No. 846,877. PATENTED MAR. 12, 1907.

F. W. TOPLIFF.

CAR STAKE.

APPLICATION FILED JAN. 2, 1906.

Fig. 1.

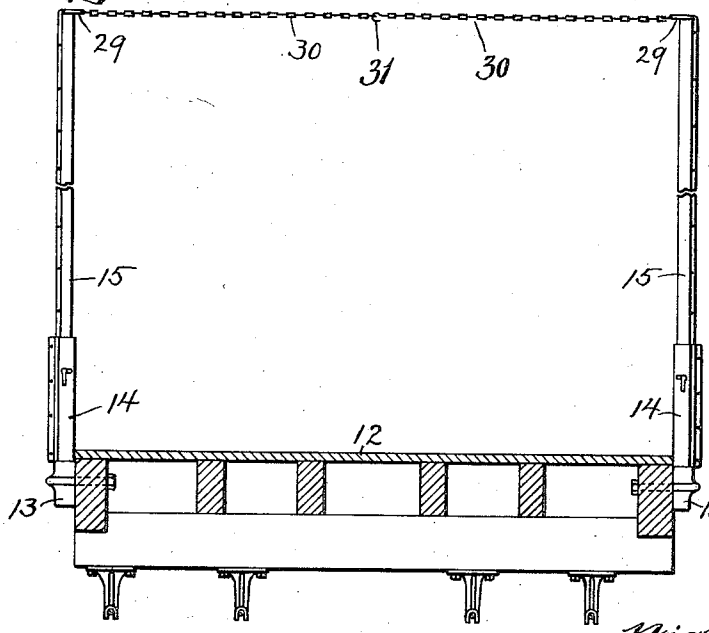


Fig. 2.

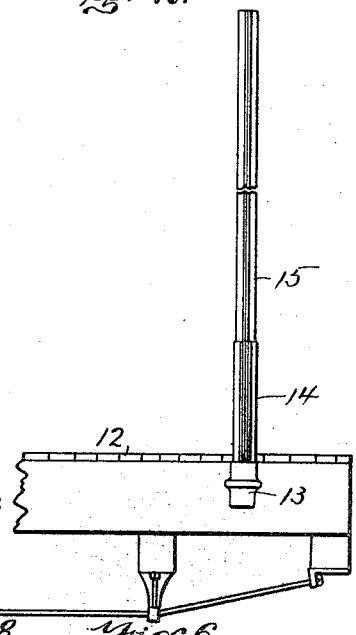


Fig. 3.

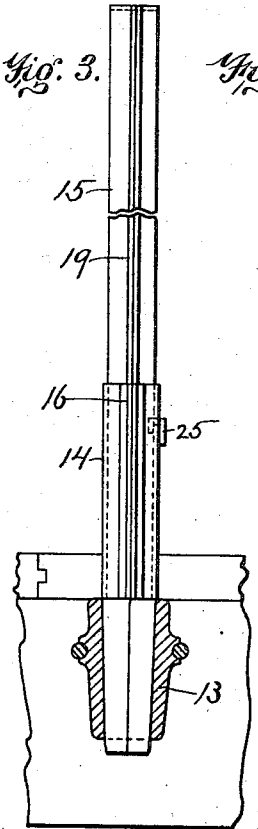


Fig. 4.

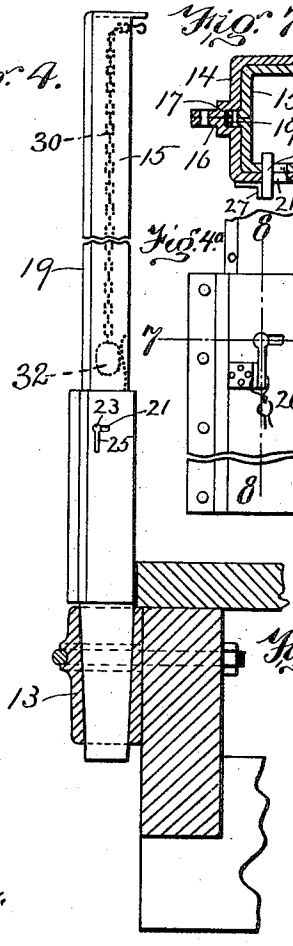


Fig. 7.

Fig. 4a.

Fig. 8.

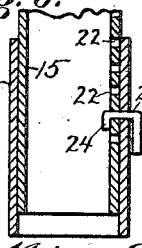


Fig. 9.

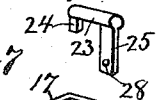


Fig. 5.

