

No. 608,387.

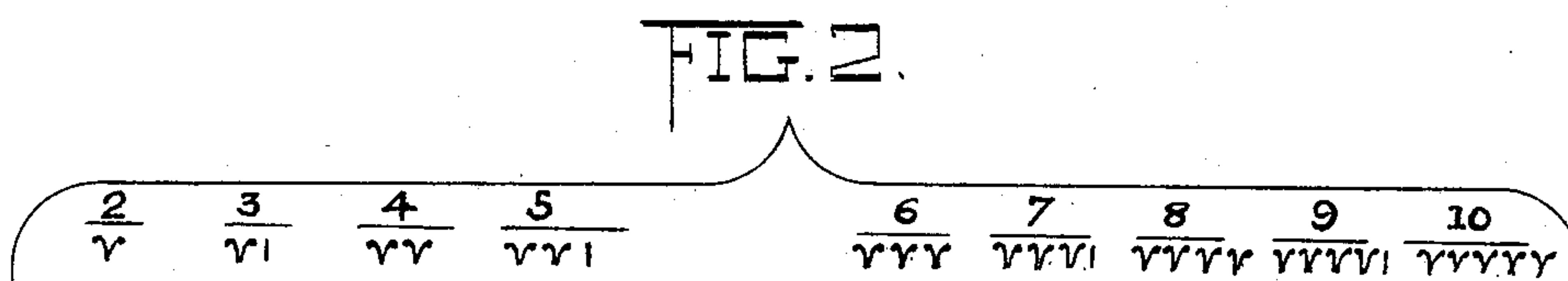
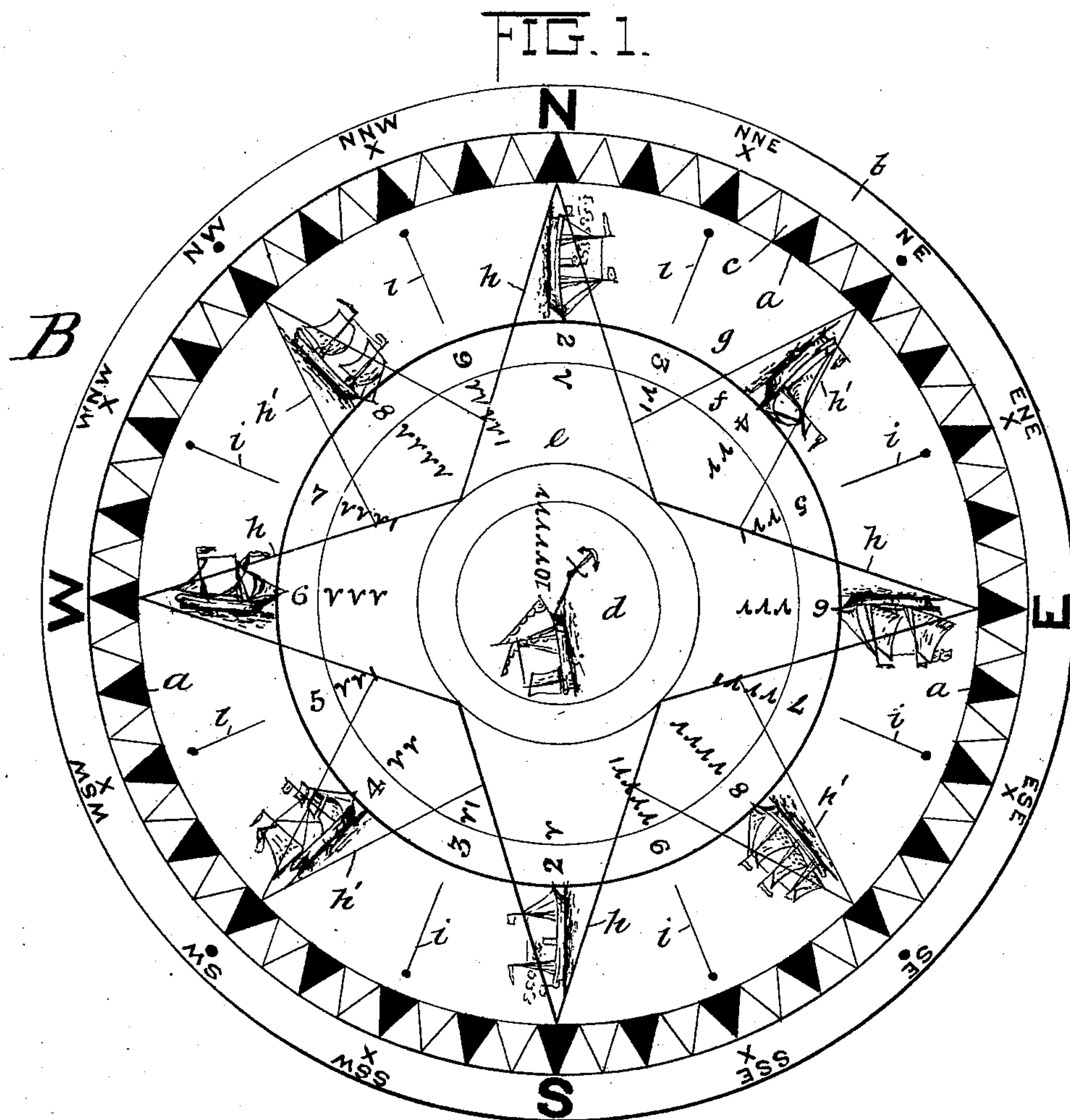
Patented Aug. 2, 1898.

