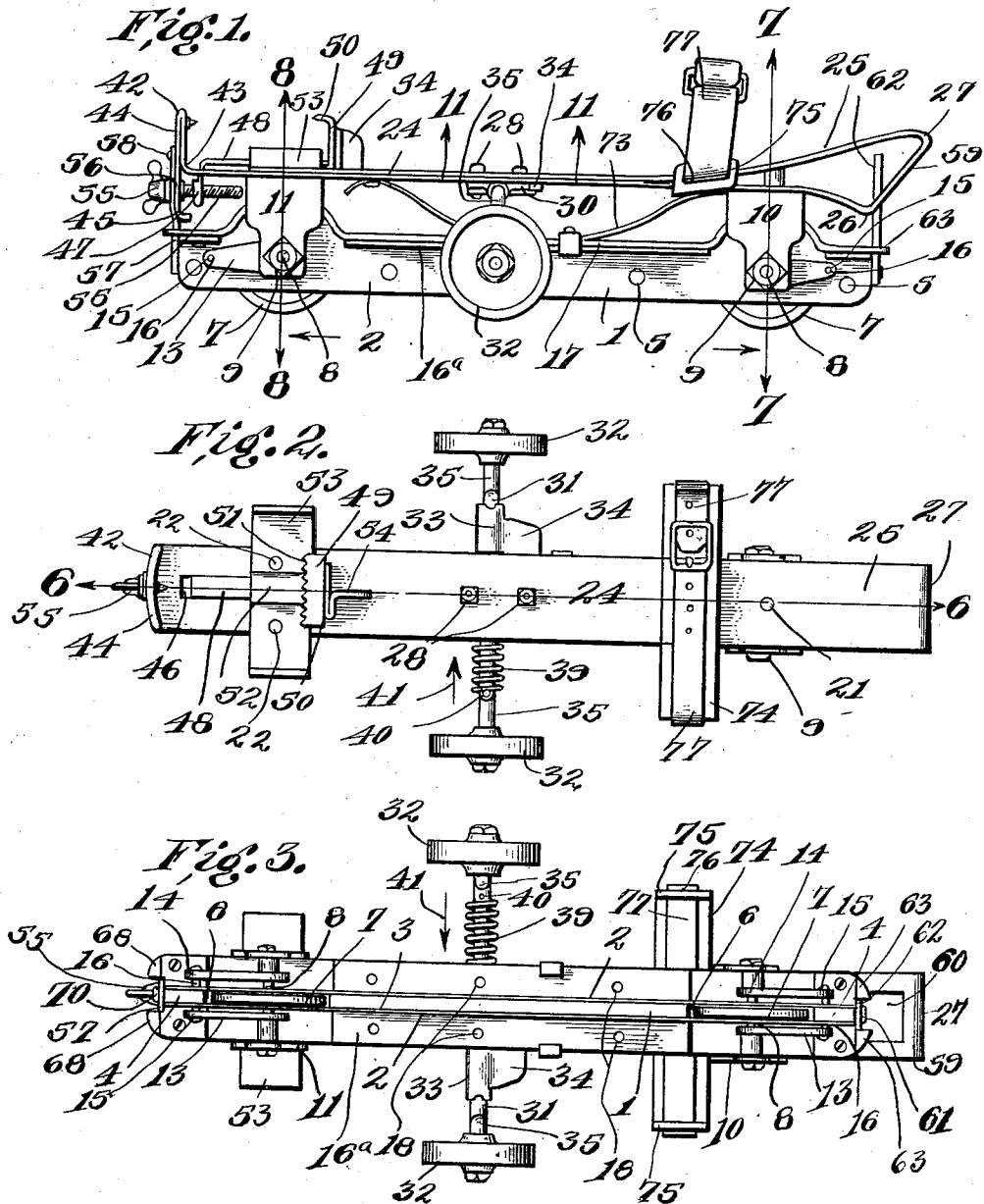


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COMBINATION ICE AND ROLLER SKATE.
APPLICATION FILED AUG. 30, 1912.

1,068,829.

Patented July 29, 1913.

