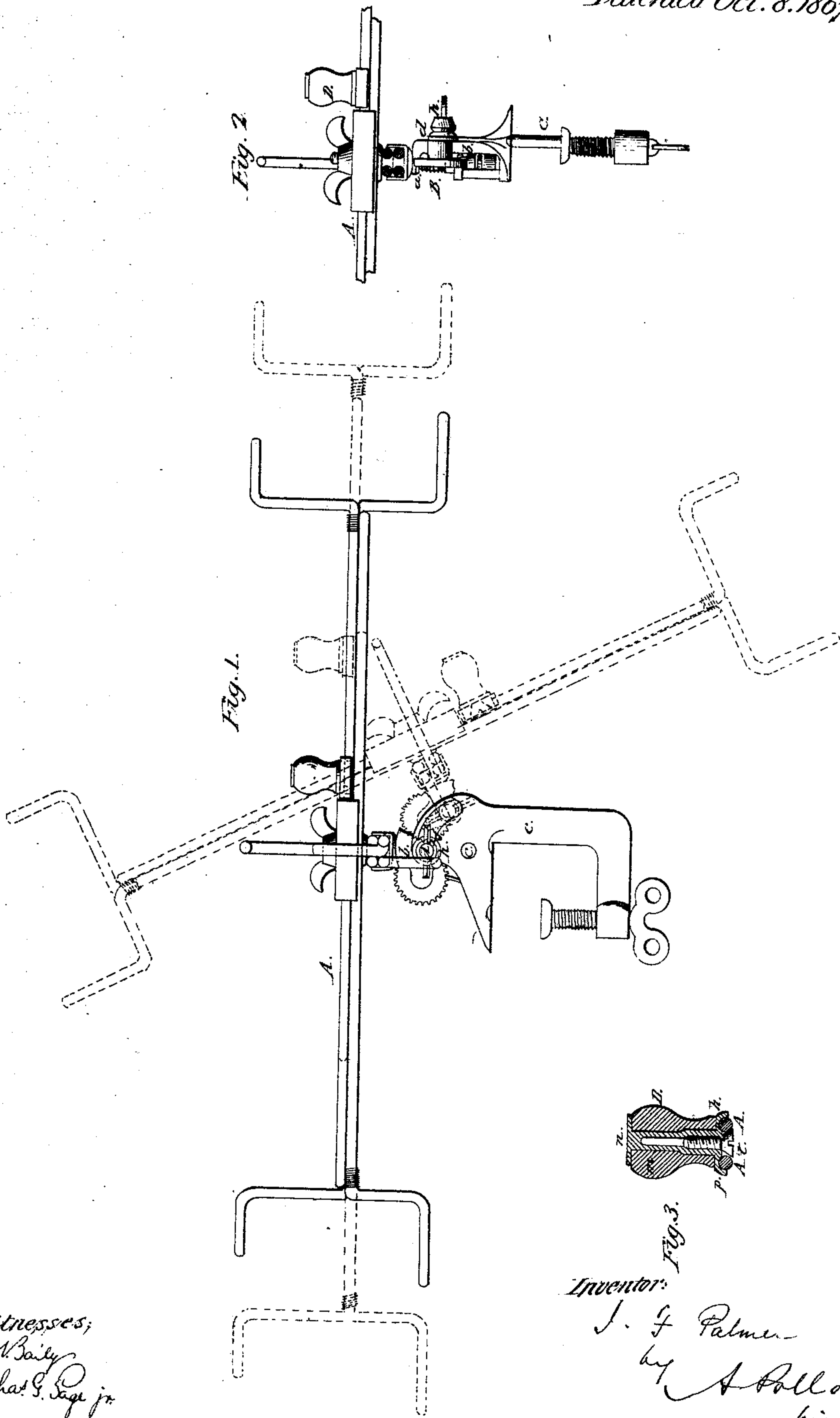


J. F. Palmer, Reel.

Nº 69,579.

Patented Oct. 8. 1867.



Witnesses;
W. Bailey
Chas. S. Sage jr.

Inventor: J. F. Palmer
by A. Pollak
his atty.

United States Patent Office.

JOSIAH FOREMAN PALMER, OF AUBURN, NEW YORK.

Letters Patent No. 69,579, dated October 8, 1867.

IMPROVEMENT IN REELS.

The Schedule referred to in these Letters Patent and making part of the same.

TO WHOM IT MAY CONCERN:

Be it known that I, JOSIAH FOREMAN PALMER, of Auburn, in the county of Cayuga, and State of New York, have invented certain new and useful Improvements in Silk or Thread-Reels or Swifts; and I hereby declare the following to be a full, clear, and exact description of the same, reference being had to the accompanying drawings, in which—

Figure 1 is a side elevation of a reel with my improvements applied.

Figure 2 is a rear elevation of the same, and

Figure 3 is a vertical section through the adjustable knob or handle.

The principal object I have in view in my present invention is to enable the arms of reels or swifts to be tilted or set at angles, so that the plane of their revolution may be either vertical or horizontal, or at any intermediate angle. To accomplish this object I mount the spindle, which carries the reel, in a plate or other suitable support, which is pivoted to the clamp or stationary part of the apparatus, and is adjusted to different angles by means of a thumb-nut and screw passing through a slot formed in the stationary frame. When the nut is loosened the arms may be tilted or inclined to any angle desired, in which position they can be held by turning the nut so as to tighten its hold upon the frame. An apparatus thus constructed can be used either as a reel or as a swift, and the operator is enabled to adjust it to the position in which it may be worked most expeditiously and conveniently. My invention further consists in the combination with the arms of the reel of an adjustable knob or handle for rotating the same, which may be secured at any point upon the arm.

