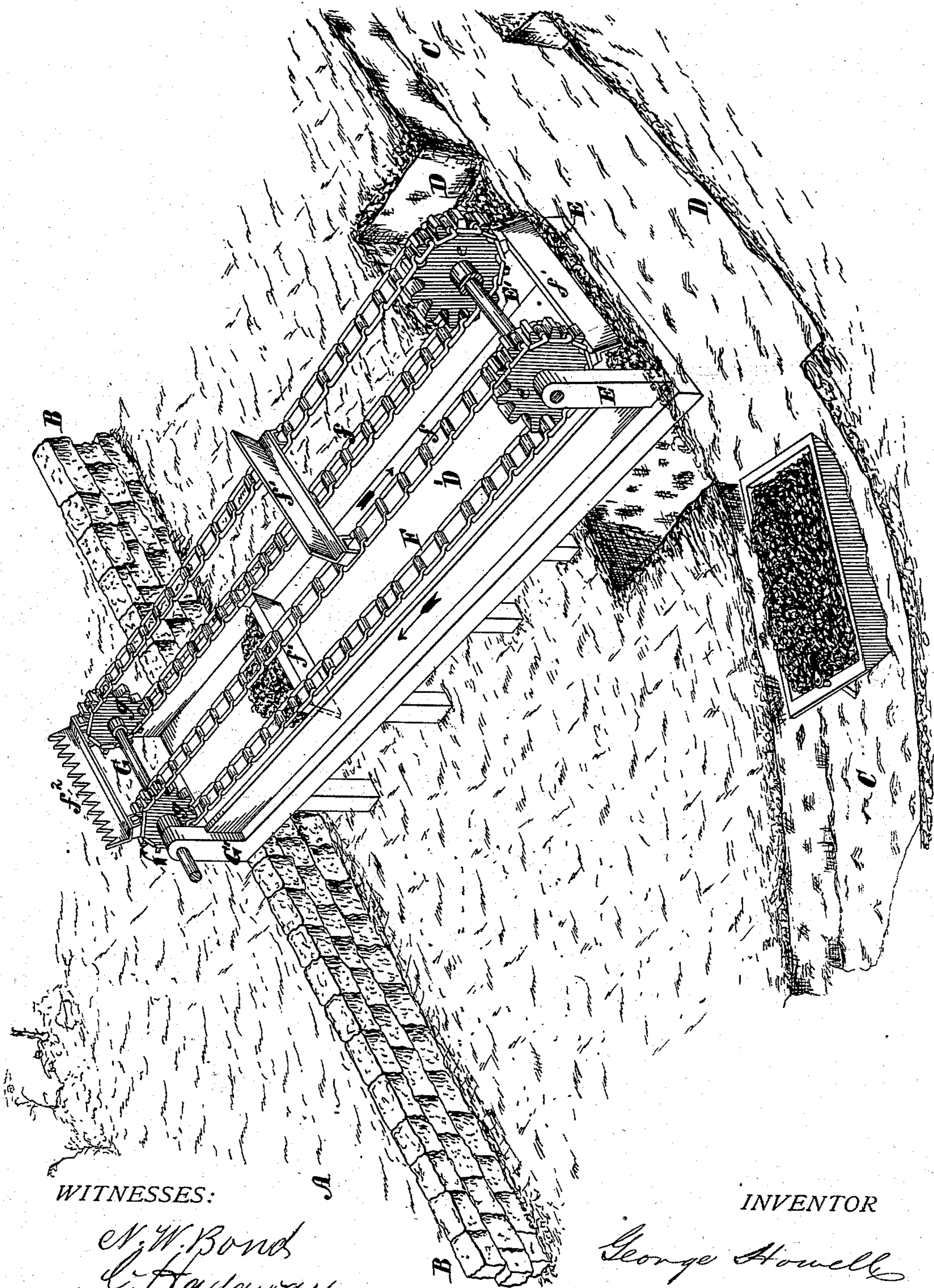


G. HOWELL.
Means for Reclaiming Low Lands.

No. 221,821.

Patented Nov. 18, 1879.



WITNESSES:

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UNITED STATES PATENT OFFICE.

GEORGE HOWELL, OF PHILADELPHIA, PENNSYLVANIA.

IMPROVEMENT IN MEANS FOR RECLAIMING LOW LANDS.

