



A.D. 1877, 1st NOVEMBER. N° 4061.

**Skates.**

LETTERS PATENT to Frank Wirth, of the Firm of Wirth and Company, Patent Solicitors, at Frankfort-on-the Main, in the Empire of Germany, for the Invention of "IMPROVEMENTS IN SKATES." A communication from Gottfried Klotz, of Kamnitz, in the Kingdom of Bohemia.

Sealed the 21st December 1877, and dated the 1st November 1877.

PROVISIONAL SPECIFICATION left by the said Frank Wirth at the Office of the Commissioners of Patents on the 1st November 1877.

FRANK WIRTH, of the Firm of Wirth and Company, Patent Solicitors, at Frankfort-on-the-Main, in the Empire of Germany. "IMPROVEMENTS IN SKATES."  
5 [A communication from Gottfried Klotz, of Kamnitz, in the Kingdom of Bohemia.]

This Invention relates to improvements in skates, and is designed to facilitate the fastening of the skate to and unfastening it from the foot.

A skate constructed according to this Invention comprises a sole, a blade or runner, two sole clasps, a heel claw, a short connecting bar, a long connecting bar,  
10 a catch spring, a sunk guide screw, and a regulating screw.

The skate sole has under the heel a hinge, in which the blade or runner is pivotted in such a manner that the same has free play when not held by the said catch spring to the sole; when however this spring is held on one side, the skate can open.

15 At the heel end of the blade or runner is placed a projecting nose, which, fitting into the said short connecting bar or piece, gives the same a horizontal movement as the blade is moved towards and from the sole. The said connecting bars or pieces fit into the said heel claw, and may be clamped by the regulating screw to each other and to the said heel claw in such a manner that they both move together. The

[Price 6d.]

*Wirth's Improvements in Skates.*

long connecting bar or piece, which is held by the said countersunk guide screw, is made wider at the toe end of the skate, and is there provided with two slots slanting in opposite directions; in these slots work two pins on the two sole clasps.

In order to fit the skate to a boot or shoe the said regulating screw is loosened, 5 and the catch spring pushed on one side; the skate will thus be opened. The boot or shoe is now placed upon the sole plate, and the sole clasps pushed to each side of the sole, the heel claw being also pushed up against the heel; the regulating screw is then tightened, thus holding the two sole clasps and the heel claw in their 10 respective positions, from which they cannot be moved except in proper relation to each other by the said projecting nose, when the blade or runner is moved to or from the sole, as herein-before explained.

If the skate is closed, that is to say, the blade or runner pushed against the sole until the spring catches the same, the said nose draws the two connecting rods, and with them the said heel claw; at the same time the connecting rod, with help of 15 the slots in the long connecting piece and the pins on the sole clasps, cause the said sole clasps to close tightly upon the sole.

When the skate is to be detached from the foot it is only necessary to push the catch spring on one side, when the blade or runner can be pulled from the sole; the said projecting nose working as described, then effects the opposite movements, and 20 the skate is detached from the foot.

The blade or runner is provided with a slanting spring slide, which effects the self-catching of the blade or runner upon the same being pushed toward the sole.

*[Faint mirrored text from the reverse side of the page, likely bleed-through from the patent document.]*

*[Faint mirrored text from the reverse side of the page, likely bleed-through from the patent document.]*

*[Faint mirrored text from the reverse side of the page, likely bleed-through from the patent document.]*

*[Faint mirrored text from the reverse side of the page, likely bleed-through from the patent document.]*

*[Faint mirrored text from the reverse side of the page, likely bleed-through from the patent document.]*

*[Faint mirrored text from the reverse side of the page, likely bleed-through from the patent document.]*

5  
10  
15  
20  
25  
30  
35  
40  
45  
50

*Wirth's Improvements in Skates.*

SPECIFICATION in pursuance of the conditions of the Letters Patent filed by the said Frank Wirth in the Great Seal Patent Office on the 30th April 1878.

5 FRANK WIRTH, of the Firm of Wirth and Company, Patent Solicitors, at Frankfort-on-the-Main, in the Empire of Germany. "IMPROVEMENTS IN SKATES." A communication from Gottfried Klotz, of Kamnitz, in the Kingdom of Bohemia.

This Invention relates to improvements in skates, and is designed to facilitate the fastening and unfastening of the same.

10 In the accompanying Drawing,—

Figure 1 is a side view of my skate when closed.

Figure 2 is a top view of the same, also closed.

Figure 3 is a side view of the said skate when open.

Figure 4 represents the heel claw detached from the skate.

15 Figure 5 is a sectional view through the line *x, y*, Figure 4.

My improved skate comprises the sole 1, the blade 2, the sole clasps 3 and 4, the heel claw 5, the short connecting bar 6, the long connecting bar 7, the catch spring 8, the sunken guide screw 9, the regulating screw 10.

20 The skate sole has under the heel a hinge *a*, in which the blade is pivoted in such a manner that the same has free play when not held by the spring 8 to the sole 1; when however the spring 8 is held on one side, the skate can open.

At the heel end of the blade is placed a projecting piece or nose C, which, fitting into the connecting piece 6, gives the same a horizontal movement as the blade is moved towards and from the sole. The two connecting pieces 6 and 7 fit into the heel claw 5, and may be clamped by the regulating screw to each other and to the claw 5 in such a manner that they both move together. The connecting piece 7, which is held by the countersunk guide screw, is made widest at the toe end of the skate, and is provided with two slots F, G, inclined in opposite directions; in these slots work the two pins D, E, of the two sole clasps 3, 4.

