

No. 773,625.

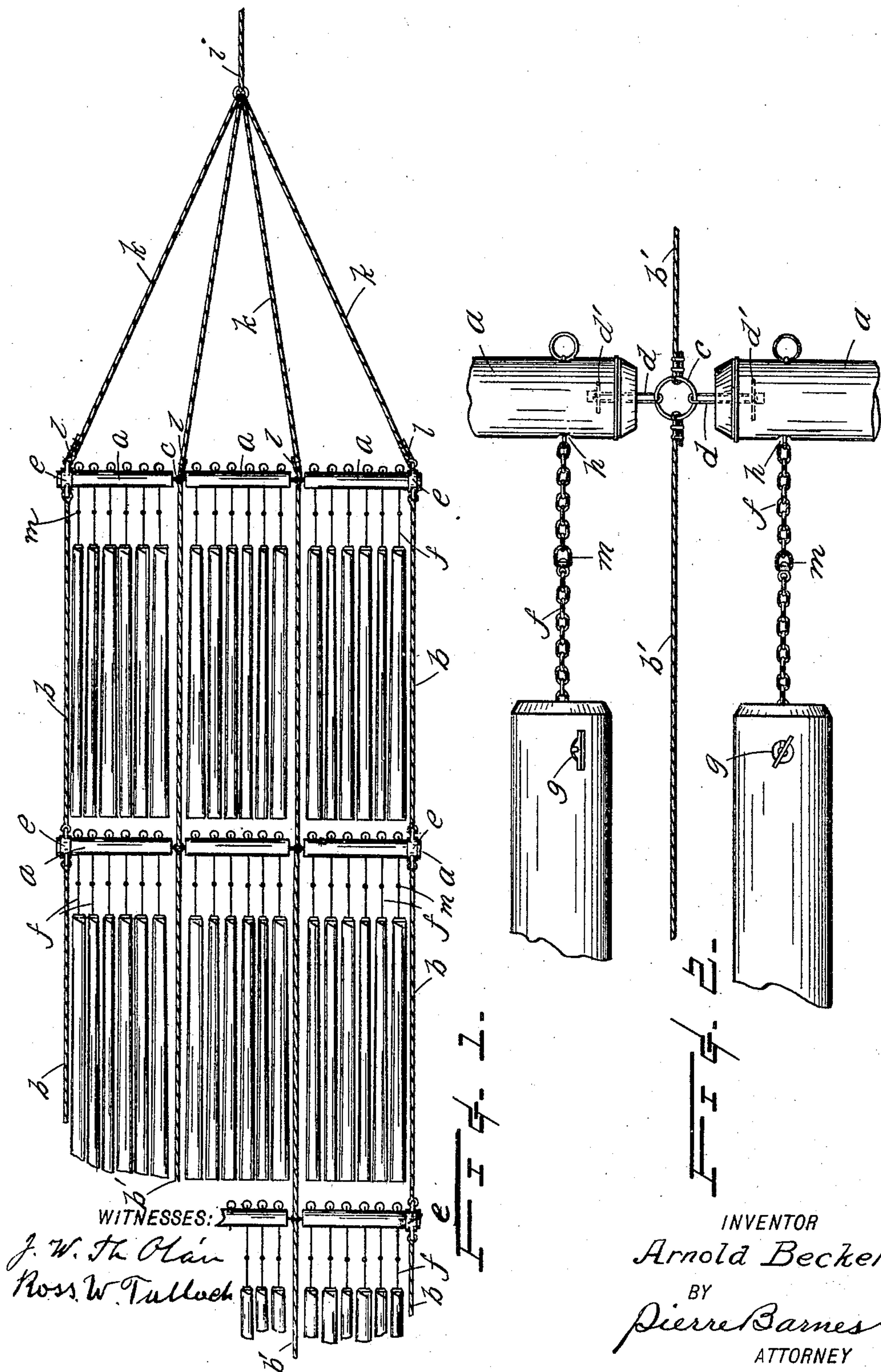
PATENTED NOV. 1, 1904.

A. BECKER.

LOG RAFT.