3 SHEETS—SHEET 1.



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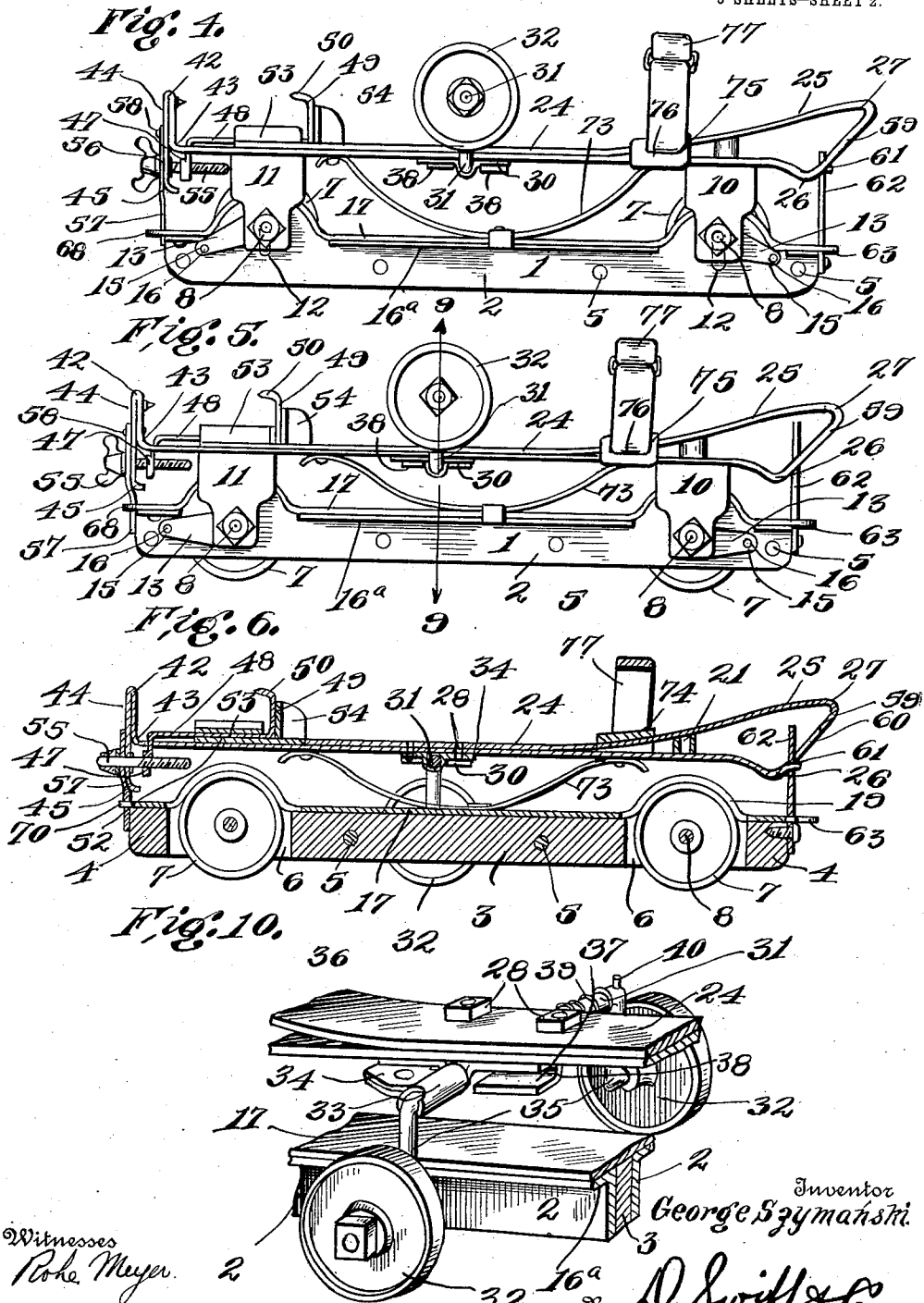
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