In regard to the prices of any of the above lines it is almost impossible to make a forecast for next season, as there are so many circumstances that may govern the outcome that will arise in the meantime.

There has been very little change in the price of logging tools during the last two seasons. The prices paid in the fall of 1903 and which were practically the same as those of a year earlier are as follows :

Axes, single bitt, $5.50 per dozen ; double bitt, $10. Hand made axes, single bitt, $6 per dozen ; double bitt, $11. Peavies, No. 1 (handled) $13 per dozen ; handles, $2.60 per dozen.

The competition in axes on the part of American manufacturers does not greatly affect the price in this locality, and the prospects are, to quote the opinions of the largest dealers and manufacturers in these parts, that there will be little or no change in the price of tools during the coming season.

## PATENT FOR A TIMBER RAFT.

Mr. J. G. Elderkin, of Fox River, Nova Scotia, has invented a new method of rafting timber, which will be understood by reference to the accompanying illustrations. The invention relates to rafts constructed of logs, piling, spars, poles, or other lumber, and designed for towing, particularly sea-going rafts which are required to withstand heavy strains, though also pertaining to those constructed for transportation in inland waters. The object of the invention is to provide a raft which will be very strong, being doubly bound together, and which will move easily through the water without chafing or injuring the timber or lumber. It is also the object to provide a raft in which the different grades of timber or lumber can be assorted and kept separate, said raft being built up of layers so arranged that when one or more of said layers are built the raft can be moved from the place it was commenced to any other place to be finished. In like manner it can be taken apart section by section without mixing the timber or that of one section with another, also parts may be removed without breaking up the raft as a whole.

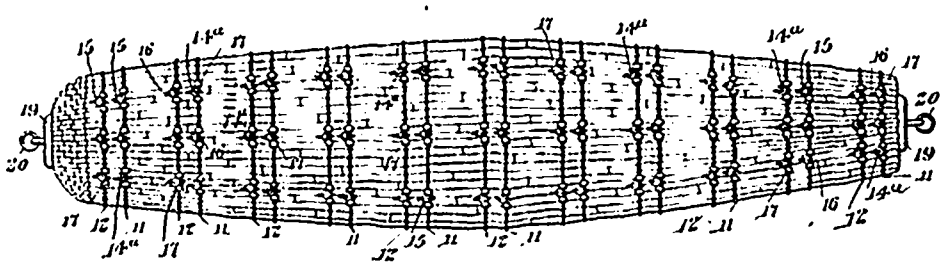

FIG. 1.

In the accompanying drawings Fig. 1 is a top plan view of a raft consttucted in accordance with the invention. Fig. 2 is a vertical sectional view through the ratt, on an enlarged scale, intermediate portions thereof being broken away, and Fig. 3 is a vertical cross-sectional view taken on substantially the line xx of Fig. 2. Similar reference-numerals designate corresponding parts in all the figures of the drawings,

The body of the raft, according to the claim of the inventor, is made up of separate independent sections that extend longitudinally of said body and are superposed one upon the other. In the present instance four of these sections are illustrated and designated by the reference-numeral 10, though any number may be employed, as desired. Each section is composed of timbers arranged end to end and having their joints disposed in staggered relation and therefore thoroughly broken. The sections extend from side to side of the raft, and each is fastened by separate binding-cables surrounding the same. Thus it will be apparent that each section is independent of the others, and should the upper one be removed the remainder will be intact. The several sections are also fastened together by raft-binder cables, which surround all the sections, and thus secure the body of the raft together as a whole. In the preferred form the body of the raft, as well as the sections, is substantially rectangular in cross-section, and to maintain this form, as well as to more thoroughly strengthen the structure, tie-cables pass vertically through the same. The lower ends