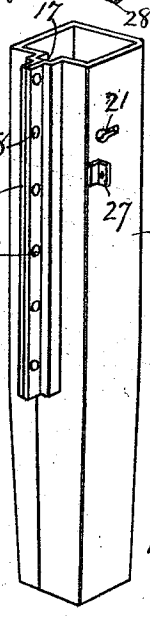
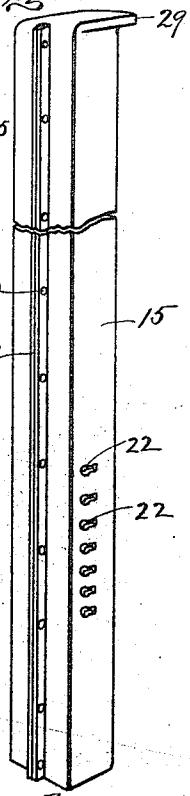


Fig. 6.



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UNITED STATES PATENT OFFICE.

FRANCIS W. TOPLIFF, OF GREENLAND, NEW HAMPSHIRE, ASSIGNOR OF ONE-THIRD TO HENRY W. ANDERSON, OF EXETER, NEW HAMPSHIRE, AND ONE-THIRD TO JOHN WALKER, OF NEW MARKET, NEW HAMPSHIRE.

CAR-STAKE.

No. 846,877. Specification of Letters Patent. Patented March 12, 1907.

Application filed January 2, 1906. Serial No. 294,060.

To all whom it may concern:

Be it known that I, FRANCIS W. TOPLIFF, of Greenland, in the county of Rockingham and State of New Hampshire, have invented certain new and useful Improvements in Car-Stakes, of which the following is a specification.

This invention relates to stakes for flat-cars used for transporting wood, lumber, &c., and has for its object to provide a durable and relatively inexpensive stake capable of being stored in small compass under the car or elsewhere, so that a set of stakes for a car can be returned with the car, after the discharge of its load, to the shipping-point and used over again.

The invention also has for its object to provide a car-stake which shall be adjustable in length to accommodate different heights of load.

The invention consists in the improvements which I will now proceed to describe and claim.

Of the accompanying drawings, forming a part of this specification, Figure 1 represents a transverse section of the body of a flat-car provided with stakes embodying my invention. Fig. 2 represents a side elevation of a portion of the car-platform, showing one of the said stakes. Fig. 3 represents an enlargement of Fig. 2, the stake-socket being shown in section. Fig. 4 represents an enlargement of a portion of Fig. 1, the stake-socket being shown in section. Fig. 4ª represents an enlargement of a portion of Fig. 4. Fig. 5 represents a perspective view of the lower section of the stake-socket. Fig. 6 represents a perspective view of the upper section of the stake-socket. Fig. 7 represents a section on line 7 7 of Fig. 4ª. Fig. 8 represents a section on line 8 8 of Fig. 4ª. Fig. 9 represents a perspective view of the key which locks the sections of the stake together.

The same letters of reference indicate the same parts in all the figures.

In the drawings, 12 represents the body or platform of an ordinary flat-car, the same being provided with the usual or suitable stake-sockets 13.

In carrying out my invention I provide a series of adjustable stakes which are preferably of telescopic construction, each comprising a hollow base-section 14, adapted at its lower portion to enter one of the sockets 13, and an upper section 15, adapted to enter the lower section 14. The sections 14 and 15 are preferably made of sheet metal—that is to say, metal which is rolled or otherwise formed into sheets or plates adapted to be bent into the form shown in the drawings to form the hollow stake-sections. The base-section 14 is preferably tapered at its lower portion, as shown in Figs. 3, 4, and 5, the interior of the socket 13 being correspondingly tapered, as shown in Figs. 3 and 4. The blank of which the base-section is formed is bent outwardly at its edges to form a longitudinal rib 16, the inner portion of which is hollow and provided with a longitudinal groove 17, communicating with the interior of the base-section, the said hollow portion being formed by bending the edge portions of the blank in the manner indicated in Figs. 5 and 7. The extreme edge portions of the blank are abutted together and secured by rivets 18. The rib 16 preferably terminates above the socket 13, as shown in Figs. 4 and 5. The upper section 15 is provided with a longitudinal rib 19, adapted to enter the grooves 17 in the base-section, the said rib being formed by bending outwardly the edge portions of the blank of which the upper section is composed and connecting said edge portions by rivets 20. The rib 19 of the upper section is adapted to enter and slide in the groove 17 of the base-section, as shown in Fig. 7.

