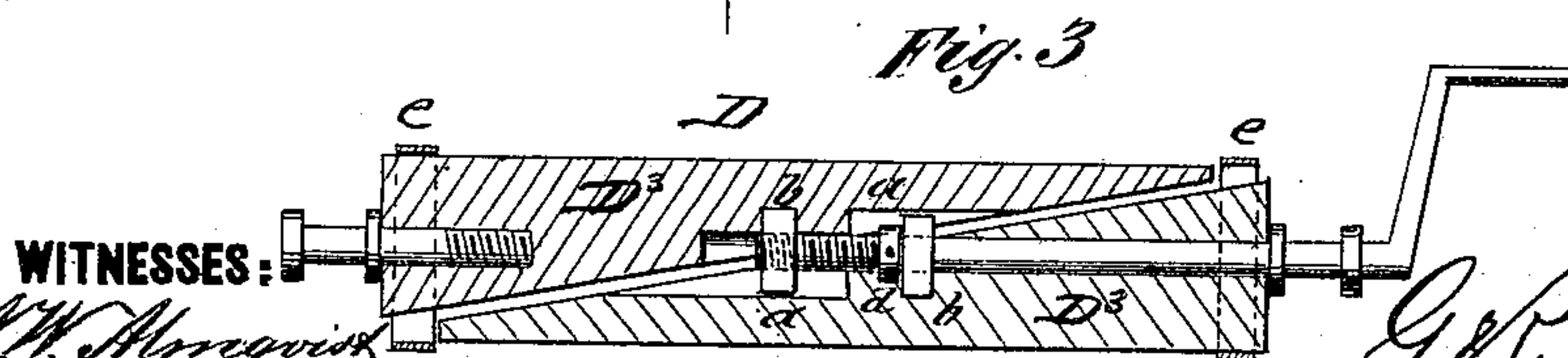
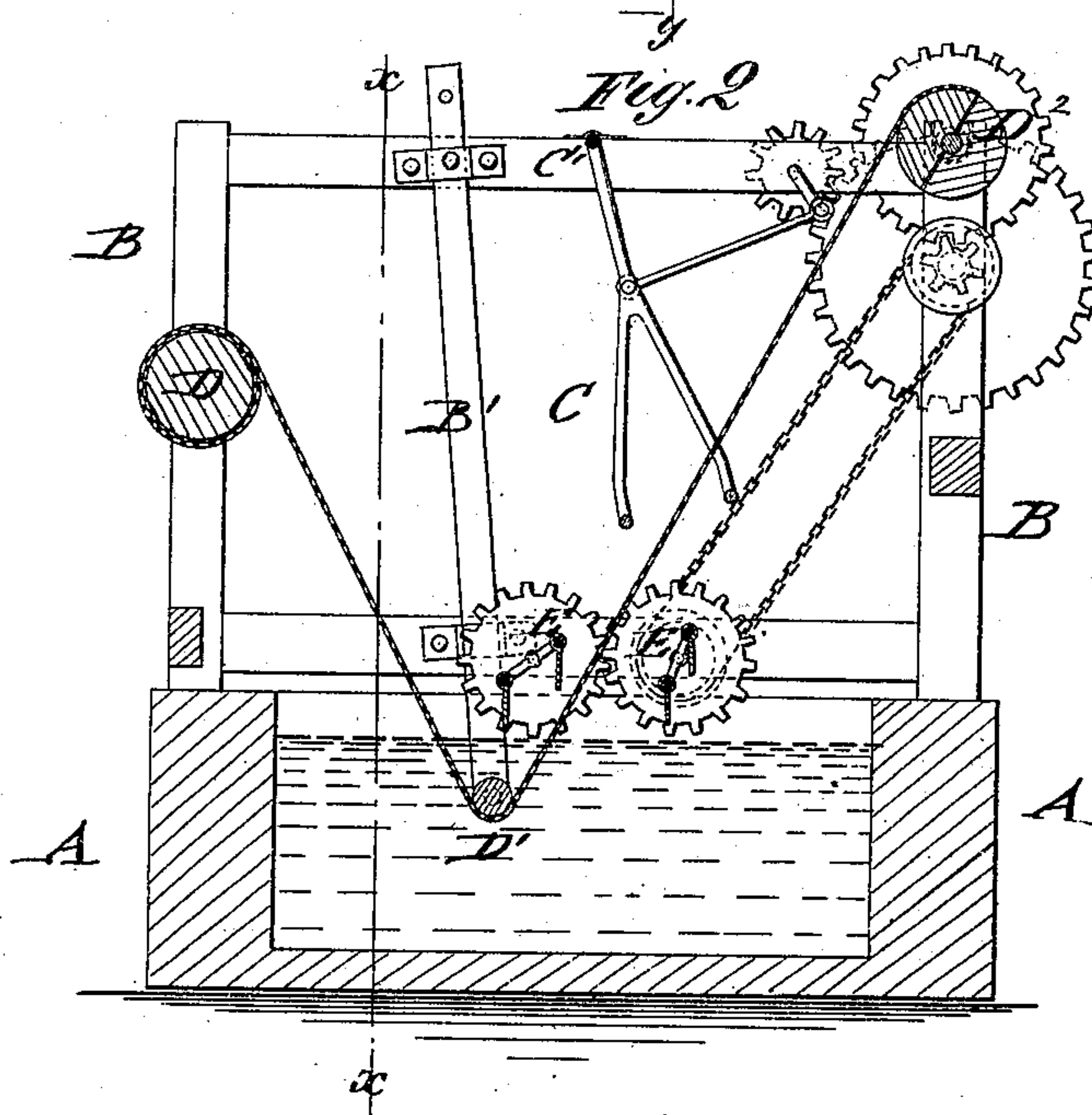
