

(No Model.)

3 Sheets—Sheet 1.

C. H. NELSON.

SKATING SAIL.

No. 302,517.

Patented July 22, 1884.

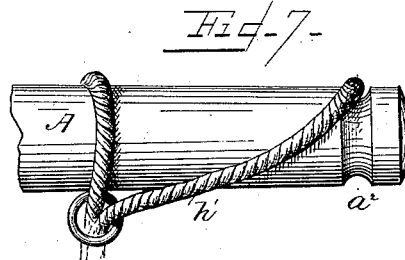
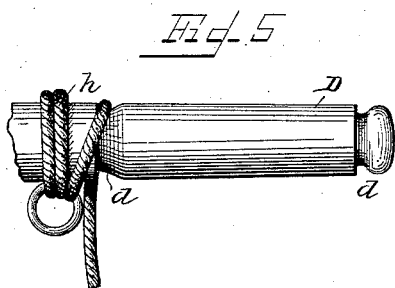
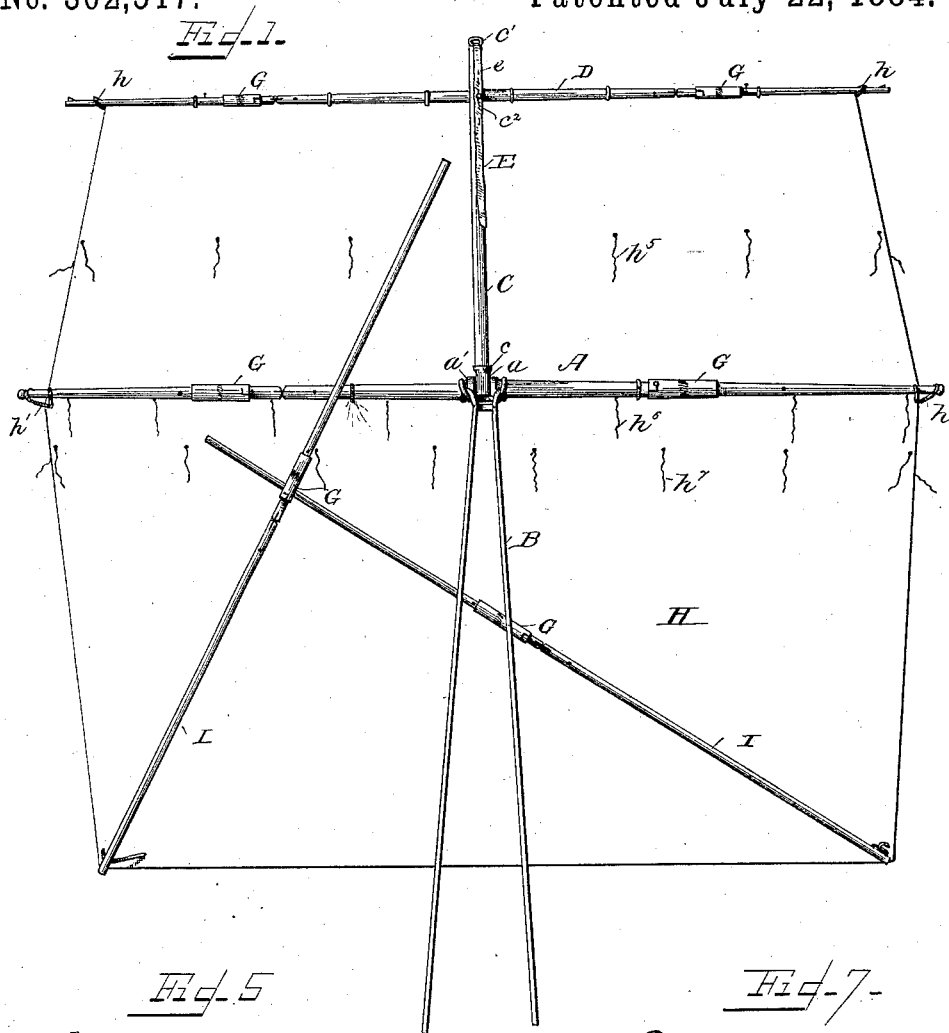
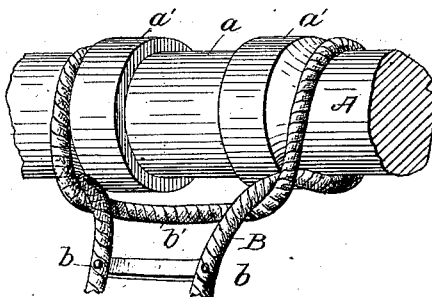


Fig. 6.



