No. 621,736. Patented Mar. 21, 1899.

E. ATWOOD.

SWIFT OR REEL.

(Application filed Nov. 4, 1897.)

(No Model.)

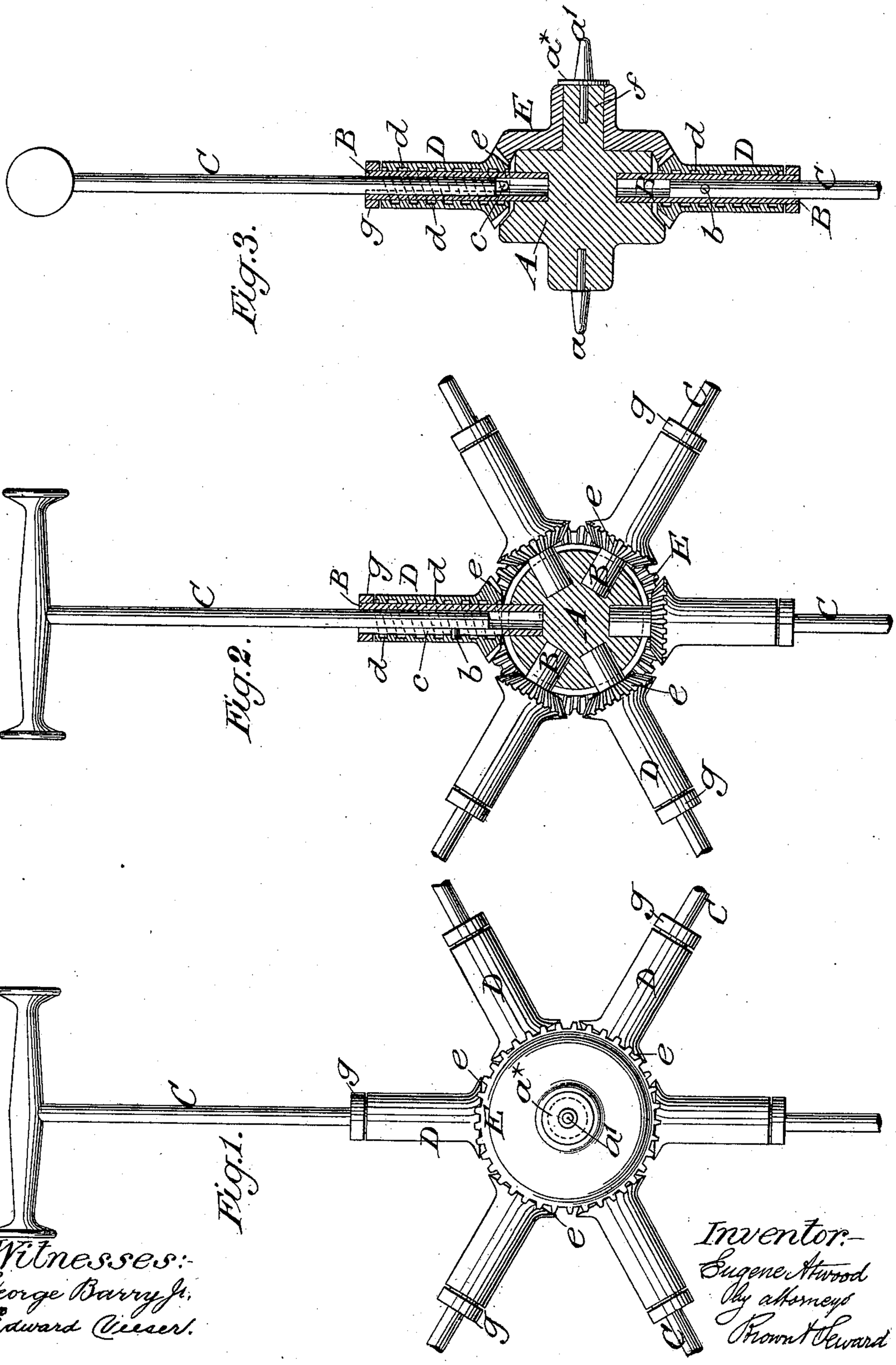

Fig. 3.