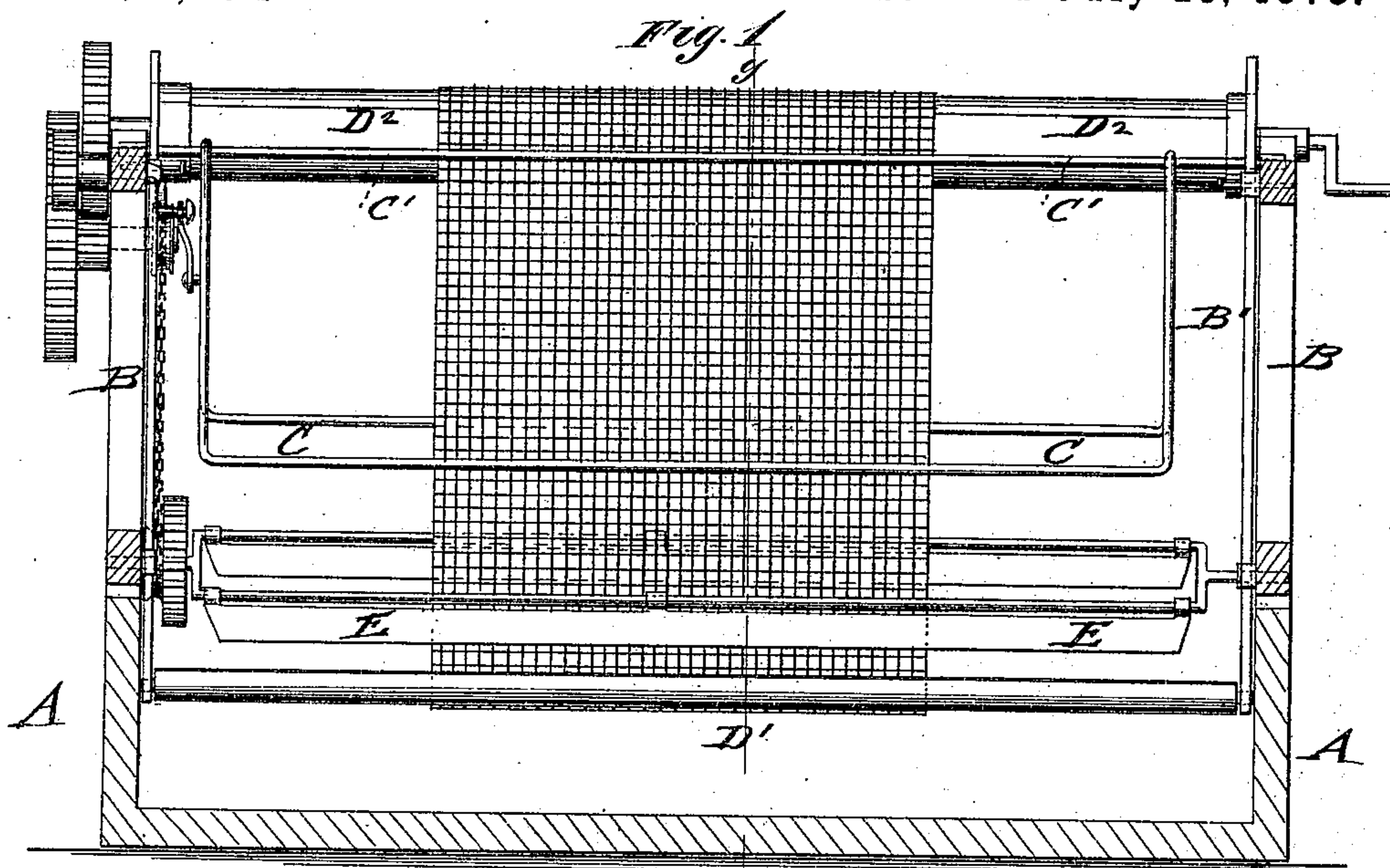


