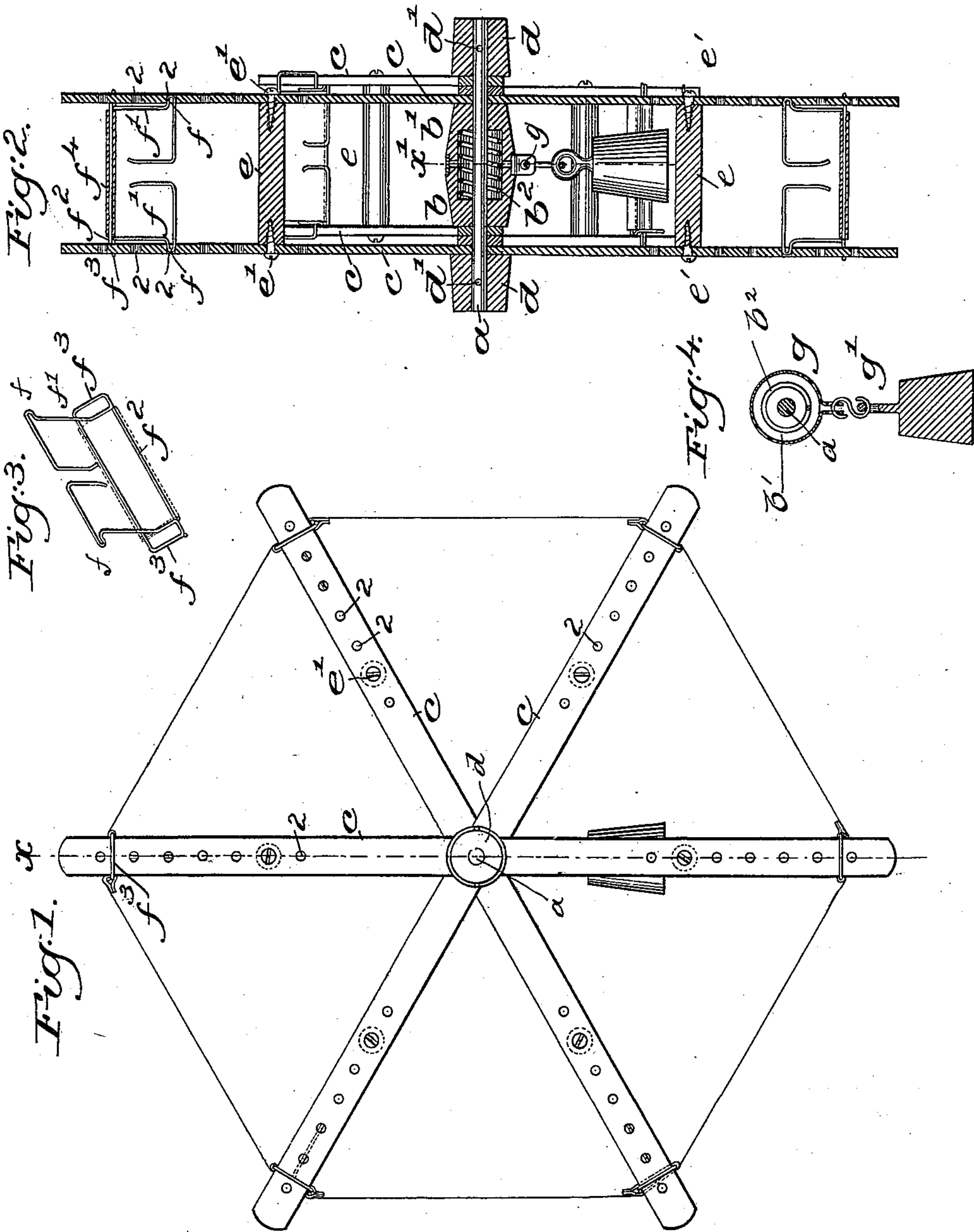


(No Model.)

J. W. FOSTER.
SWIFT OR REEL.

No. 554,620.

Patented Feb. 11, 1896.



Witnesses.

Louis N. Lowell
Edward F. Allen.

Inventor.

John W. Foster.
by Lewis S. Gregory, attys.

UNITED STATES PATENT OFFICE.

JOHN W. FOSTER, OF WESTFIELD, MASSACHUSETTS, ASSIGNOR TO THE
FOSTER MACHINE COMPANY, OF SAME PLACE.

SWIFT OR REEL.

SPECIFICATION forming part of Letters Patent No. 554,620, dated February 11, 1896.

Application filed June 12, 1893. Serial No. 477,263. (No model.)

To all whom it may concern:

Be it known that I, JOHN W. FOSTER, of Westfield, county of Hampden, State of Massachusetts, have invented an Improvement in Swifts or Reels, of which the following description, in connection with the accompanying drawings, is a specification, like letters and numerals on the drawings representing like parts.

10 The swifts or reels in common use present a series of wooden bars arranged between spiders, and the skein rests on these bars. In practice it frequently happens that the skein slips on these bars, to the injury of the thread.
15 To overcome this difficulty I have provided the swift with a series of friction-plates covered preferably with cloth or some suitable non-metallic substance—as, for instance, leather—which will not injure the thread. I
20 have also provided novel means for adjusting these plates to thus readily adapt the swift to a skein of any desired size.

Figure 1, in elevation, shows a swift or reel embodying my invention; Fig. 2, a section in the line x , Fig. 1; Fig. 3, a detail of one of the plates removed; and Fig. 4, a sectional detail in the line x' , Fig. 2.

The swift-axle a receives upon it a divided or two-part hub $b b'$, preferably suitably chambered (see Fig. 2) to receive a spring b^2 which acts normally to separate the halves of the hub. Next this hub the axle receives upon it loosely the individual spiders $c c$, and outside the spiders the axle has applied to it journals or blocks $d d$, which are fixed to the axle in suitable manner, as by pins d' . The spring b^2 acts to force the parts of the hub outwardly against the spiders, composed of bars, and thus clamp the spiders firmly. The bars of
35 the spider have a series of holes, as 2, and between the bars I have arranged at suitable distances cross-girths e , fastening them by screws e' . The holes 2 not occupied by the screws e' are adapted to receive the lugs f of

the locking devices f' , made as spring-arms, 45 said locking devices being attached to the bars f^2 . (Shown as composed of wire and as having end loops f^3 to fit over the bars c .) The bars are enveloped by the friction-surface f^4 , preferably cloth, and preferably the bar is 50 about one-half of an inch wide, so as to enable the friction-surface to present a face of some width, which acting against the skein will create sufficient friction against the thread of the skein to prevent the skein slipping on the 55 swift.

To provide a drag or friction to prevent the swift running faster than required for the proper delivery of the thread, I have encircled the hub by a strip g , preferably of metal, 60 on which is hung a suitable weight g' .

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

1. A swift or reel having an axle, spiders 65 composed of a series of bars loosely mounted upon the axle, an expansible hub which by its expansion separates and holds the spiders against journals secured to the axle outside the spiders, and skein-supports having broad 70 flat faces provided with friction-surfaces and having locking devices to engage the spiders, substantially as described.

2. A swift or reel having spiders composed of a series of bars loosely mounted on the axle, 75 a two-part spring-expanded central hub also loose on the axle, and journals secured to said axle outside the spiders, said spring pressing both parts of the said hub one away from the other and against the inner sides of the inner 80 arms of the spiders, substantially as described.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

JOHN W. FOSTER.

Witnesses:

LOUISE ELLIOTT,
A. F. LILLEY.