsior are the following, ranking in the order named: Poplar, white birch, yellow birch, bass, whitewood, and soft maple.

The Forsaith Machine Company also manufacture a general line of woodworking machinery, and furnish anything in the line of steam power or machine shop equipment.

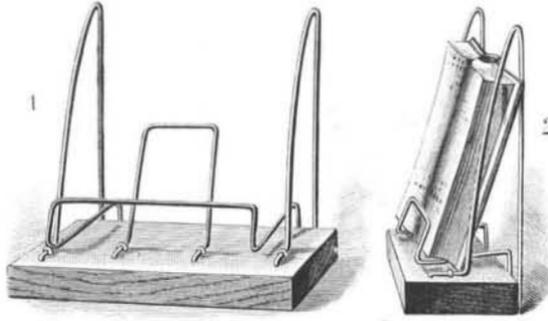
AN IMPROVED SCAFFOLD HOLDER.

A simple and easily adjusted device adapted for use in supporting scaffolds on the outside of buildings is illustrated herewith, and has been patented by Mr. William J. Blundell, of No. 152 East 129th Street, New York City. The holder is made with a skeleton frame



BLUNDELL'S SCAFFOLD HOLDER.

at its upper end, adapted to slip over the inner end of a beam, which may be projected from a window to support a scaffold, while its lower end has a hook to engage with a joist of the flooring, as shown in the sectional view, so that the holder serves as a tie rod between the beam and joist. The holder is made in two sections, which overlap each other and are held in place by

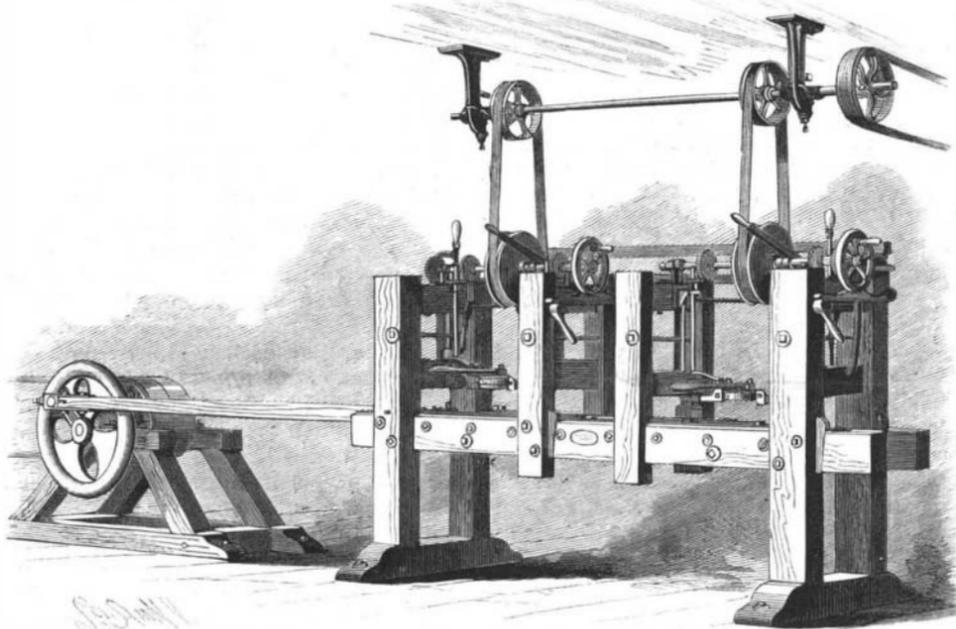


HARBAUGH'S BOOK HOLDER.

pins passing through corresponding holes, whereby the holder may be adjusted as to length according to the distance from the top of the window sill to the lower edge of the joist.

AN IMPROVED BOOK HOLDER.

A simple and inexpensive device for holding books in an open position, at a suitable inclination for reading, is illustrated herewith, and has been patented by Mr. Frank P. Harbaugh, of Chambersburg, Pa. Near the ends of the base piece are wire standards, bent into



THE FORSAITH IMPROVED MACHINE FOR MAKING EXCELSIOR.

an approximately V shape, and midway between the standards is secured a bent wire support for the back of the book. Between the standards and the support are arranged the arms of the bottom support, so that the leaves of a book placed on the arms may be held in open position by the horizontal part of the support, the covers resting against the standards, and the book being thus held in a light spring clamp. This holder may be attached, by simple fixtures, to chairs, lounges, etc.

American Industries and the Brussels Exhibition.