Specification forming part of Letters Patent No. **221,821**, dated November 18, 1879; application filed May 2, 1879.

To all whom it may concern:

Be it known that I, GEORGE HOWELL, of Philadelphia, in the county of Philadelphia and State of Pennsylvania, have invented certain new and useful Improvements in Means for Reclaiming Low Lands; 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 pertains to make and use it, reference being had to the accompanying drawing, which forms part of this specification, in which the figure is a perspective illustration of my improvements.

My invention has for its object to provide a means for reclaiming waste lands subject to overflow, or low marshy tracts or swamps which, by reason of their depressed and wet condition or character, are unfit for cultivation or for building purposes.

My invention consists, essentially, in peculiar means for filling in such lands with alluvial mud or deposits obtained from the beds of channels of water bodies or courses by dredging apparatus, which discharge the same into reservoirs or basins, whence it is drawn and distributed to any desired extent over the land to be filled in by means of endless conveyers provided with sweeps or scrapers.

Referring to the accompanying drawings, A indicates a tract of land of any extent of the character suggested—i. e., wet, marshy, low, or subject to overflow—which it is desired to reclaim or render adaptable for agricultural, building, or other stable or industrial purposes. Such reclamation or adaptation, it is assumed, may be accomplished by filling in the low land with soil of a suitable character. To accomplish this a bank, B, of earth, stone, brick, or other material, if not already existent, will be required to be thrown up to divide the tract A from the stream or water-body C, on which it is assumed to border, such stream or body being navigable by scows bearing dredging apparatus. Between such bank and the water, or within the latter, must also be constructed a reservoir or basin for the reception of the mud or alluvial deposits taken from the beds or channels of rivers, bays, or other water courses or bodies. Such receptacle may consist of a basin formed by excavation effected by the dredges, into which the scows

may enter by floating and discharge their contents. Such a basin is shown at D in the drawings. From the bottom of this basin, and extending to the bank B, is an inclined plane, D', over which is located an endless conveyer, F. Said conveyer consists of endless chains *f f*, running on wheels *e e* upon a shaft, E', sustained on standards E within the basin, and over another shaft, G, having wheels *g g*, and sustained in standards G' G', which rest on the bank B, and said chains being connected by transverse scrapers or sweeps *f'*. These scrapers or sweeps may be of any desired construction—for example, imperforate planks, as shown at *f'*, or serrated bars, as shown at *f''*.

It is designed that motion should be applied by any suitable motor to the shaft G, so as to cause the conveyer F to move as indicated by the arrows, whereby the mud in the basin D will be drawn out by the scrapers or sweeps, carried up the incline D', and discharged over the bank B upon the tract A. The mud or material thus discharged, owing to its semi-fluid character, will have a tendency to spread over the tract A; but to facilitate such spreading, as well as to secure a uniform distribution to any determined depth, other conveyers, like F, will be located above said tract, extending across and working over it. These distributing-conveyers form no part of the invention herein described, but are the subject-matter of another pending application for patent which I have made. Such conveyers will meet and carry along the mud thrown over the bank B, and will distribute the same over the tract A, being moved from time to time as the work of reclamation or filling in progresses. So, too, as occasion demands, the basin first made for the reception of the mud may be abandoned and a new one excavated in another locality, the conveyer F being moved accordingly.

The advantages of this invention may be briefly summarized as follows: First, a method of economically disposing of the mud dredged from rivers, &c., is obtained; second, tracts of land which, owing to their native swampy condition, are practically valueless may be rendered profitable and capable of utilization; and, third, the expense incident to railway transportation of river-deposits is obviated,

and in its stead is substituted a cheaper and more efficient method of conveyance.

What I claim as my invention is—

1. The combination, with the basin D and bank B, of the endless carrier for conveying mud or alluvial deposit in the reclamation of low lands, as set forth.

2. The combination of a basin adapted for the reception of mud or alluvium discharged directly from scows or dredges with a bank, B, an inclined plane, D', and an endless con-

veyer, F, provided with scrapers or sweeps f', designed and operated to fill in and reclaim low lands, as set forth.

In testimony that I claim the foregoing I have hereunto set my hand this 29th day of April, 1879.

GEORGE HOWELL.

Witnesses:

SAML. J. VAN STAVOREN,
CHAS. F. VAN HORN.