Means are employed for locking the upper section to the base-section at various heights to vary the length of the stake. Said means, as here shown, comprise a horizontally-arranged keyhole 21, formed in one side of the base-section, and a vertical series of similarly formed and arranged keyholes 22, formed in the corresponding side of the upper section. Each of the keyholes 22 is adapted to coincide with the keyhole 21. 23 represents a key adapted to be inserted in the two coinciding keyholes in the two sections, the said key having a finger 24 at its inner end adapted to pass through the narrower portions of the keyhole and an elongated arm 25 at its outer end adapted to cause the finger 24 to swing downwardly crosswise of the keyholes after passing through the same, the arm 25 acting, therefore, by gravitation to hold the

key in engagement with the two sections of the stake. The key may be secured in its locking position by means of a wire and lead seal 26, as shown in Fig. 4ª, the base-section 14 being provided with a perforated ear 27, so arranged that when the key is in its locking position the arm 25 will bear against said ear, said arm having a perforation 28. The wire of the seal may be passed through the perforations in the ear and arm and its ends united by the usual lead seal, thus preventing the unauthorized movement of the key to release the upper stake-section. Each upper section may be provided with a laterally-projecting ear 29, adapted to engage a chain 30, which may be employed to connect each stake at one side of the car with the corresponding stake at the opposite side, as indicated in Fig. 1, there being preferably a chain on each stake, these being adapted to be connected over the center of the car by a hook 31 on one chain engaging a link or eye on the other. If desired, the chains 30 may be stored within the hollow stake-sections 15 when not in use, each chain being movable in an opening in the stake-section and attached to a weight 32, Fig. 4, located in the section 15. The weight normally holds the chain retracted in the stake.

It will be seen that the above-described construction provides a light, simple, and durable stake which can be packed in small compass for storage and can be adjusted to the height of the load. If desired, the car may be provided with a suitable box or receptacle (not shown) to contain the stake-sections when they are not in use.

I believe myself to be the first to provide a car-stake which is removable from its socket and is variable or adjustable as to length, so that it can be packed in relatively small compass when not in use and can be adapted to the height of the load. I do not, therefore, limit myself to the telescopic construction here shown, although this is the best of which I am at present aware.

I claim—

1. An adjustable car-stake comprising relatively movable sections and means for positively locking said sections together under different adjustments, to prevent relative movement in either direction.

2. A car-stake comprising a base portion adapted to engage a stake-socket, an upper section adjustable relatively to the base-section and means for positively locking said sections together under different adjustments, to prevent relative movement in either direction.

3. A telescopic car-stake comprising a hollow base-section adapted to engage a stake-socket, an upper section formed to enter the base-section, and means for securing the two sections together, to prevent change in the total length of the stake.

4. A telescopic car-stake comprising a hollow base-section adapted to removably engage a stake-socket, and an upper section formed to enter the base-section, said sections being provided with means for preventing movement of the upper section relatively to the base-section in either direction.

5. A telescopic car-stake comprising a hollow sheet-metal base-section adapted to engage a stake-socket, and a hollow sheet-metal upper section formed to enter the base-section, said sections being provided with means for locking and securing the upper section to the base-section in different fixed positions to vary the length of the stake.

6. A telescopic car-stake comprising a hollow base-section adapted to engage a stake-socket, and provided with a horizontally-arranged keyhole, a hollow upper section formed to enter the base-section and provided with a vertical series of horizontally-arranged keyholes, each of which is adapted to coincide with the keyhole in the base-section, and a key adapted to enter into coinciding keyholes in the two sections and provided at its outer end with means for holding the key in engagement with the sections.

7. A telescopic car-stake comprising a hollow base-section adapted to engage a stake-socket, and provided with a horizontally-arranged keyhole and with an ear below the same, a hollow upper section formed to slide in the base-section and provided with a vertical series of horizontally-arranged keyholes, and a key adapted to enter two coinciding keyholes in the two sections and provided at its outer end with an arm adapted to be coupled to said ear.

8. A telescopic car-stake comprising a hollow sheet-metal lower section having at one side an outwardly-projecting longitudinal rib formed by the outwardly-turned edges of the sheet-metal blank, a portion of said rib being hollow to form a groove communicating with the interior of the base-section, and a hollow sheet-metal upper section formed to slide in the lower section and having a longitudinal rib formed by the outwardly-turned edges of the sheet-metal blank, said rib being adapted to enter the groove of the base-section.

9. An adjustable car-stake comprising a base-section adapted to detachably engage a stake-socket, an upper section movable relatively to the base-section to vary the length of the stake, and means for positively locking said sections together to prevent relative movement in either direction.

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

FRANCIS W. TOPLIFF.

Witnesses:
JOSEPH O. SIMPSON,
JOHN E. TOWLE.