APPLICATION FILED DEC. 15, 1903.

NO MODEL.





# UNITED STATES PATENT OFFICE.

ARNOLD BECKER, OF SEATTLE, WASHINGTON.

## LOG-RAFT.

SPECIFICATION forming part of Letters Patent No. 773,625, dated November 1, 1904.

Application filed December 15, 1903. Serial No. 185,259. (No model.)

*To all whom it may concern:*

Be it known that I, ARNOLD BECKER, a citizen of the United States, residing at Seattle, in the county of King and State of Washington, have invented certain new and useful Improvements in Log-Rafts, of which the following is a specification, reference being had therein to the accompanying drawings.

This invention has relation to the rafting of saw-logs or the like; and among the objects thereof is the provision of a compact and flexible construction of raft which is especially adapted for the conveyance of logs considerable distances and in extremely rough waters.

With the above-noted general objects in view the invention consists in the novel construction and arrangement of a raft-frame and the manner of assembling the logs and of connecting the same to the frame, as will be hereinafter more particularly referred to in the specification and finally pointed out in the claims.

Referring to the accompanying drawings, Figure 1 is a plan view of a log-raft embodying my invention, and Fig. 2 is an enlarged fragmentary view of the same.

The framework of the raft comprises transversely-arranged members *a*, disposed in series substantially parallel, one member being connected to the next member by tie-lines *b* and *b'*. The several said members may be integral—that is, of a single piece; but in order to make the raft construction more flexible I prefer to form each such member of a plurality of parts. In the latter case the several component parts of each transverse member are plially connected at their adjacent ends, preferably by links *c* and *d*, of which the latter project into pockets or recesses formed in the extremities of the spars and are retained therein by drift-pins *d'*. The intermediate links *c* are utilized for securing the ends of the aforesaid tie-lines *b'*, while the other tie-lines, *b*, are for convenience secured to loops of straps or rings *e*, provided upon the outside rows of spars in proximity of their outer ends, or the said lines may be lashed thereat directly to the spars. The saw-logs to be

towed are rafted in the spaces between the said members of the frame, and their forward ends are severally connected by boom-chains or cables *f*, which are secured to the adjacent of said spar members, preferably by being passed through apertures *g* and *h*, provided, respectively, in the ends of the saw-logs and the frame-spars.

*i* represents a hawser, which may advantageously be connected with the forward series of the frame-spars by bridle-lines *k* and are suitably secured, as by a bight *l*, to each of the said intermediate links and to the said loops of the straps. A swivel *m* is included in each of the said boom-chains, whereby the rotary motion common to saw-logs hauled in a seaway is provided for and all danger of the said chains being broken by twisting is reduced to a minimum.

The construction of the raft is so simple that it is quickly assembled and the logs are reliably held for towage. The connections and arrangement of the several component parts, both of the frame structure and the saw-logs, is so pliable that it will yieldingly accommodate itself to any sea-swells likely to be encountered.

Having described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. In a log-raft, the combination with the saw-logs to be towed, and a hawser, of a raft-frame comprising transversely-arranged members disposed in series, connections between each of said series, connection between the foremost transverse frame member and the said hawser, and an individual connection between each saw-log and the transverse frame member immediately in advance thereof.

2. In a log-raft, the combination of a raft-frame consisting of transverse members severally comprised of sections flexibly connected together and longitudinal members flexibly connecting each transverse member with the adjacent ones, and means such as boom-chains for connecting saw-logs positioned intermediate of the said transverse members with the member immediately in advance thereof.

3. In a log-raft, the combination with the

raft-frame comprised of transversely-ar-  
ranged members and longitudinal lines con-  
necting each such transverse member with the  
next transverse member, means to secure the  
5 foremost of said transverse members with a  
towing line or hawser, and the logs being  
towed, of connections between the forward  
end of each of said logs and the transverse  
frame member immediately in advance thereof

such last-named connections severally includ- 10  
ing a swivel device.

In testimony whereof I affix my signature in  
presence of two witnesses.

ARNOLD BECKER.

Witnesses:

PIERRE BARNES,  
HENRY S. NOON.