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3 Sheets—Sheet 2.

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Fig. 2.

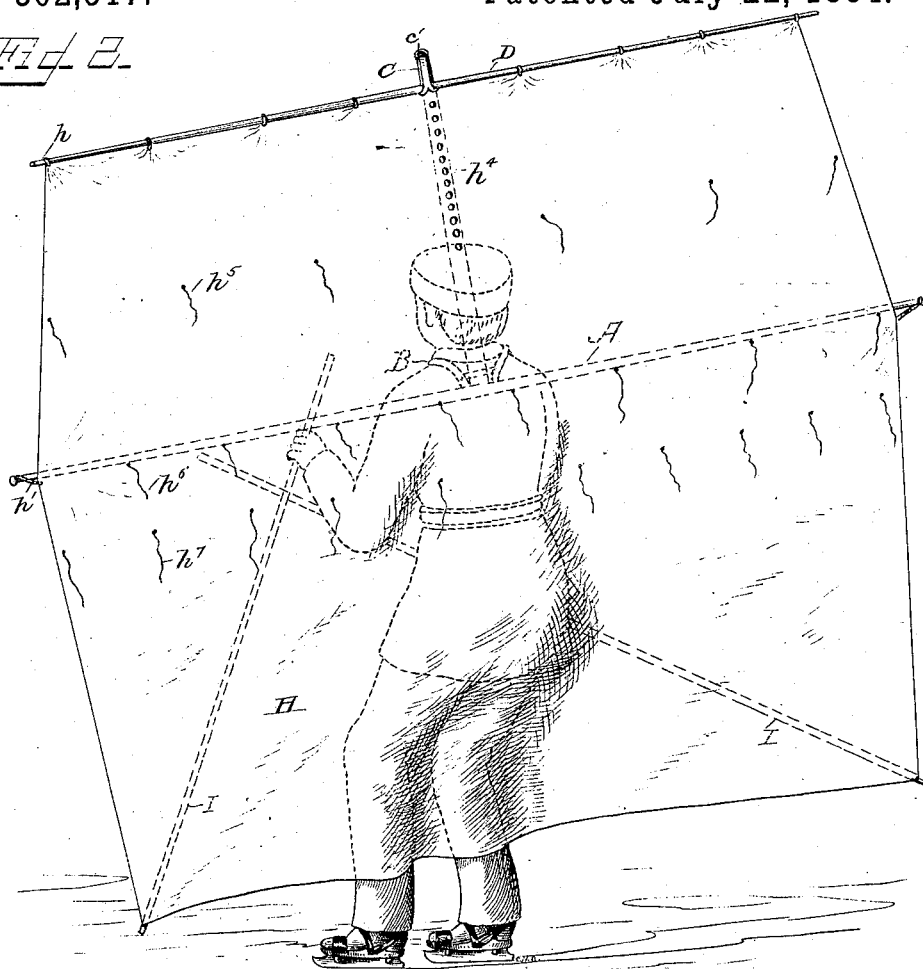


Fig. 3.

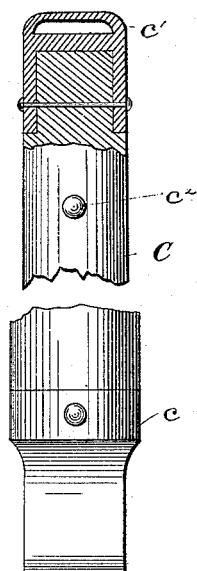
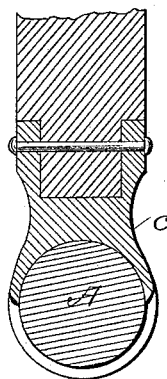


Fig. 4.



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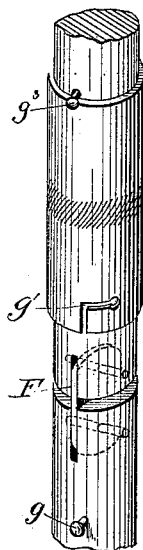


Fig. 8.