F. V. DE BEM.
METHOD OF SIGNALING AT SEA.

(No Model.)

(Application filed Nov. 18, 1897.)

2 Sheets—Sheet 1.



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2 Sheets—Sheet 2.

FIG. 2.

<i>A</i> <u>SIGNAL CODE.</u>	
N.V. --- 2 Continuous blasts	S,V. --- 2 Continuous blasts
NNE,VV. 2 --- " --- 1 Separate blast	SSW,VV. 2 --- " --- 1 Separate blast
NE,VV. 4 --- " --- blasts	SW,VV. 4 --- " --- blasts
ENE,VV. 4 --- " --- 1 Separate blast	WSW,VV. 4 --- " --- 1 Separate blast
E,VV. 6 --- " --- blasts	W,VV. 6 --- " --- blasts
ESE,VV. 6 --- " --- 1 Separate blast	WNW,VV. 6 --- " --- 1 Separate blast
SE,VV. 8 --- " --- blasts	NW,VV. 8 --- " --- blasts
SSE,VV. 8 --- " --- 1 Separate blast	NNW,VV. 8 --- " --- 1 Separate blast
Anchored Vessel VVVV, 10 Continuous blasts	
Port and Starboard, usual code signals.	

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METHOD OF SIGNALING AT SEA.

SPECIFICATION forming part of Letters Patent No. 608,387, dated August 2, 1898.

Application filed November 18, 1897. Serial No. 659,034. (No model.)

To all whom it may concern:

Be it known that I, FRANCISCO VIEIRA DE BEM, a citizen of the United States, residing at Gloucester, in the county of Essex and State of Massachusetts, have invented certain new and useful Improvements in Marine Signaling Codes; 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.

My invention relates to marine signaling codes, its primary object being to provide a new and simplified system of signaling whereby collisions between vessels on dark nights or in heavy fogs may be avoided and all liability of the different signals being confused obviated.

To this end my invention consists in providing a code in which the signals are systematically arranged and composed of long and short blasts or full-tone signals and semitone signals sounded with proper intervals of rest between them, the basic or foundation part of each signal being a long blast or full tone or a combination of long blasts designating the cardinal points and principal divisions thereof, followed as a sequence by a single short blast or semitone designating the principal intermediate points or subdivisions between said cardinal points, and the said signals being so distinctive in character as to admit of no confusion or mistake in interpreting them, as sometimes occurs with the ordinary code under certain atmospheric conditions, which render the blasts partially inaudible.

In the accompanying drawings, hereto annexed and forming part of this specification, Figure 1 is a diagrammatic view of the compass chart or card. Fig. 2 is a view showing a progressive group of marks representing the code-signals, and Fig. 3 a view of a reference-card explanatory of the code.

For ready reference and for the purpose of instruction the code-signal marks and their definitions may be printed upon a card A, as shown in Fig. 3, each code character "V" representing two almost-continuous long blasts or full tones and each character "1" following thereafter a short blast or semitone, which is sounded after a proper interval of

rest. The code-signal marks and the points indicated thereby, as shown in said figure, are as follows:

Signal-Code.

2	3	4	5	6	7
V	V1	VV	VV1	VVV	VVV1
	8	9	10		
	VVVV	VVVV1	VVVVV		

Explanation of Code.

N, V	Two continuous blasts, last prolonged.	65
NNE, V1	Two continuous, one separate prolonged blast.	
NE, VV	Four continuous blasts, last prolonged.	70
ENE, VV1	Four continuous, one separate prolonged blast.	
E, VVV	Six continuous blasts.	
ESE, VVV1	Six continuous, one separate blast.	75
SE, VVVV	Eight continuous blasts.	
SSE, VVVV1	Eight continuous, one separate blast.	
S, V	Two continuous blasts.	
SSW, V1	Two continuous, one separate blast.	80
SW, VV	Four continuous blasts.	
WSW, VV1	Four continuous, one separate blast.	
W, VVV	Six continuous blasts, last prolonged.	85
WNW, VVV1	Six continuous, one separate prolonged blast.	
NW, VVVV	Eight continuous blasts, last prolonged.	90
NNW, VVVV1	Eight continuous, one separate prolonged blast.	
Anchored vessel, VVVVV	Ten continuous blasts.	
Port and star-board.	Usual code-signals.	95

From this it will be seen that ten signals in all are included in the code, each signal having for its base or foundation part the character "V," representing two long blasts or full tones, and that said full tones indicate the cardinal points N, S, E, W, and principal intermediate divisions thereof—NE, SE,

