

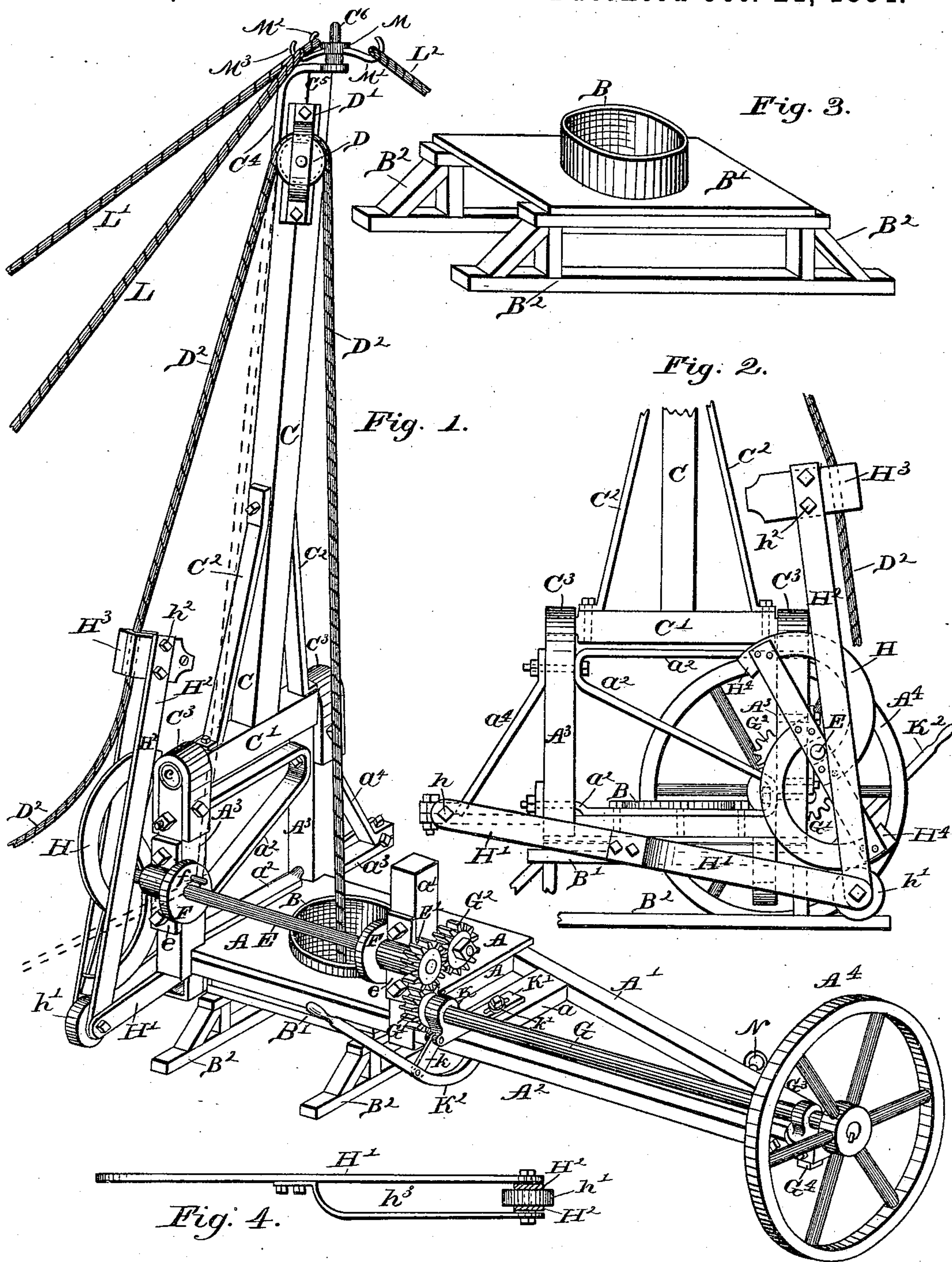
(No Model.)

S. WHEELAND.

WELL DRILLING APPARATUS.

No. 306,792.

Patented Oct. 21, 1884.



Witnesses
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UNITED STATES PATENT OFFICE.

SIMEN WHEELAND, OF BROWNSVILLE, MISSOURI.

WELL-DRILLING APPARATUS.

SPECIFICATION forming part of Letters Patent No. 306,792, dated October 21, 1884.

Application filed July 17, 1884. (No model.)

To all whom it may concern:

Be it known that I, SIMEN WHEELAND, of Browns-
ville, in the county of Saline and State
of Missouri, have invented certain new and use-
ful Improvements in Well-Drilling Apparatus;
and I do hereby declare that the following is a
full, clear, and exact description of the inven-
tion, which will enable others skilled in the art
to which it appertains to make and use the
same, reference being had to the accompanying
drawings, and to letters of reference marked
thereon, which form a part of this specification.

