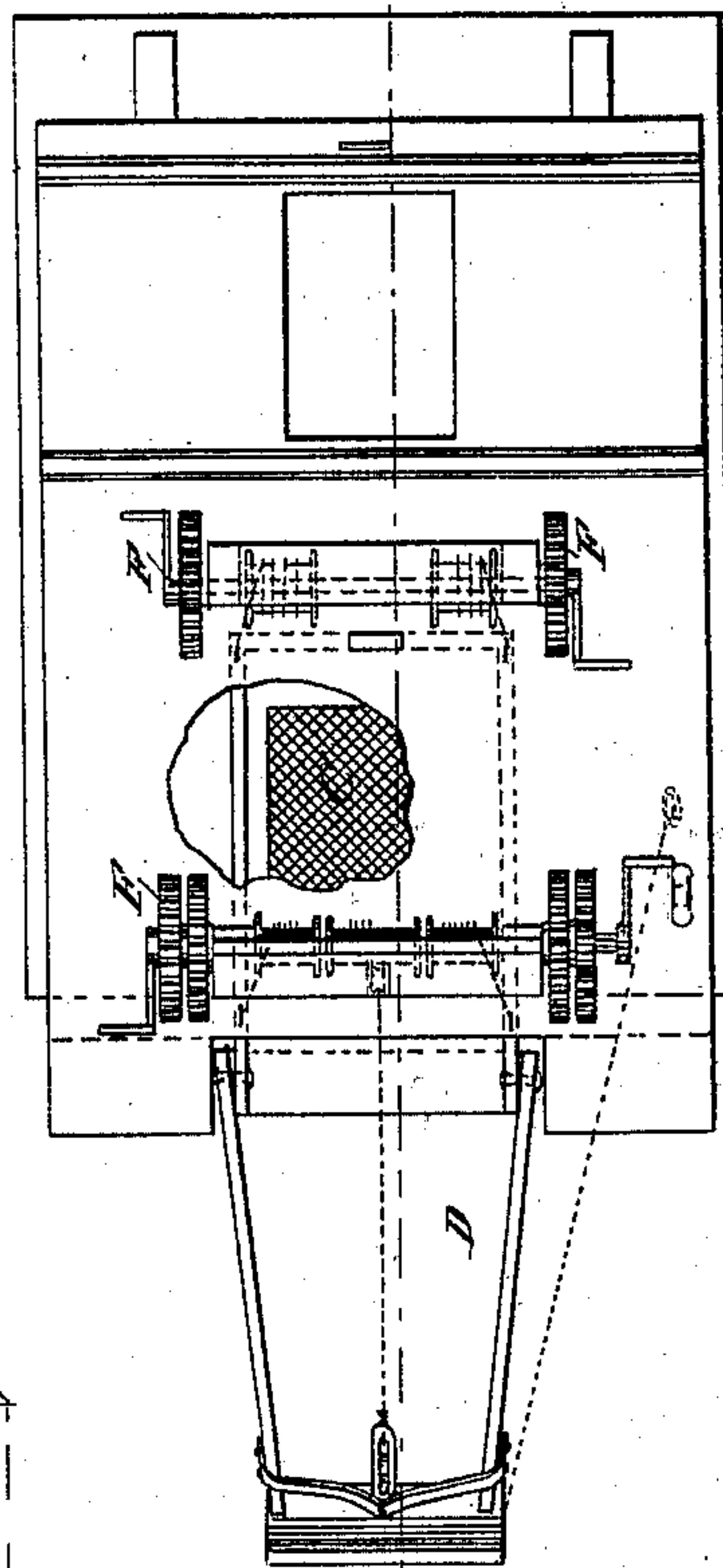
