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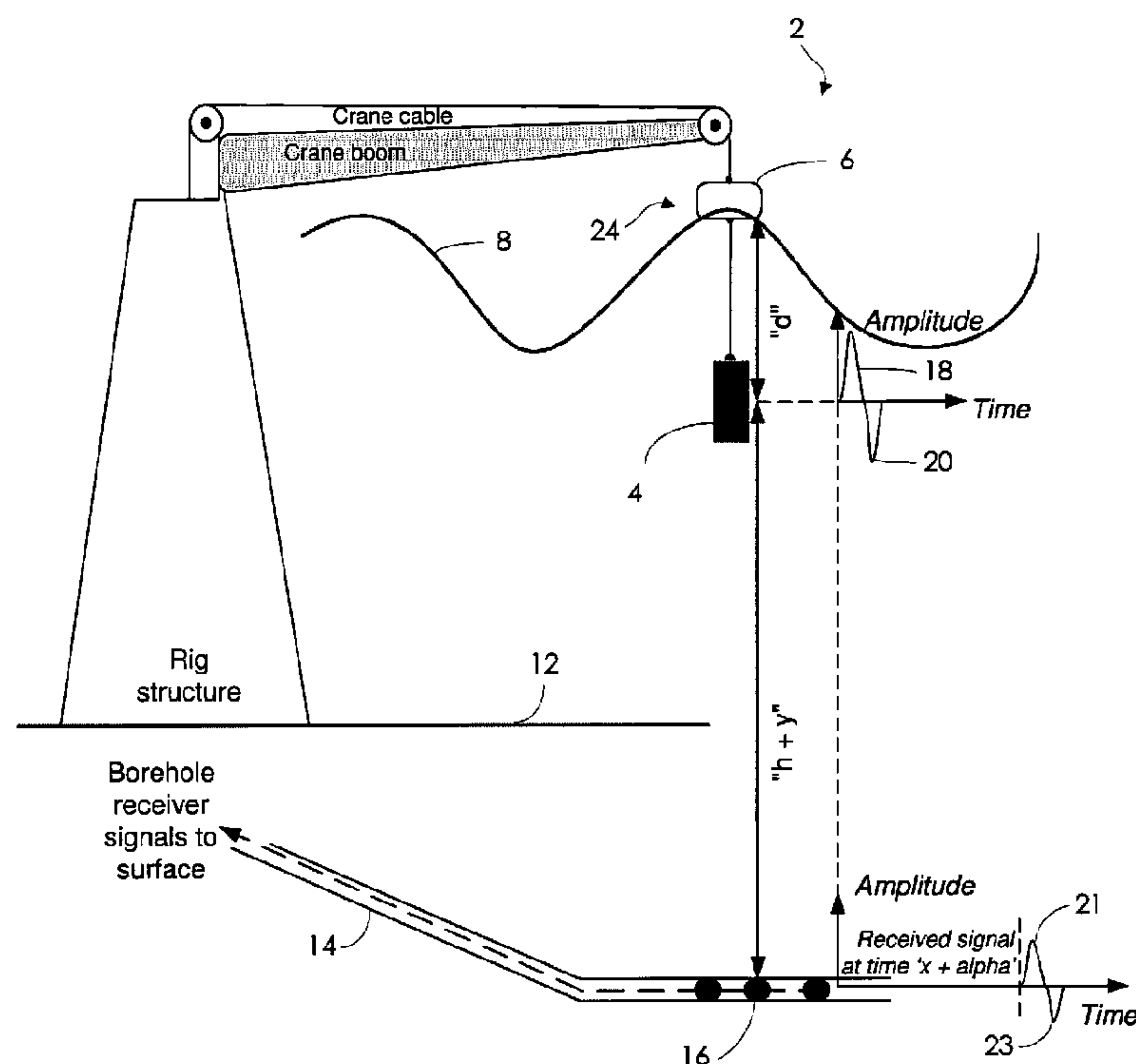
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(54) Titre : PROCÉDES ET APPAREILS DE COMMANDE DE SOURCE POUR LE TIR SEQUENTIEL DE RESEAUX DE
CANONS A AIR ECHELONNES EN SISMIQUE DE PUITS

(54) Title: METHODS AND APPARATUS OF SOURCE CONTROL FOR SEQUENTIAL FIRING OF STAGGERED AIR
GUN ARRAYS IN BOREHOLE SEISMIC



(57) Abrégé/Abstract:

Methods and apparatus for controlling seismic source firings are disclosed. The methods and apparatus enable firing of seismic sources to increase pressure wave amplitude. Some methods and apparatus reduce ghosting and align first pressure peaks of multiple seismic sources. The multiple seismic sources may be fired sequentially according to active feedback mechanisms. Controlling the firing of the seismic source facilitates more accurate seismic data and a more consistent seismic source signature.

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receivers in the wellbore. Most VSPs use a surface seismic source, which is commonly a vibrator

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source controller programmed to fire the underwater seismic

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