The following extract from a note to the *Evening Post*, just received from one of the jurors of the Brussels exhibition, shows that though the number of American exhibitors was not large, the reputation of American artisans for ingenuity and talent was fully sustained by those who represented them. The writer, under date of the 5th of October, says: "I have just finished the duties of juror at the exhibition, and must let you hear of the returns. In the agricultural machines, on which division I was put, we got for the United States three diplomas of honor—the highest award—and one gold medal; in other words, a diploma of honor for each exhibitor but one, and he really only deserved the gold medal. The other exhibitors fared equally well, for out of 73 expositors, 54 got distinctions of greater or less degree. I think we have reason to congratulate ourselves."

The Smithsonian Institution, at Washington, has sent an expedition to Nova Scotia and secured facsimiles of the "fairy rocks," on which are curious hieroglyphic characters, evidently very old, which may throw some light on the history of the early discoveries of America. The markings are cut in upon a rock of highly polished slate, and the intaglio is about a sixteenth of an inch deep.

Long Distance Telephoning.

Words spoken in Philadelphia can now be heard in Portland, Me., a distance of 450 miles. A member of the *Review's* staff in New York conversed with Mr. Standford, manager of the telephone exchange at Portland, Me., on October 6, and heard every word distinctly. The American Telephone and Telegraph Company, of New York, of which President Theo. N. Vail and Vice-President and General Manager Ed. J. Hall, Jr., are the energetic and far-seeing executives, is to be congratulated on the successful opening up to telephone service of this vast and wealthy territory. What was at first looked upon as a doubtful venture is now rapidly becoming recognized as one of the successful and progressive moves in recent electrical history. The large and important cities of Philadelphia, New York, Brooklyn, Albany, New Haven, Hartford, Providence, Boston, and Portland, with intermediate towns, are now in telephonic communication, covering a territory represented by seven States. By November 1 this company's lines between Buffalo and Albany will be completed, and the cities of Syracuse, Rochester, Utica, Auburn, etc., will enter the long distance telephonic system.

There are at the present time over 100 manufacturing establishments in the territory adjacent to New York that are daily patrons of this system, either by leasing lines or by contracting for so many hours per day, and these companies are all supplied with the improved long distance transmitter—the invention which, with the use of hard-drawn copper conductors, made possible this wonderful and potent advance in the telephonic industry.

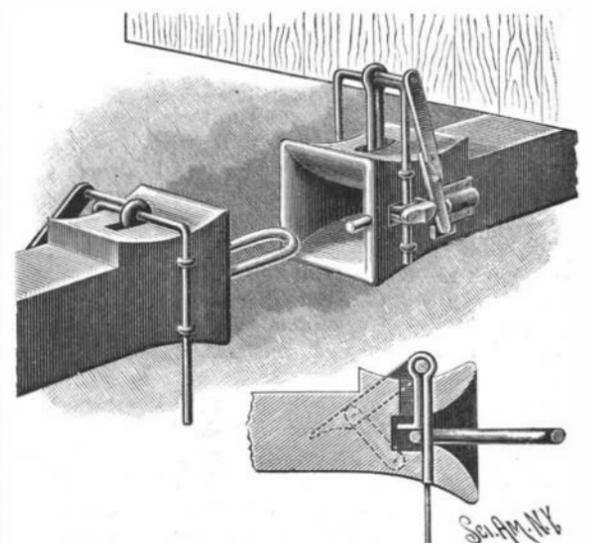
The extension of this system to Cleveland, Pittsburgh, Baltimore, Washington, Cincinnati, and Chicago is now only a question of time. It is known to be electrically possible, and the experience of the American Company so far leads to the belief that it will be successful from the stern standpoint of dollars and cents.—*Elect. Review.*

AN IMPROVED CAR COUPLING.

A car coupling which is simple and durable in construction and automatic in operation is illustrated herewith, and has been patented by Mr. Joseph H. Weaver, of Grange, Ga. The coupling pin has a rearwardly extending foot or arm adapted to rest on the inner end of the coupling link, to hold the latter in horizontal position, the coupling pin being held to slide vertically, and its upper outer end being supported by a U-shaped frame, having its side arms engaged by eyes secured to the sides of the drawhead, whereby the frame is perfectly guided in its up and down movement. From one side of this frame projects a pin on which is fulcrumed an arm pivotally connected to a second arm pivoted at its lower end to one side of the draw-

head, the latter arm having a pin adapted to engage the lower end of the upper arm. The front edge of the lower arm is also adapted to be engaged by a dog pivoted to a bar sliding horizontally on the side and projecting beyond the front of the drawhead. With the coupling in the position shown in the left-hand figure, the link being held horizontally by the foot of the coupling pin resting upon it, the coming together of the opposing drawheads causes the dropping of the coupling pin held in the drawhead to the right, the pushing in of the horizontal bar causing the pivoted arms at the side to assume the position shown in the small sectional view.

For further information relative to this invention address the patentee, or Mr. S. W. Hamilton, Hendersonville, N. C.



WEAVER'S CAR COUPLING.