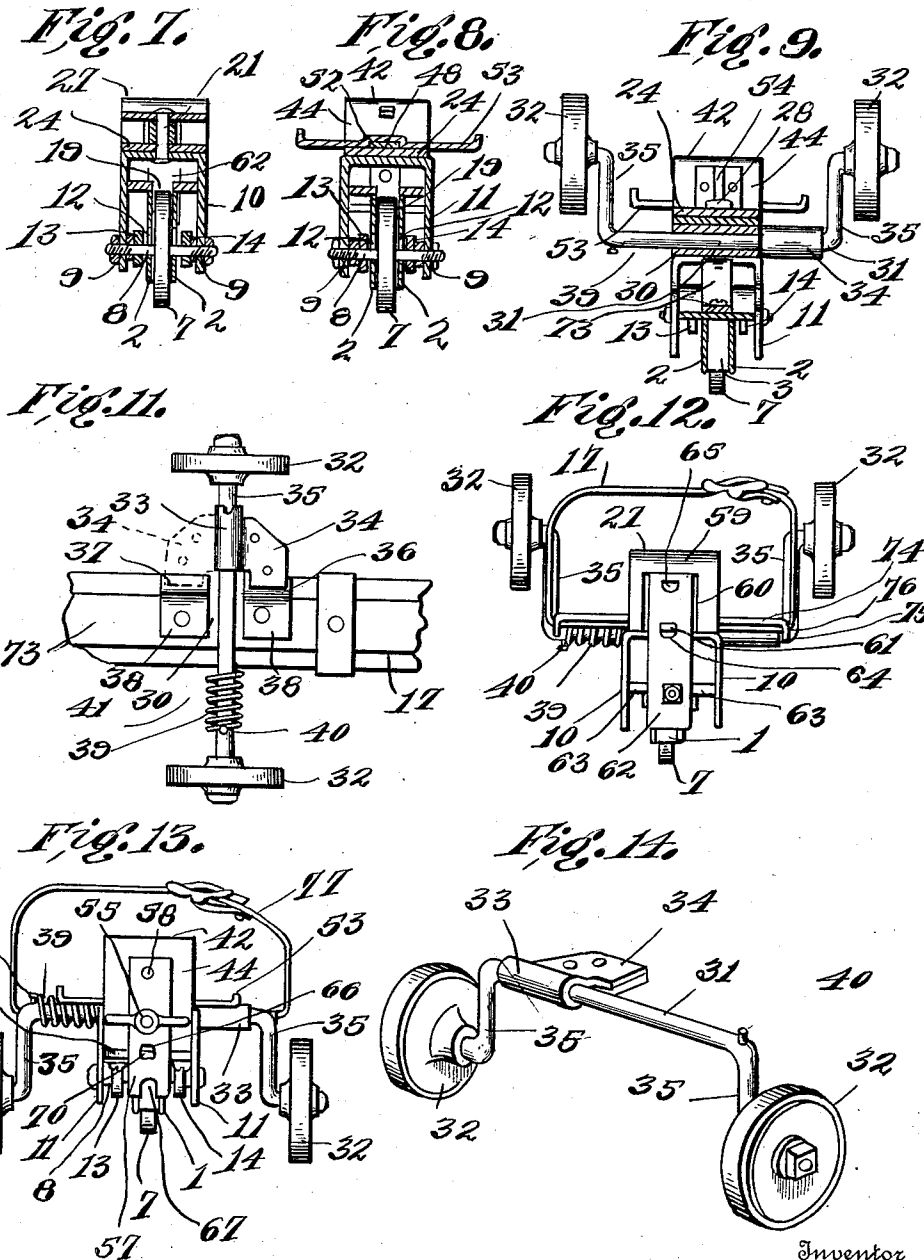
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3 SHEETS—SHEET 3.