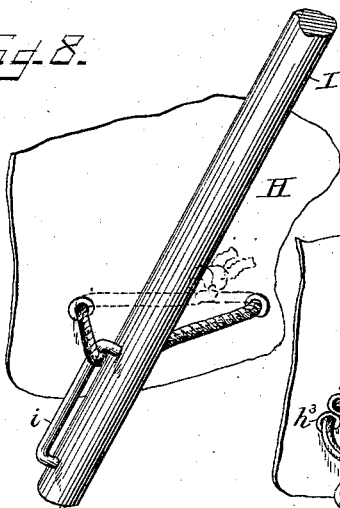


Fig. 9.

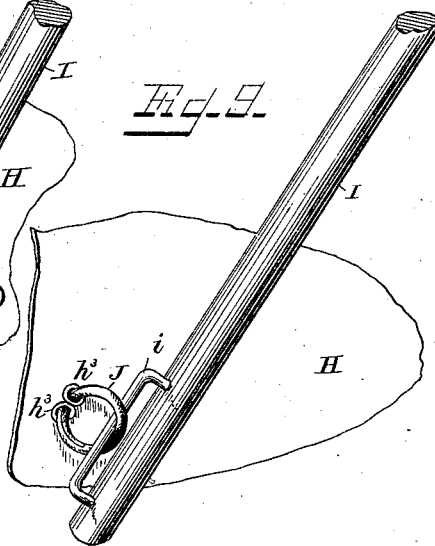


Fig. 10.

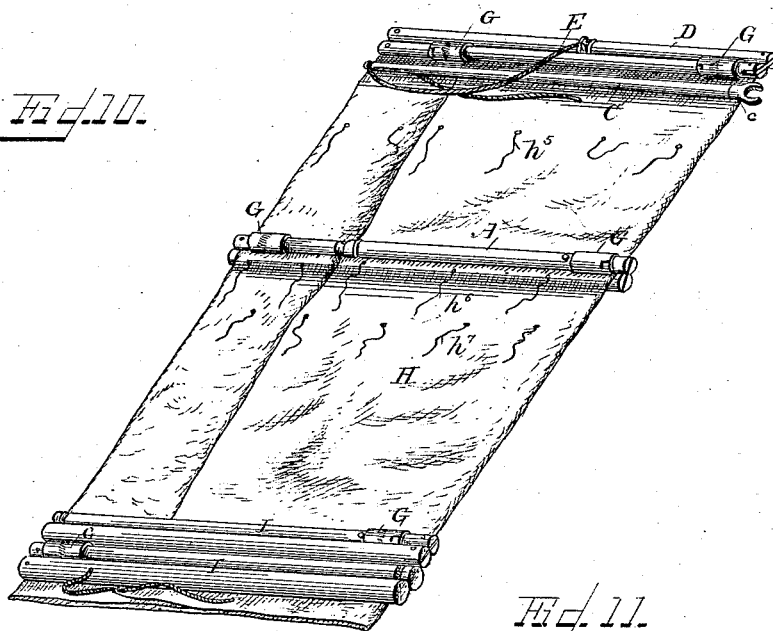
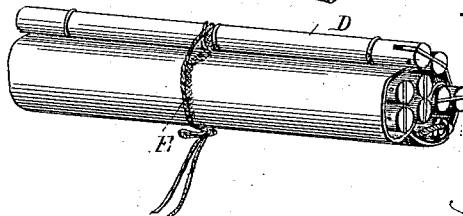


Fig. 11.



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UNITED STATES PATENT OFFICE.

CORNELIUS HOLTE NELSON, OF SHEPPARDTOWN, MISSISSIPPI.

SKATING-SAIL.

SPECIFICATION forming part of Letters Patent No. 302,517, dated July 22, 1884.

Application filed April 28, 1884. (No model.)

To all whom it may concern:

Be it known that I, CORNELIUS H. NELSON, a citizen of the United States, residing at Sheppardtown, in the county of Leflore and State of Mississippi, have invented certain new and useful Improvements in Skating-Sails; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to that class of skater's appliances which comprise a sail adapted to be secured to the body of the skater and assist in his propulsion on the ice.

The object of my invention is to provide a simple and efficient skating-sail and rigging, which can be readily and conveniently folded into compact form to permit of the transportation of the device through crowded thoroughfares, cars, &c.