Fig. 2.

Fig. 1.

Witnesses:-
George Barry Jr.
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Inventor:-
Eugene Atwood
by attorneys
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UNITED STATES PATENT OFFICE.

EUGENE ATWOOD, OF STONINGTON, CONNECTICUT, ASSIGNOR, BY MESNE ASSIGNMENTS, TO THE ATWOOD-MORRISON COMPANY, OF SAME PLACE.

SWIFT OR REEL.

SPECIFICATION forming part of Letters Patent No. 621,736, dated March 21, 1899.

Application filed November 4, 1897. Serial No. 657,331. (No model.)

To all whom it may concern:

Be it known that I, EUGENE ATWOOD, of Stonington, in the county of New London and State of Connecticut, have invented a new and useful Improvement in Swifts, of which the following is a specification.

The object of the invention is to obtain a swift of simple construction in which all the arms while being prevented from turning may be adjusted simultaneously and correspondingly.

Figure 1 represents a side view of a hub and one of the arms and portions of the other arms of a swift embodying my invention. Fig. 2 is an opposite side view corresponding with Fig. 1, but partly in section. Fig. 3 represents an axial section corresponding with Figs. 1 and 2.

Similar letters of reference designate corresponding parts in all the figures.

A is the hub of the swift, which may be made of wood and is furnished with two central gudgeons *a a'*. This hub is furnished with fixedly-attached equidistant radial sockets B B, corresponding in number with the number of arms C of the swift, (six in the example represented,) the said arms being fitted to slide freely longitudinally and radially in said sockets and each of said arms being furnished with a pin or projection *b*, (see Figs. 2 and 3,) which works in a slot *c*, provided in one side of the socket, lengthwise thereof, for the purpose of preventing the turning of its arm C. Fitted to turn easily upon the exterior of each socket B is a sleeve D. This sleeve D is screw-threaded internally, as shown at *d d* in Figs. 2 and 3, and is furnished at its inner end with a bevel-gear *e*. The bevel-gears *e* are all geared with a bevel-gear E, which is fitted to turn upon a journal *f*, provided on the hub A. The sleeves are each confined lengthwise to preserve the engagement of its bevel-gear *e* with the bevel-gear E on the hub A by means of a collar *g*, fast on the outer end of its respective socket B. The pins or projections *b*, before mentioned, on the arms C pass through and protrude outwardly beyond the slots *c* in their respective sockets and enter the screw-threads *d* in their respective sleeves D. The bevel-gear E is kept up in gear with the bevel-gears *e* by means of a collar or flange *a** on the gudgeon *a'*, which is inserted tightly into the hub.

The entire swift, except the gudgeons and the pin *b*, may be made of wood, the sockets B being driven into the hub and glued therein and the collars *g*, which are put on after the sleeves, being glued to the ends of the sockets.

To adjust the several arms C, the gear E is taken hold of by hand and turned in one direction or the other, and thereby caused to turn the bevel-gears *e* and sleeve D in such manner that the screw-threads in the sleeves by their action on the pins or projections *b* of the arms C move the said arms together inward or outward. In this operation the collar *g* and the lower end of the slot *c* constitute stops to limit the movement of the arms in and out.

What I claim as my invention is—

In a swift, the combination of a hub having outwardly-projecting longitudinally-slotted sockets, arms fitted to said sockets and having lateral projections passing through and protruding outwardly beyond the slots of said sockets, internally-screw-threaded sleeves fitted to said sockets and receiving within their screw-threads the so protruding portions of said lateral projections, and gearing between said sleeves for the purpose of moving all simultaneously and correspondingly, substantially as herein described.

EUGENE ATWOOD.

Witnesses:
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