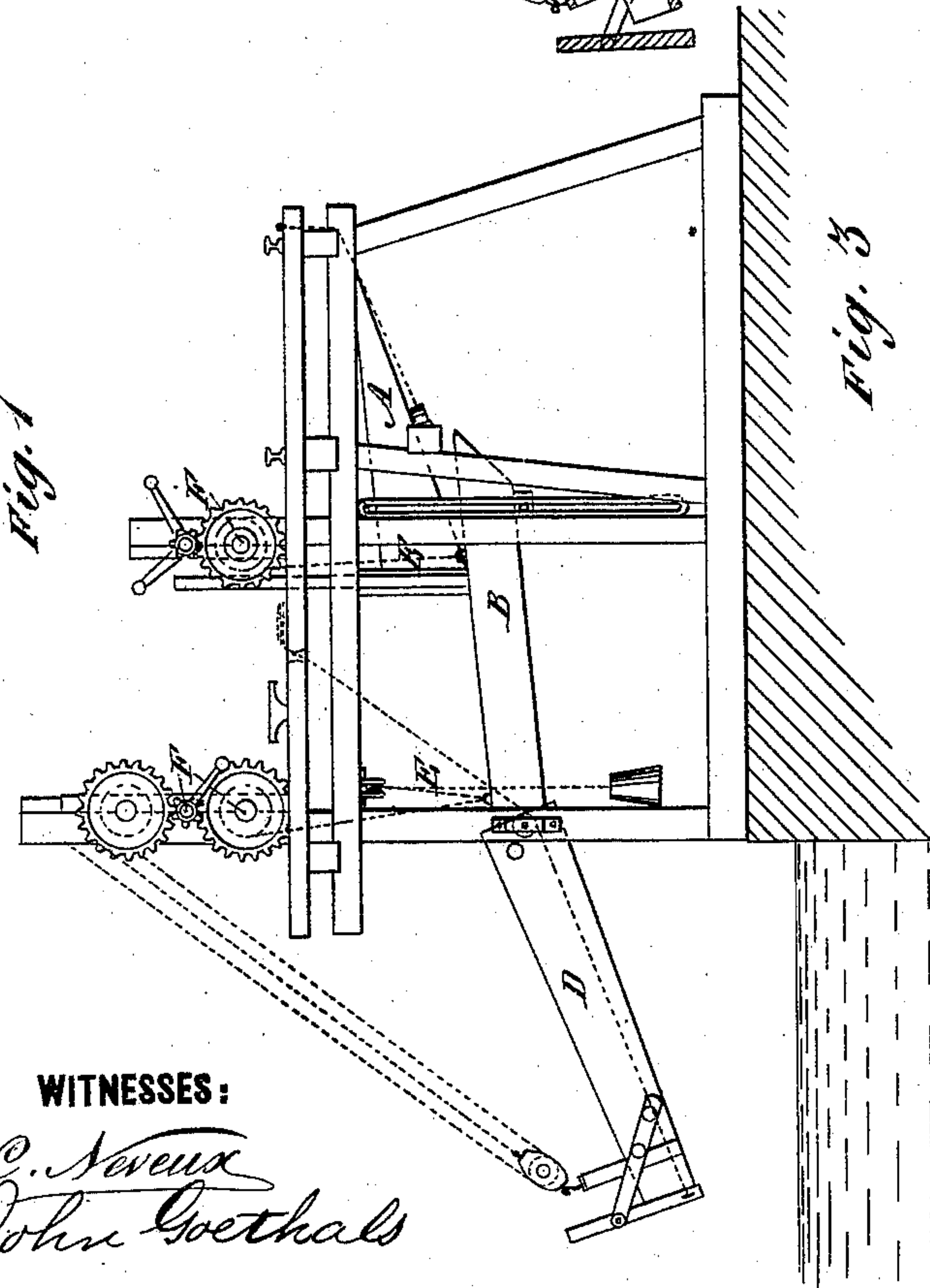
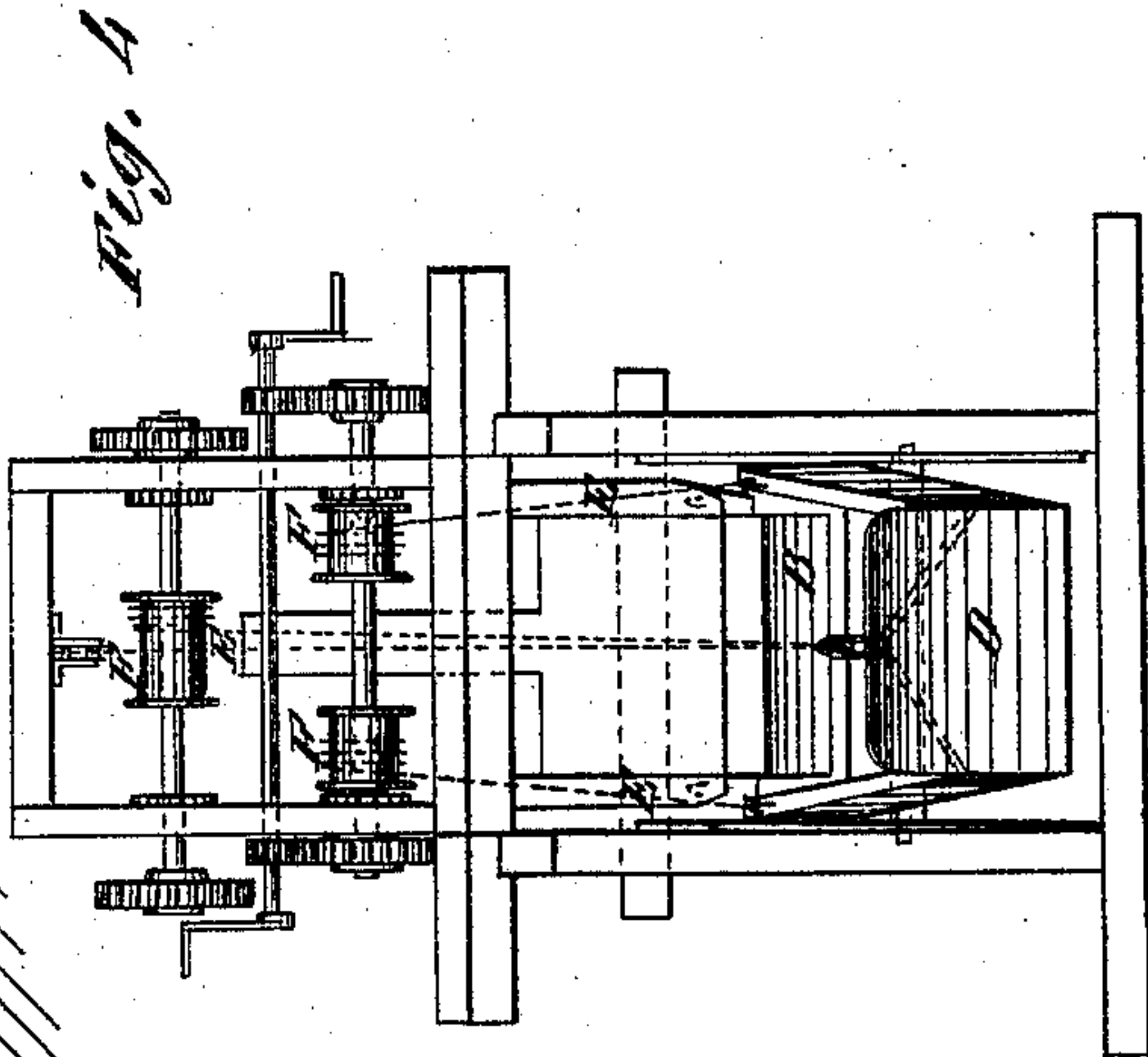