In the drawings, Figure 1 is a front elevation of my invention, showing the sails set. Fig. 2 is a rear perspective view showing the sail in position upon the skater. Fig. 3 is a detail view in elevation of the top-mast, the top end being in cross-section. Fig. 4 is a detail sectional view showing the lower end of the top-mast in position upon the main-yard. Fig. 5 is a detail perspective view of the central portion of the main-yard. Fig. 6 is a detail end view of the top-sail yard. Fig. 7 is a detail end view of the main-yard. Fig. 8 is a detail view in perspective, illustrating the folding joints of the yards. Fig. 9 is a detail perspective view of the connection between the end of the bracing-strips and the lower corner of the sail. Fig. 10 is a perspective view showing the sail and rigging folded, ready to be rolled. Fig. 11 is a perspective view showing the device rolled in compact form, ready for transportation.

Corresponding parts in all the figures are denoted by the same letters of reference.

Referring to the drawings, A designates the main-yard, which is provided at its center with a circumferential groove, *a*, preferably formed in a central enlargement upon the yard, so that the outer edges of the said enlargement form circumferential shoulders *a'* *a'*. This yard is adapted to be secured to the back of the skater, at about his shoulders, by means

of a cord, B, secured to the center of the yard, preferably by being passed around the yard at the shoulders *a'*, and having its two end portions, *b b*, passed through the central loop, *b'*, formed in the cord, this fastening being illustrated in Fig. 6 of the drawings. The cord may be secured to the body of the skater in any suitable manner; but the end portions, *b*, are preferably passed over the shoulders of the skater, as shown in dotted lines, Fig. 2, from whence they are brought down and tied around the waist.

C designates the top-mast, which is provided with a bifurcated lower end, preferably formed by a casting, *c*, that is received by the groove *a* in the main-yard. The top-mast is thus supported upon the main-yard, and it carries the top-sail yard D by means of a halyard, E, secured centrally to the yard D and passing through an eye, *c'*, at the top of the top-mast, this eye being preferably formed by a suitable casting. The halyard may be formed of rope or cord, and its end may be secured by winding round a cleat on the top-mast, but it preferably consists of a strap, as shown, provided with a series of bottom-holes or perforations, *e*, adapted to be engaged over a stud or button, *c''*, projecting from the top-mast. The yards A and D are jointed to adapt them to be folded when the device is out of use, these joints being preferably formed by means of plates F, pivoted in recesses in the adjoining ends of the yards at the joints, sleeves G being provided upon the yards and adapted to slide over the joints, to stiffen and brace the same when the yard is extended. The sliding sleeves may be provided with a circumferential milled rib, *g*, to facilitate their adjustment, and they are provided with a right-angular end slot, *g'*, adapted to engage a pin, *g''*, provided upon the yard to secure the sleeves in position when they are adjusted over the joints. Stop-pins *g'''* may also be provided upon the yards to limit the movement of the sleeve.

H designates the sail, which comprises the mainsail and top-sail portions in one piece, and is secured to both yards in any suitable manner, the stays *h* at the top corners of the sail being engaged around one of two circumferential shoulders formed upon the ends of the

top-sail yard, as shown at $d\ d$, while the stays h' at the junction of the mainsail and top-sail portions are engaged around circumferential shoulders a'' , formed upon the ends of the main-
 5 yard. The sail is disposed in rear of the top-mast, and is secured to the rear sides of the yards, so that it will be at the back of the skater when it is secured in position.

I I designate two strips, having their lower
 10 ends connected to the lower corners of the mainsail, and formed with joints corresponding to those upon the yards. The connection between these strips or rods and the sail is preferably formed by a lap-ring, J, passing
 15 through a staple, i , upon the end of the rod and through eyelets $h^3\ h^3$ in the sail. These strips are adapted to project up in front of the skater, and they are adapted to be conveniently operated by him to brace the mainsail,
 20 to enable him to run before the wind, to tack, or to govern the movement of the sail.

In reefing, the top-sail yard is rolled down toward the main-yard, the halyard being passed through one of a central vertical series of eye-
 25 lets, h^4 , formed in the top-sail, at each revolution, by which arrangement the halyard will secure the reef without the aid of reefing-points. Generally, however, the top-sail yard will be rolled down to the first series of reefing-points
 30 h^5 , and secured by the latter in the usual manner. In case of a high wind or inability to manage the top-sail, the top-sail yard can be rolled down to the main-yard, and secured by the reefing-points h^6 just under the latter. The
 35 sail may be still further reefed by drawing the mainsail portion up until the lowermost series of reefing-points h^7 is brought to the main-yard, when the reef is secured by tying the points around the main-yard.