G. R. ACHESON.
GALVANIZING MACHINE.

No. 180,182.

Patented July 25, 1876.



WITNESSES:

A. W. Montgomery
John Goethals

INVENTOR:

G. R. Acheson

BY

Mumford

ATTORNEYS.

UNITED STATES PATENT OFFICE.

GEORGE R. ACHESON, OF PHILADELPHIA, PENNSYLVANIA.

IMPROVEMENT IN GALVANIZING-MACHINES.

Specification forming part of Letters Patent No. **180,182**, dated July 25, 1876; application filed May 22, 1876.

To all whom it may concern:

Be it known that I, GEORGE R. ACHESON, of the city and county of Philadelphia, and State of Pennsylvania, have invented a new and Improved Galvanizing-Machine, of which the following is a specification:

In the accompanying drawing, Figure 1 represents a vertical longitudinal section of my improved galvanizing-machine, taken on line *x x*, Fig. 2. Fig. 2 is a vertical transverse section of the same on line *y y*, Fig. 1; and Fig. 3, a detail vertical central section of the detachable roller on which the wire-cloth is wound.

Similar letters of reference indicate corresponding parts.

The invention relates to an improved machine for galvanizing or painting wire-cloth in such a manner that no surplus metal, liquid, or paint remains on the cloth, that no scum is taken up by the same, and, finally, the winding-up roller may be easily removed from the wire-cloth after the galvanizing or painting process is completed.

The invention consists of a machine with rollers for tightening the wire-cloth while passing through the galvanizing or painting liquid. Suitable skimmers and beaters are arranged in connection with the cloth at both sides of the same, to secure the regular tinning or painting. A sectional and diagonally-jointed winding-up roller serves for being readily taken out of the cloth.

In the drawing, A represents a receptacle for the galvanizing or painting liquid, on which is supported a suitable frame-work, B, to which the different operating parts are applied. The wire-cloth is guided over tightening-rollers D¹ D², of which the front one, D, serves to guide the cloth from the roll to a lower roller, D¹, that is submerged in the galvanizing-liquid, and adjusted therein by sliding supporting-rods B' of frame B to greater or less depth, according to the quantity of liquid in the receptacle and the degree of stretching or tightening required.

The wire-cloth passes from the lower roller D¹ to the upper roller D², to which it is securely clamped to be wound upon the same.

The upper roller D² is revolved by a crank in top bearing of frame B, and made of two diagonally-separated sections, D³, that are

connected by interior recesses *a*, a fixed screw-nut, *b*, and the threaded end of the roller-shaft having a collar, *d*, as shown in detail in Fig. 3.

By turning the roller-shaft in one direction, the diagonal sections D³ are screwed together, and firmly retained by end hoops or bands *e* at the ends of the sections D³. By turning the shaft in opposite direction, the sections may be detached and readily taken out of the roll of wire-cloth wound around the same. The sectional roller D² is, for this purpose, taken out of the bearings of frame B, and slipped out of the cloth, leaving it in perfect shape.

The top roller D² actuates, by gear-wheels and crank-rod connection, the swinging reciprocating beaters C, which are hung to a top rod, C', striking alternately on each side of the wire-cloth after the same has left the liquid. The sudden and quick action of the beaters frees the wire-cloth of all surplus liquid or paint, and keeps the meshes open, so that the uniform galvanizing of the wire-cloth in economical manner is produced.

The skimmers E are operated by intermeshing wheels and pulley and belt or chain connection with the gear-wheels of the winding-up roller D². They are made of swinging plates, that are hung to revolving arms or endless belts, or similar devices, as desired. The skimmers enter the liquid at both sides of the wire-cloth, and carry off any froth or scum that accumulates on the surface of the liquid, preventing the contact of the scum with the wire-cloth. The wire-cloth is thereby brought in contact with clear metal or paint in entering and leaving the liquid, and is thus galvanized or painted by mechanical means in a perfect, economical, and effective manner.

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

1. A machine for galvanizing or painting wire-cloth, consisting of rollers for guiding, tightening, and winding up the wire-cloth, in connection with reciprocating beaters and skimmers arranged at each side of the wire-cloth, substantially in the manner described, and for the purpose specified.

2. The winding-up roller D², made in two

diagonal sections, connected by interior recesses, fixed nuts, and threaded end of roller-shaft, as shown and described.

3. In a galvanizing-machine, the swinging reciprocating beaters, striking alternately each side of the wire-cloth to remove the surplus liquid, substantially as specified.

4. In a galvanizing-machine, the pendent

revolving skimmers, entering the liquid at both sides of the wire-cloth, to keep the same clear of scum, substantially as described.

GEORGE RANKIN ACHESON.

Witnesses:

JAMES H. KELLY,
M. H. PENNELL.