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UNITED STATES PATENT OFFICE.

GEORGE SZYMAŃSKI, OF ATTALLA, ALABAMA.

COMBINATION ICE AND ROLLER SKATE.

1,068,829.

Specification of Letters Patent.

Patented July 29, 1913.

Application filed August 30, 1912. Serial No. 717,909.

To all whom it may concern:

Be it known that I, GEORGE SZYMAŃSKI, a citizen of the United States, residing at Attalla, in the county of Etowah and State of Alabama, have invented a new and useful Combination Ice and Roller Skate; 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 a new and useful combination ice and roller skate.

As one of the objects of the invention it is the aim to provide a device of this nature, so constructed as to be converted from a roller skate into an ice skate and vice versa.

As further stated, another object of the invention is the provision of means for holding the parts adjusted, whereby the device may be utilized as an ice skate, said means also acting to hold the parts for a roller skate.

One of the features of the invention is the provision of spring means for forcing the part, which carry the rollers, upwardly when said part is released by the holding means, for throwing the rollers out of position. The said part carrying the rollers adapted to be forced downwardly against the action of said spring means, to bring the rollers into operative positions, when the said holding means is again released.

Another feature of the invention is the provision of central rollers, one disposed on each side of the skate, for maintaining the equilibrium of the skate, in case the user thereof has a weak ankle. Said central rollers are so constructed, that they can be thrown into and out of operative position.

Another feature of the invention is the provision of a novel heel clamp.

The invention comprises further features and combination of parts, as hereinafter set forth, shown in the drawings and claimed.

In the drawings:—Figure 1 is a view in side elevation of the improved skate, showing the same adjusted for use as a roller skate. Fig. 2 is a plan view. Fig. 3 is a bottom plan view. Fig. 4 is a view in side elevation showing the device utilized as an ice skate. Fig. 5 is a view similar to Fig. 1 showing the central rollers thrown up out of operative position. Fig. 6 is a longitudinal sectional view on line 6—6 of Fig. 2. Fig. 7 is a transverse sectional view on line 7—7

of Fig. 1. Fig. 8 is a transverse sectional view on line 8—8 of Fig. 1. Fig. 9 is a sectional view on line 9—9 of Fig. 5. Fig. 10 is a detail perspective view of a portion of the skate, showing how the central rollers may be held in two different positions. Fig. 11 is a transverse sectional view on line 11—11 of Fig. 1. Fig. 12 is a front end view. Fig. 13 is a rear end view. Fig. 14 is a detail view.

Referring to the drawings 1 designates the runner of the skate, which is constructed of two outside plates 2 and intermediate plates 3 and 4, which outside plates and intermediate plates are riveted together by the rivets 5. Between the outside plates, forwardly and rearwardly, and between the adjacent ends of the intermediate plates, spaces or pockets 6 are provided, for the reception of the rollers 7, which are mounted upon the shaft pins 8, which in turn are mounted in bearings 9 of the U-shaped brackets 10 and 11. The shaft pins 8 are adapted to move in the slots 12 of the outside plates 2. When the rollers 7 are moved into or out of operative position, they are oscillated upon the links 13 and 14, pivoted at 15 upon the bolts 16, which extend transversely of the said plates 2 adjacent their ends. The plates 2 are provided with lateral flanges 16^a, to which a plate 17 is riveted as at 18. This plate 17 is provided with slots, through which the rollers 7 move when adjusted. The slots are designated by the characters 19.

Riveted at 21 and 22 to the bracket members 10 and 11 is a sole plate 24 constructed with an extension 25, which is folded or bent at 26 and 27, so as to lie against the upper face of the sole plate, and bolted thereto by the bolts 28 and the rivets 22. Secured upon the under face of the sole plate, substantially at its central portion is a clamping plate 30, by means of the said bolts 28. Mounted in a bearing of the clamping plate 30 is a transversely extending shaft 31 having a crank portion at each end, and upon each of which a roller 32 is mounted. In Fig. 1 it will be seen that the crank portions are thrown downwardly, so that the rollers 32 will engage the surface on which the skate moves, but in Fig. 5 the crank portions are thrown upwardly, thereby holding the rollers 32 out of operative position.