To enable those skilled in the art to fully understand and use my invention I will proceed to describe the manner in which the same is or may be carried into effect by reference to the drawings accompanying and forming part of this specification.

The reel shown in the drawings, so far as concerns the arrangement of the extensible arms A and centre spindle B, upon which they revolve, is substantially the same as that for which Letters Patent of the United States were issued to S. W. and J. F. Palmer on the 15th May, 1860, to which reference may be made for a description of this portion of the apparatus. On referring to that invention it will be seen that the spindle revolves in bearings, which are immovably fixed to the clamp or mechanism for holding the reel in operative position, and that the tilt or angle of inclination of the arms cannot be changed without moving in a similar manner and to a like degree all other parts of the apparatus. And the same thing may be said of other reels, none of them, so far as I know, having an adjustable connection between the reel proper and the clamp or other supporting mechanism. In order to admit of the reel being adjusted, as hereinbefore specified, I mount the spindle B in bearings formed in lugs *a* projecting from a plate, *b*. This plate is pivoted to the clamp C at *c*, and carries near its upper end, on the side contiguous to the clamp, a pin, *d*, which projects through a segmental slot, *f*, of suitable size, formed in the upper part of the clamp, the curve of the slot being that of a circle, of which the pivoted point *c* is the centre. The pin *d* is screw-threaded, and upon the end which projects through the slot a thumb-nut, *h*, is fitted, which, when screwed down upon the pin *d*, is pressed against that part of the clamp surrounded by the slot. If desired, a disk or washer, *k*, may be interposed between the nut and the clamp, in order that the two may be more firmly held together.

From the foregoing description it will be seen that the plate *b*, and consequently the spindle and arms which it carries, may be set at any desired angle with respect to the clamp or stationary part of the apparatus. When the clamp is fastened to a table, for instance, the plate *b*, moving on its pivot *c*, can be placed at any desired angle, its movement being only limited by the length of the slot *f*, in which the screw-pin *d* slides. When the arms are adjusted to the proper position they are readily maintained therein by turning the thumb-nut *h* so as to screw it down upon the pin *c*, and until it is pressed tightly against the clamp, by which means the plate *b* and clamp are firmly united together, as shown in fig. 1, where the arms are shown in two positions. In order to hold the spindle in its bearings, no matter at what angle of inclination the arms may happen to be, I place it between jaws O, which project from the plate, and fit between two flanges *s*, formed around the spindle. By this means it is held securely in place, the jaws and flanges preventing it from becoming disengaged from the lower socket *a*, no matter at what angle the plate *b* is set. Other means, however, which will readily suggest themselves, may be employed for this purpose.

The mechanism I have described for the adjustment of the arms is as well adapted for use with reels of ordinary combination as with the one shown in the drawings in illustration of my invention, and can be readily applied to such reels, it being only necessary to connect, in the manner substantially as hereinbefore described, the stem or spindle which carries the reel with the clamp, or frame, or other device for supporting and holding in place the same. The knob or handle D, which is attached to one of the arms A, and is used to revolve the reel in winding the thread or silk, is made capable of being adjusted to different positions nearer to or further from the centre of motion x of the arms. It consists of a knob, m , of wood or other suitable material, which revolves upon a stem or spindle, n , cored out at its lower end, and having attached to it a clamp, p , which is of suitable form to fit the arm A upon which it is placed. The hollow portion of the stem n has a screw-thread cut upon its interior, engaging with a screw, t , which passes up through the clamp, and in the interval or space between the two parallel pieces of which each arm A is composed. The head of the screw is of greater diameter than the width between the two pieces, so that when the screw passes up into the hollow stem the head will become wedged tightly between the pieces, and so hold the clamp p , and consequently the knob, firmly in any desired position. The head at the same time passes between the pieces a sufficient distance to prevent it from interfering with the lower arm A. By this means, no matter to what length the arms are extended or contracted, the knob may be always kept at any required distance from the axis x . By loosening the screw t it may be moved to any point upon the arm, and then maintained in such position by turning the screw so as to tighten its hold upon the arm.

Having described my invention, and the manner in which the same is or may be carried into effect, what I claim, and desire to secure by Letters Patent, is—

1. The combination of a reel or swift with the pivoted adjustable plate and clamp or frame for supporting the same, so that the said reel or swift may be tilted or adjusted to different angles of inclination with respect to the said clamp or frame, substantially as and for the purposes set forth.

2. The combination, with the slotted clamp or holding-frame, of the adjustable plate for supporting the spindle, and the screw and thumb-nut for adjusting and holding the said plate in position, substantially in the manner and for the purposes specified.

3. The combination, with the arms of a reel or swift, such as described, of a knob or handle, constructed and arranged as specified, so as to be adjusted and held at any desired point upon the said arms.

In testimony whereof I have signed my name to this specification before two subscribing witnesses.

JOSIAH FOREMAN PALMER.

Witnesses:

HORACE T. COOK,

JOHN J. SHEPHERD.