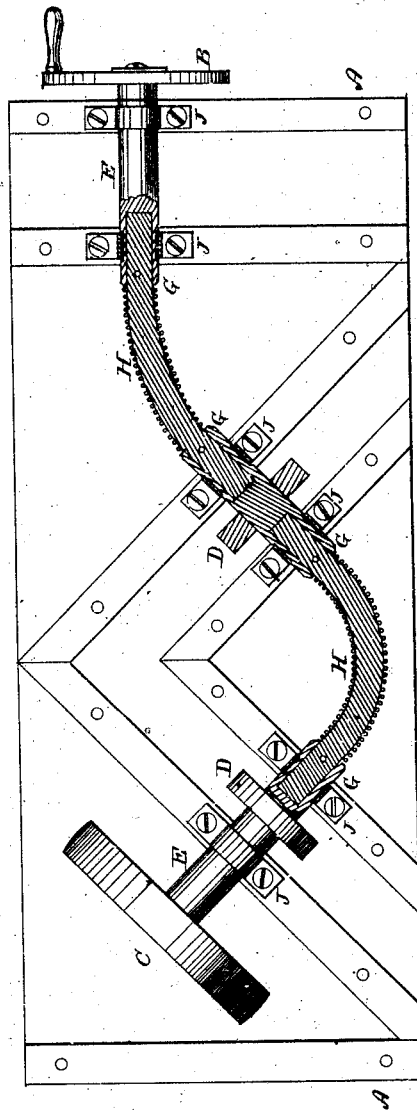


T. Welham,
Shaft Coupling,
No 46,166, *Patented Jan. 31, 1865.*



Witnesses
J. Franklin Reigart
L. Luchs

Inventor.
Thos Welham

*The drawing in this patent
is not in print.*

UNITED STATES PATENT OFFICE.

THOMAS WELHAM, OF WASHINGTON, DISTRICT OF COLUMBIA.

IMPROVEMENT IN UNIVERSAL SHAFTING.

Specification forming part of Letters Patent No. 46,166, dated January 31, 1865.

To all whom it may concern:

Be it known that I, THOMAS WELHAM, formerly of Nebraska, but now of Washington City, District of Columbia, have invented new and useful Improvements in Shafting, which I style "The Universal Shafting;" and I do hereby declare the following to be an exact description thereof, reference being had to the accompanying drawings, and to the letters of reference marked thereon, making a part of this specification.

The nature of my invention consists in a revolving shaft made of flexible material, so as to operate in various positions or at any curve for the purpose of driving machinery of all kinds.

To enable others skilled in the art to make and use my invention, I will proceed to describe its construction and operation.

A represents a base or frame upon which the revolving shaft rests so as to show its operation.

B represents a driving-wheel on the solid or stiff part of the shaft, and C a balance or fly wheel.

D D represent band wheels that are located also on the stiff or solid parts of the shaft E. These stiff, solid, or iron parts of the shaft

have socket-ends G in which the ends of the flexible portions H of the shaft are fastened permanently by rivets or otherwise. The flexible portions H of the continuous shaft E are made in sections of gum-elastic or rolled canvas or any other flexible material, either lapped or braided, either hollow or solid, so that the shaft can be operated in any position, either vertical, horizontal, curved, or at any angle. These sections and flexible parts of the shaft I surround on their outsides with wire of sufficient strength, according to the size and power of the shaft, and I wrap the wire in a coil on the outside or put layers of wire on the inside, for the purpose of strengthening the flexible material and to prevent it from twisting out of shape. The shaft, as a whole, operates in bearings J, as usual.

What I claim as my invention, and desire to secure by Letters Patent, is—

A revolving shaft made of flexible material, so as to operate in various positions or any curve, in the manner and for the purposes set forth.

THOS. WELHAM.

Witnesses:

J. FRANKLIN REIGART,
EDM. F. BROWN.