To hold the crank portions upwardly or downwardly, the shaft 31 is constructed with a plate 33 having a lug 34, which,

when the crank portions 35 are thrown downwardly, engage the socket 36, but when the crank portions are thrown upwardly, the lug 34 engages the socket 37. The sockets 36 and 37 are constructed or formed by the plates 38, which are clamped to the sole plate by the bolts 28. To hold the lug 34 in either of the sockets 36 or 37, a coil spring 39 is mounted upon the shaft 31, between one edge of the sole plate and the lug 40 of the shaft. To withdraw the lug 34 from either of the sockets, the shaft 31 is moved transversely of the sole plate and through its bearings against the action of the spring, as indicated by the arrow 41, and after which the shaft is partially rotated, so that the lug 34 may enter the socket 37, that is, provided the rollers 32 are moved from the positions shown in Fig. 1 to those shown in Fig. 5, and vice versa. In this manner the rollers 32 may be thrown out of operative position, so as to adapt the device as an ice skate, or as a roller skate, provided, however, the user does not require the said rollers to maintain the equilibrium of the skate.

The rear portion of the sole plate is bent upon itself as at 42 and 43, to form a heel back 44 and an extension lug 45. The sole plate, where the same is not reinforced by the extension 25, is constructed with a slot 46, which receives the lug 47 of the extension 48 of the heel clamp 49, which is constructed with a flange 50 having teeth 51, to engage the forward portion of the heel of a shoe. The extension 48 of the heel clamp slides through a bearing 52 of the plate 53, which constitutes a heel rest. Riveted or otherwise secured to the heel clamp is a reinforcing or brace plate 54, which not only braces or reinforces the heel clamp, but also acts to guide the same true when moved. To move the heel clamp a screw 55 swiveled at 56 in the extension lug 45 is threaded in the downwardly extending lug of the extension 48. The swiveling of the screw also acts to hold a spring blade or plate 57 to the extension lug 45. The spring blade or plate 57 is also riveted at 58 to the folded portion or the heel back of the sole plate. The portion 59 of the sole plate is constructed with an opening 60, the edge of which is formed with a lug 61. Bolted or otherwise secured to the forward end of the runner is a spring blade or plate 62, the same being arranged between the lugs 63 at the forward end of the plate 17, in order to insure lateral rigidity. The spring blade or plate 62 is formed with two openings 64 and 65, while the spring blade or plate 57 is constructed with an opening 66 and a notch 67. The spring blade or plate 57 is arranged between the lugs 68 at the rear portion of the plate 17, thereby also insuring lateral rigidity. The rear portion of the plate 17 is provided with a lug 70. When the sole

plate is in its uppermost position, and the roller 7 out of operative position, the lug 70 is in engagement with the notch 67, and the lug 61 is in engagement with the opening 65 respectively of the plates 57 and 62. However, when the sole plate is in its lowermost position, and the rollers 7 extended beyond the plates 2, for engaging a surface over which the skate moves, the lugs 61 and 70 engage the openings 64 and 66 respectively of the plates 57 and 62. These plates 57 and 62 constitute means for holding the sole plate adjusted relative to the plate 17.

Secured to the plate 17 by means of riveting or otherwise is a leaf spring, the ends of which spring 73 bear against the sole plate, thereby acting to force the same upwardly, when the spring plates or blades 57 and 62 are released or disengaged properly from the lugs 61 and 70. When the sole plate is moved downwardly, it is against the action of said spring.

Riveted or otherwise secured by one of the rivets 21 is a transversely disposed plate 74 having a downwardly extending lug at each end. Each lug 75 is provided with a slot 76. A strap 77 extends through the slots 76, for securing the forward portion of the skate to a shoe of the user.

From the foregoing it will be observed that there has been devised a simple and efficient combination ice and roller skate, which may be easily and readily converted from one to the other, and one which has been found desirable and practical.

The invention having been set forth, what is claimed as new and useful is:—

1. In a combination ice and roller skate, a runner, rollers movably mounted in the runner, a sole plate having connections with the rollers, and means for holding the sole plate in adjusted positions, whereby the rollers may be held into and out of operative positions.

2. In a combination ice and roller skate, a runner, rollers movably mounted in the runner, a sole plate having connections with the rollers, spring blades having adjustable connections with the ends of the sole plate and the runner, for holding the sole plate in adjusted positions, whereby the rollers are held into and out of operative positions.