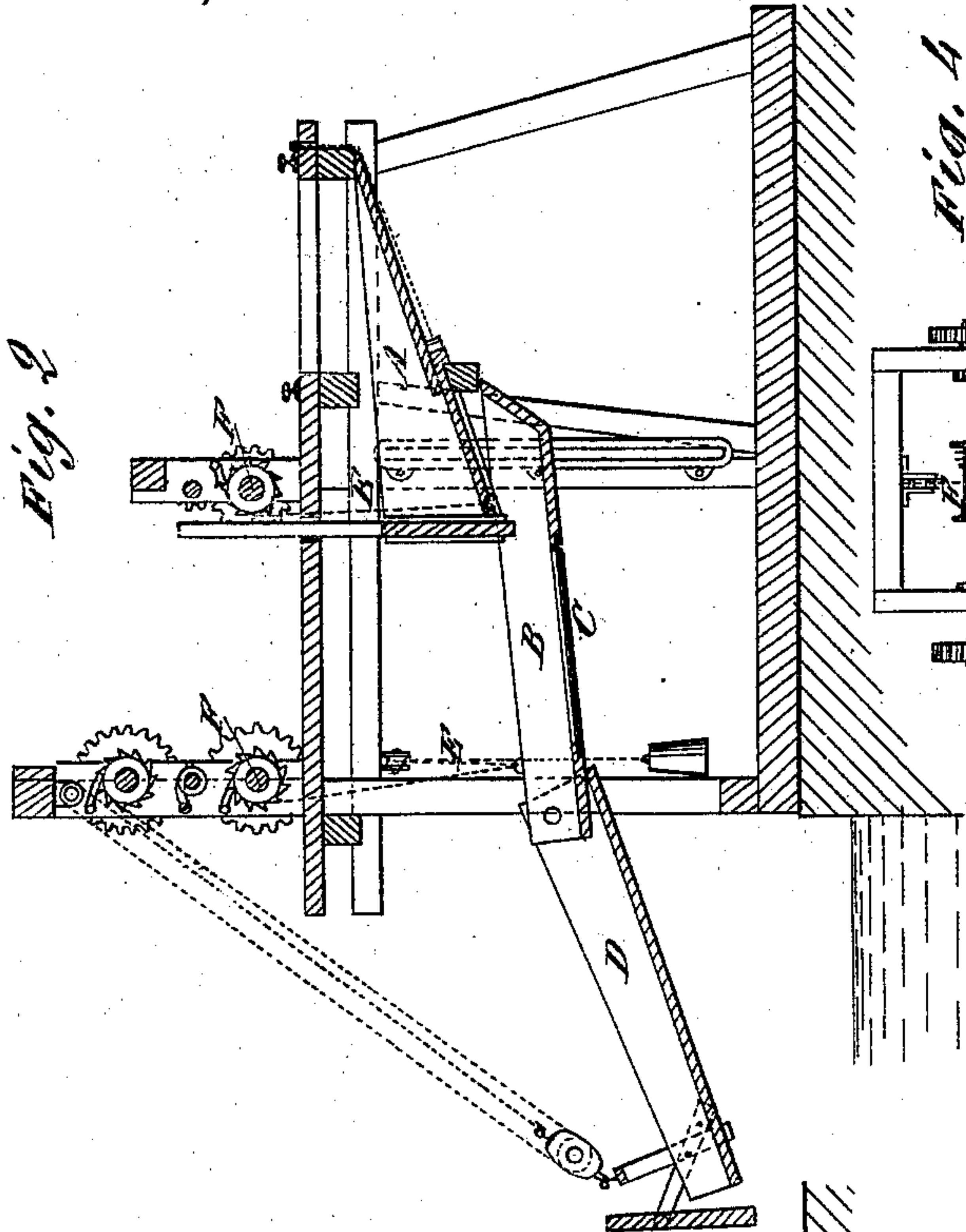