SW, and NW—while the sequence characters “1” represent short blasts or semitones following each full blast or combination of full blasts and indicate the minor intermediate divisions NNE, ENE, ESE, SSE, SSW, WSW, WNW, and NNW. By reference to my improved compass chart or card B (shown in Fig. 1) this will be fully understood. This chart or card bears upon its face the point characters enumerated above and the rhumb-point divisions *a*, arranged in two concentric circles *b c* at the outer edge thereof, as usual. At the center of the card is a circular space *d* and between the same and circle *c* three concentric circular spaces *e f g*. Extending from the central circle is a star-shaped figure having four main points *h*, radiating to the cardinal-point characters, and four auxiliary points *h'*, radiating to the principal intermediate points and dividing the chart into eight parts, as shown. Radial division-lines *i* in the circular space *g*, between the star-points and leading to the eight minor compass-points, further divide the compass into sixteen parts. The code-signal marks are arranged in the circular space *e*, and in the circular space *f*, adjacent thereto, are numerals from “2” to “9,” indicating the number of blasts each code-mark represents. The said code-marks and numerals are arranged in two progressive sets at diametrically opposite sides of the compass-cards, one set extending from N to SSE, on the one hand, and the other set from S to NNW, on the other hand, the corresponding diametrically opposite points on the compass being represented by the same marks, and from this it will be seen that a systematically - arranged and exceedingly-simple code of signals is provided. For the purpose of instruction the circular space *g* may bear opposite the compass-points the representations of vessels pursuing various courses, and in the central circular space *d* I have shown the representation of an anchored vessel and alongside the same the proper code-signal to be sounded thereby. This compass chart or card may in practice take the place of the ordinary compass-card in order that the code may be under the inspection of the steersman or master of the vessel.

The manner of employing my improvement is apparent. On dark nights or during a fog if the master of the vessel, for illustration, steering NE, hears a signal of four long blasts VV, (3,) indicating that the vessel signaling is heading SW, he would either change the course of his vessel NNE and respond by giving a signal of two long blasts and one short blast V1 (3) or ENE and give four long blasts and one short blast VV1, (5,) and thereby pass on one side or the other of the first-named vessel and notify the master of the same of the course his vessel is pursuing.

The blasts may be produced by a steam-whistle or any other suitable sound-producing apparatus.

It will be noted that in my improved code

the long blasts or full tones form the basic or foundation part of the whistle and the short blast or half-tones the sequence and that no two short blasts are sounded in any of the signals. Thus there is an avoidance of any liability of the signals being confused by the mingling or merging of two short blasts into a long blast, so that each short blast will be well defined from the preceding long blast or blasts and when heard will be known as the end of the signal, it being immaterial in such case whether the whole of the long blast is heard in a long signal, because evidence is given that the signaling vessel is steering toward one of the minor points of the compass, between the cardinal and principal intermediate points thereof, and the master, hearing the signal, can govern his vessel to steer from said minor point, wait for the continuation of the signal, or give a signal. It has been demonstrated that two or more long plain blasts can be more readily heard and distinguished than short plain blasts, so that it is apparent that if only a portion of the first blast of a given signal—V1, for instance—is heard and interpreted as one short blast, one long blast, and a final short blast the signal will be readily understood, as in no instance does a short blast in this code precede a signal. It will also be observed that the course of a signaling vessel may be approximately determined from hearing both the first and last notes of the whistle. In practice the long blasts will be sounded with one or two seconds of rest between them and the short blasts after an interval of about three seconds.

By the use of my improved signaling-code liability of collisions between vessels on dark nights or in heavy fogs will be reduced to the minimum.

The compass card or chart is not herein claimed, but forms the subject-matter of a divisional application, filed April 23, 1898, Serial No. 678,621.

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

1. The herein-described signaling-code, consisting, essentially, of a series of sound-signals, each composed of systematically - arranged long duplicate plain blasts or a combination of duplicate long plain blasts followed as sequence by a single short plain blast, sounded with intervals of rest as described, the said duplicate long plain blasts or combinations thereof forming the basic part of the signal and representing cardinal points and principal intermediate rhumb-points, and the single short blast forming the terminal of the signal and representing minor intermediate points between the cardinals, substantially as described.

2. The herein-described improved method of marine sound-signaling, consisting of long duplicate plain blasts or a combination of long duplicate plain blasts representing cardinal points and principal intermediate points

followed by a terminal short blast represent-
ing minor intermediate points, the north and
south signals consisting of two long plain
blasts; the north northeast and south south-
west signals of two long plain blasts followed
by one short plain blast; the northeast and
southwest signals of four long plain blasts;
the east northeast and west southwest signals
of four long plain blasts and one short plain
blast; the east and west signals of six long
plain blasts; the east southeast and west
northwest signals of six long plain blasts and
one short plain blast; the southeast and north-

west signals of eight long plain blasts; the
south southeast and north northwest signals
of eight long plain blasts and one short plain
blast; and that of an anchored vessel ten
long plain blasts, produced with intervals of
rest between each blast, substantially as de-
scribed.

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

FRANCISCO VIEIRA DE BEM.

Witnesses:

LAURA MCQUINN,
SUMNER D. YORK.