3. In a combination ice and roller skate, a runner, rollers movably mounted in the runner, a sole plate having connections with the rollers, and means for holding the sole plate in adjusted positions, whereby the rollers may be held into and out of operative positions, and resilient means between the runner and the sole plate.

4. In a combination ice and roller skate, a runner, rollers movably mounted in the runner, a sole plate having connections with the rollers, spring blades having adjustable connections with the ends of the sole plate and

the runner, for holding the sole plate in adjusted positions, whereby the rollers may be held out of operative position, thereby converting the skate into an ice skate and vice versa, and yieldable means between the runner and the sole plate.

5. In a combination ice and roller skate, a runner having pockets, one at each end, rollers arranged in the pockets, means for pivoting the rollers to the runner, whereby the rollers may move in the pockets, a sole plate having connections with the pivoted means, and means for holding the sole plate in adjusted positions relative to the runner for holding the rollers out of operative positions, whereby the skate may be converted into an ice skate and vice versa.

6. In a combination ice and roller skate, a runner having pockets, one at each end, rollers arranged in the pockets, means for pivoting the rollers to the runner, whereby the rollers may move in the pockets, a sole plate having connections with the pivoted means, and spring blades adjustably connected between the sole plate and the runner, whereby the sole plate may be held in adjusted positions, for holding the rollers out of operative positions, thereby converting the skate into an ice skate and vice versa.

7. In a combination ice and roller skate, a runner having pockets, one at each end, rollers arranged in the pockets, means for pivoting the rollers to the runner, whereby the rollers may move in the pockets, a sole plate having connections with the pivoted means, and means for holding the sole plate in adjusted positions relative to the runner for holding the rollers out of operative positions, whereby the skate may be converted into an ice skate and vice versa, and yieldable means mounted between the sole plate and the runner.

8. In a combination ice and roller skate, a runner having pockets, one at each end, rollers arranged in the pockets, means for pivoting the rollers to the runner, whereby the rollers may move in the pockets, a sole plate having connections with the pivoted means, and spring blades adjustably connected between the sole plate and the runner, whereby the sole plate may be held in adjusted positions, for holding the rollers out of operative positions, thereby converting the skate into an ice skate and vice versa, and yieldable means mounted between sole plate and the runner.

9. In a combination ice and roller skate, a runner having pockets, one at each end, and provided with slots adjoining the pockets, rollers arranged in the pockets and provided with shaft pins movable in the slots, links pivoted to the runner, two at each end and one upon either side, in which the shaft pins are mounted, a sole plate having bracket connections with the shaft pins, spring blades adjustably connected between the sole plate and the runner for holding the sole plate in adjusted positions relative to the runner for throwing the rollers out of operative positions thereby converting the skate into an ice skate and vice versa, and yieldable means between the sole plate and the runner.

10. In a combination ice and roller skate, a runner having pockets, one at each end, rollers arranged in the pockets, means for pivoting the rollers to the runner, whereby the rollers may move in the pockets, a sole plate having connections with the pivoted means, and spring blades adjustably connected between the sole plate and the runner, whereby the sole plate may be held in adjusted positions, for holding the rollers out of operative positions, thereby converting the skate into an ice skate and vice versa, and yieldable means mounted between sole plate and the runner, said skate having central adjustable rollers, for maintaining the equilibrium of the skate when converted into a roller skate.

11. In a combination ice and roller skate having a sole plate, a bearing plate fixed to the under side of the sole plate, sockets, one arranged upon each side of the bearing of said bearing plate, a shaft mounted in the bearing of said bearing plate and provided with cranks one at each end, rollers on said cranks, said shaft having a plate provided with a lug insertible in either of said sockets, for holding the rollers into and out of operative positions, and yieldable means mounted upon the shaft between one edge of the sole plate, and a lug forming an integral part of the shaft, for holding the shaft in such adjusted positions.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

GEORGE SZYMAŃSKI.

Witnesses:

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H. L. APPLETON.