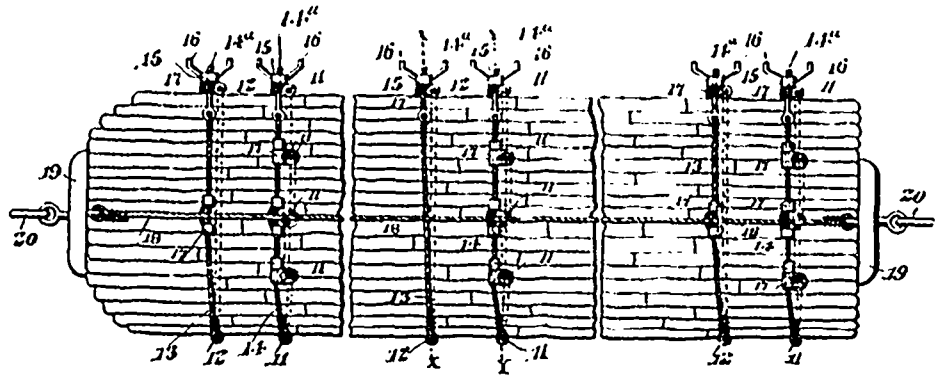

FIG. 2.

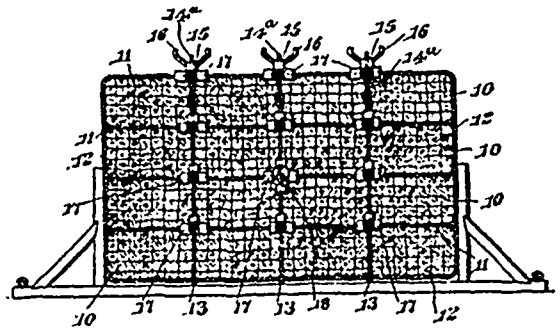

FIG. 3.

of the cables are fastened to the lower transverse stretches of the raft-binder cables, and said cables pass vertically through the body of the raft. Their upper ends are fastened to stems, upon which are screwed tension devices in the form of nuts, having suitable handles. The tie-cables are fastened to the lower stretches of the lowest section-binder cables, and these tie-cables also pass vertically through the body of the raft, being connected to similar tension devices. Wherever the cables cross devices connect the same, these devices being so arranged that they will permit the relative movements of the cables. Extending centrally through the raft is a draft-cable, fastened at its ends to cap-plates that are arranged at the ends of the raft, said cap-plates being provided with suitable eyes, to which the tow-line may be attached. The raft may be constructed in any manner desired. For instance, in Fig. 3 there is illustrated cribwork. This, however, constitutes no part of the present invention.

It will be apparent that a raft constructed in the manner described is doubly bound, each section being separate and yet secured to the others, so as to make a strong and rigid structure. The body is tied horizontally by the section-binder cables, so that it cannot spread, and the vertical cables also serve to hold said body in proper place. These cables may be tightened as desired by means of tension devices. A still further advantage resides in the fact that a raft may be constructed in sections and taken apart in the same manner without materially affecting the body as a whole. Furthermore, the different grades of lumber may be kept assorted and will not become mixed when the raft is broken up. While in the drawings the cables have been represented as "wire" rope, it will be understood that the term is broad enough to include chains or other suitable means of a similar character.

## AMERICAN TIMBER IN GERMANY.

Kolnische Zeitung, a German commercial journal, says that imports of timber into Germany from the United States have more than trebled since 1880, amounting in 1902 to more than $5,850,000. It consisted mostly of pitch pine. This wood is more resistant to the weather and costs less than oak, which averages $3.47 per 35.3 cubic feet, while pitch pine costs only $1.66 for the same amount. Owing to its utility and cheapness the pine is handled in the most remote parts of Germany. It is used for making doors, windows, floors, etc., while oak is used in the manufacture of the finer grades of furniture.

It is stated that the first saw mill built on the Pacific coast was erected by the Hudson Bay Company, near Vancouver, Wash., in 1828. It had a daily capacity of about 1,000 feet.