E. R. BULKLEY.

COAL-CHUTE.

No. 182,100.

Patented Sept. 12, 1876.



WITNESSES:

C. Severux
John Goethals

INVENTOR:

E. R. Bulkley

BY

Wm. H. L.

ATTORNEYS.

UNITED STATES PATENT OFFICE

EDMUND R. BULKLEY, OF PERTH AMBOY, NEW JERSEY.

IMPROVEMENT IN COAL-CHUTES.

Specification forming part of Letters Patent No. **182,100**, dated September 12, 1876; application filed March 6, 1876.

To all whom it may concern:

Be it known that I, EDMUND R. BULKLEY, of Perth Amboy, in the county of Middlesex and State of New Jersey, have invented a new and Improved Coal-Chute, of which the following is a specification:

The invention relates to coal-chutes for loading vessels; and it consists in the combination, with an adjustable discharging-chute section and the feeding-bin, of an adjustable intermediate or upper chute-section having a sieve bottom for sifting out the fine coal as it passes from the bin, and for preventing a too violent fall of the coal into the hold of the vessel, as will be hereinafter more fully described.

Figure 1 is a side elevation of my improved coal-chute. Fig. 2 is a longitudinal sectional elevation. Fig. 3 is a plan view. Fig. 4 is a front elevation.

A is the bin containing the coal; B, the upper portion of the chute containing the screen C, and D is the lower portion of the chute.

Heretofore only the lower portion D has been made to rise and fall, the upper portion being made stationary, and being necessarily located high enough for chuting the coal into vessels at high-water; consequently, the fall from part D into the hold at low-water is so

great that the coal breaks up badly, and as there is no way of separating the fine particles the coal goes to market in that state, which sometimes considerably depreciates the value. I therefore propose to make the upper part B adjustable also, so that the fall will mainly occur from the bin into the chute, striking on the close bottoms above the screens, and then passing over it and sifting out the broken pieces, after which the descent into the hold through the lower part is so gentle that but little breakage occurs.

The hoisting and lowering of the part B will be effected by ropes or chains E and gear F, of any approved arrangement, the same as are employed for the other parts.

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

The combination, with feeder A and the discharge D, of the sifter-section B, movable to a higher or lower position at both ends, thereby causing the fall and breakage of coal before the latter passes the sifter.

EDMUND R. BULKLEY.

Witnesses:

CHAS. P. BROOKS,
D. D. BRODHEAD, Sr.