40 The operation and advantages of my invention will be readily understood and appreciated.

The device is simple and inexpensive, and is convenient and efficient in operation.

45 When it is desired to fold the sail for transportation, the bracing rods or strips I I are disconnected from the sail and folded, the top-mast is separated from the main-yard, and the ends of the yards are folded over to their central
 50 portion to the position shown in Fig. 10. In this position the sail is folded to correspond with the folds of the yards, and the strips I I and top-mast are placed parallel with the yards, as shown, when the whole device may be com-
 55 pactly rolled to the position shown in Fig. 11 and secured by the cord B.

I do not wish to be understood as limiting myself to the construction and arrangement of parts as herein shown and specified, but re-
 60 serve to myself the right to all such modifications as properly fall within the spirit and scope of my invention.

It is evident that many modifications may be made. For instance, the joints of the yards
 65 and bracing-strips may be formed by hinges or any other suitable devices; or the yards

and strips may telescope to secure their contraction. The lap-ring connecting the bracing-strips and the corner of the sail may be
 70 dispensed with, and suitable straps may be secured to the sail and tied through the staple upon the bracing-strip. Under some circumstances the top-sail and top-mast may be entirely dispensed with; or, on the other hand, a
 75 double top-sail may be formed by providing another top-sail yard upon the top-mast.

I claim as my invention—

1. In a skating-sail adapted to be secured to the body of a skater, the folding or col-
 80 lapsible yards, substantially as set forth.

2. In a skating-sail, the combination, with the folding yards, of the sail secured thereto and adapted to fold with the same for trans-
 85 portation, substantially as set forth.

3. The combination, in a skating-sail, of the
 90 folding main-yard, the top-mast detachably seated upon the same, the folding top-sail yard, and the sail secured to the yards and adapted to fold therewith, substantially as and for the purpose set forth.

4. In a skating-sail, the combination of the
 95 folding main-yard provided with a securing-cord by which it may be secured to the body of the skater, the top-mast removably seated upon the yard, the top-sail yard adapted to
 100 fold, and connected with the top-mast, the sail secured to the yards, and the folding bracing-strips detachably connected to the lower corners of the sail, whereby the device may be compactly folded and secured by the cord upon
 105 the main-yard, substantially as set forth.

5. The combination, in a folding skating-
 110 sail, with the yard and with the sail secured upon the same, and adapted to fold therewith, of the cord secured to the yard and normally
 115 fastening the device upon the skater, said cord also serving to secure the device after it is folded, substantially as set forth.

6. The combination, in a skating-sail, with
 120 the main-yard, the top-mast supported upon the same, and the top-sail yard connected with the top-mast, of the sail secured to the yards, and comprising the main-sail and top-
 125 sail portions in one piece, substantially as set forth.

7. The combination, in a skating-sail, with
 130 the sail, of bracing and governing strips or rods secured to the lower corners of the sail and projecting up in front of the skater, substantially as and for the purpose set forth.

8. The combination, in a skating-sail, of the
 135 main-yard provided with a central fastening-cord, by which it is adapted to be fastened to the body of the skater, the sail secured to the yard, and bracing strips or rods secured to the
 140 lower corners of the sail, and projecting up so as to be within reach of the skater, substantially as set forth.

9. A skating-sail comprising a cross-yard, having means for securing it to the body of
 145 the skater, and a sail secured to the yard, substantially as set forth.

10. The combination, in a skating sail, of
the mast, the yard connected thereto by a
halyard, and the sail provided with a series
of eyelets or perforations, through which the
5 halyard is passed at each revolution of the
yard in reefing, substantially as set forth.

11. The combination, in a skating-sail, of
the main-yard, the mast supported upon the
same and provided with the eye at its top,
10 the top-sail yard, the halyard secured to the
latter yard and passing through the eye upon
the mast, and the sail secured to the yards
and provided with strips or rods connected to
its lower corners, by which it may be governed

when in position upon the body of the skater, 15
substantially as set forth.

12. In a skating-sail, the combination, with
the jointed yards carrying the sail, of the
sliding sleeves upon the yards, the sleeves
being adapted to brace the joints when the 20
sail is set, substantially as set forth.

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

CORNELIUS HOLTE NELSON.

Witnesses:

W. P. BEAN,
C. C. NYE.