The object of this improvement is an effi-
cient well-drilling appliance. The invention
consists in the peculiar construction and ar-
rangement of the parts, as will be hereinafter
fully explained and specifically claimed, refer-
ence being had to the drawings herewith filed
as part hereof, in which the same letters of
reference denote the same parts in the differ-
ent views.

Figure 1 is a perspective view of a well-drill
embodying the features of my improvement.
Fig. 2 is a sectional end elevation of the same.
Fig. 3 is a perspective view of one of the parts
detached. Fig. 4 is a top view of one of the
parts detached.

A A' A² represent a frame provided with
vertical extensions A³ a', and a circular open-
ing fitting over a cylindrical vertical exten-
sion, B, of a base-frame, B' B², on which the
frame A A' A² is arranged to revolve for a
purpose hereinafter set forth.

C is a vertical beam, tenoned at its lower end
to a transverse beam, C', having journals c,
by means of which, with straps C³, it is flexi-
bly connected to the vertical extension A³.

C² represents metal braces for additionally
securing the connection of the vertical beam
C to the transverse beam C', and a² is a Z-
shaped metal brace for securing the position
of the parts to which it is connected, as shown.

D is a pulley secured to the upper part of
the beam C by means of metal arbor D', to re-
ceive and act as a bearing for the rope D², con-
necting with the well-drill (not shown) and
with an automatically adjustable link or frame,
H², by means of a clamp, H³, secured to the
rope D², and to the link H² by means of bolts
h².

E is a shaft provided at its outer end with a
double cam, H, for a purpose hereinafter set

forth, and with disks F F, which serve as guards
for winding the rope D², and elevating the drill
from the well as occasion may require. The
shaft E revolves in bearings e e, secured to ver-
tical extensions a' A³ of the revolving frame
A A' A².

E² is a gear-wheel secured to the inner end
of the shaft E, and arranged to mesh with a
pinion, G', secured to a shaft, G, having a
wheel, A⁴, rigidly affixed to its outer end, as
shown, and arranged to revolve in a swivel
metal bearing, G³, secured to the frame A' A²,
near its outer end, and an adjustable metal
bearing, K, affixed to the transverse beam a,
and having a slotted extension, K', for a pur-
pose hereinafter set forth.

H' is a metal frame or link, flexibly connect-
ed to the lateral extension a³ a⁴ of the revolv-
ing frame by a pivot-bolt, h, and provided
with a friction-roller, h'. The vertical beam
C has a metal addition, C⁴ C⁵, having a pivot,
C⁶, for the reception of a perforated plate, M,
having radial hooked projections M' M² M³.

L L' L² are guy-ropes for steadying the ma-
chine.

K² is a lever connecting by means of a link,
k, with the adjustable bearing K for the shaft
G, for the purpose of putting the pinion G' on
the shaft G out of gear with the pinion E' on
the shaft E, and in gear with the pinion or
idle-gear G², for the purpose of thereby re-
versing the motion of the shaft E, and elevat-
ing the drill from the well by winding the rope
D² thereon, the latter being previously disen-
gaged from the clamp H³, and secured to the
disk F by means of staple or hook affixed
thereto, as shown at f.

The mechanism is put in operation by one
or more draft-animals connected through the
usual single or double tree to the ring-bolt N,
on the frame-extension A', and driven in a
circuit around the vertical extension B of the
base frame or platform B' B², which is to be
rigidly secured in position by any suitable
means. As the frame A A' A² moves around
the platform-extension B, the wheel A⁴ will
revolve and give motion to the shaft G, and
through the gearing G' E² to the shaft E, pro-
vided at its outer end with the double cam H,
which will pass through the link or frame H²,
and periodically engage with friction-roller h',
affixed to the link H', flexibly connected to

the frame-extension $a^3 a^1$, and by bearing the same downward elevate the well-drill until the ends H^1 of the cam H pass the roller h' , when the drill will drop with the usual effect. As the drilling progresses, the rope D^2 is lowered through the clamp H^3 , as occasion may require. When the work is done, the flexibly-connected vertical extension C is lowered on the part $A A' A^2$ for convenience of transporting, for which purpose the parts $H' H^2$ may be disengaged from the frame-work and from each other.

Having explained the construction and operation of my improvement, what I claim as new, and desire to secure by Letters Patent, is—

1. The double cam H , and links $H' H^2$, and

the driving-frame $A A' A^2$, provided with vertical extension C , and geared shafting $G E$, all arranged to operate substantially as specified, for the purpose set forth.

2. The frame $B' B^2$, provided with cylindrical vertical extension B , in combination with the frame $A A' A^2$, and superstructure, arranged to operate as specified, for purpose set forth.

In testimony that I claim the foregoing as my own I affix my signature in presence of two witnesses.

SIMEN WHEELAND.

Witnesses:

A. ARMSTRONG,
W. H. REAVIS.