30 To fit the skate to a boot or shoe the screw 10 is loosened and the spring 8 pushed on one side; the skate will thus be opened. The boot or shoe is now placed upon the sole plate 1, and the sole clasps 3 and 4 are pushed to each side of the sole, the heel claw 5 being also pushed up against the heel; the regulating screw 10 is then tightened, thus holding the two sole clasps and the heel claw in their respective positions, from which they cannot be moved except in proper relation to each other or by the nose C, when the blade is moved to or from the sole, as herein-before explained.

40 If the skate is closed, that is to say, if the blade is pushed against the sole 1 until the spring 8 catches the same, the nose C draws the connecting rods 6 and 7, and with them the heel claw 5; at the same time the connecting rod, by the aid of the slots F, G, and the pins D, E, causes the sole clasps 3 and 4 to close tightly upon the sole.

When the skate is to be detached from the foot it is only necessary to push the spring 8 on one side, when the blade can be pulled from the sole; the nose C, working as described, then effects the opposite movements, as above specified, and the skate is detached from the foot.

The blade 1 is provided with a slanting or inclined spring slide 1<sup>a</sup>, which effects the catching of the blade 2 when the same is pushed towards the sole.

50 Having thus fully described the said Invention, and the manner of performing the same, I wish it understood that I claim,—

First. The blade hinged to the sole, and formed with a projecting piece or nose, as above set forth.

Second. The combination of parts comprising the nose, the connecting rod, the claw, the rod 7, and the clasps, as above set forth.

---

*Wirth's Improvements in Skates.*

---

Third. The piece with slanting slots in combination with the pins and clasps, as above set forth.

Fourth. Providing the skate with a spring 8, as above set forth, and for the purpose specified.

Fifth. The combination and arrangement of the parts of the skate, as above 5 described, and shewn in the Drawing, for the purposes specified.

In witness whereof, I, the said Frank Wirth, have hereunto set my hand and seal, this Twenty-third day of April, in the year of our Lord One thousand eight hundred and seventy-eight.

FRANK WIRTH. (L.S.) 10

---

LONDON: Printed by GEORGE EDWARD EYRE and WILLIAM SPOTTISWOODE,  
Printers to the Queen's most Excellent Majesty.  
For Her Majesty's Stationery Office.

1878.

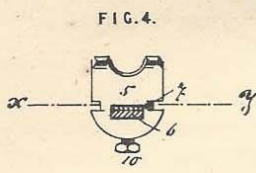
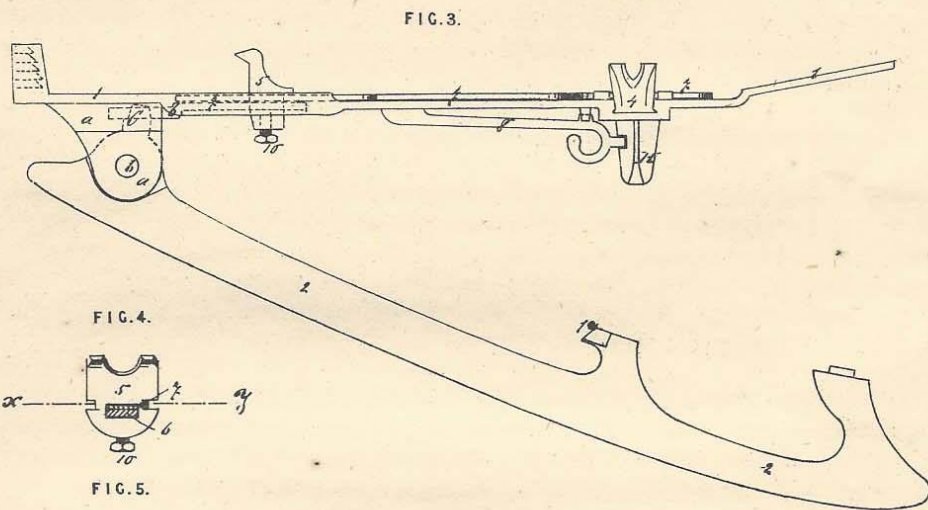
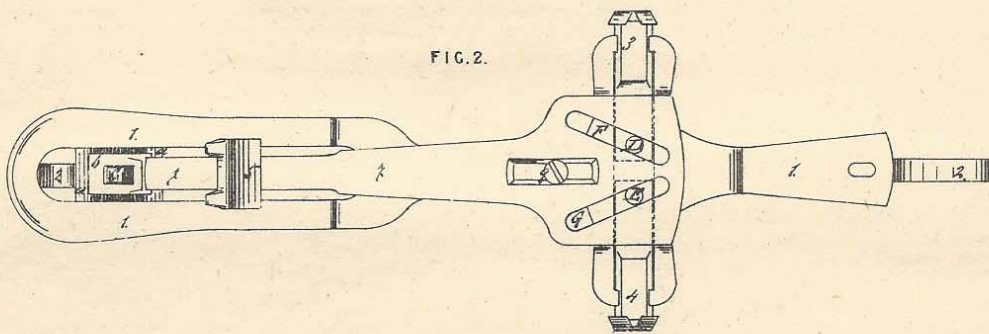
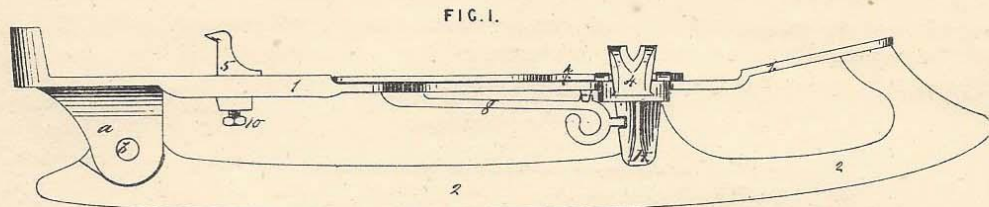


FIG. 5.



*The filed drawing is not colored.*

Malby & Sons, Photo-Litho.