No. 821,999. PATENTED MAY 29, 1906

H. B. FROST & A. B. VAN RIPER.

COMBINED SWIFT AND SUPPORT THEREFOR.

APPLICATION FILED NOV. 19, 1904.

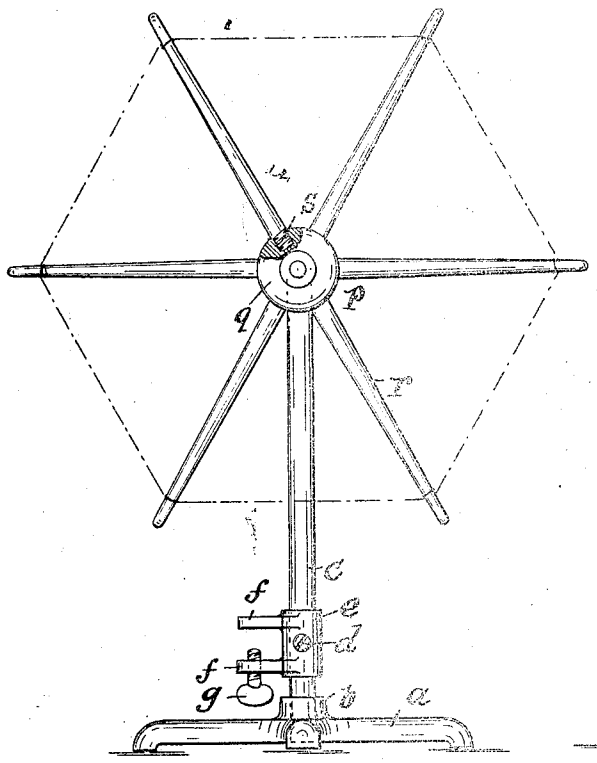


Fig. 1.

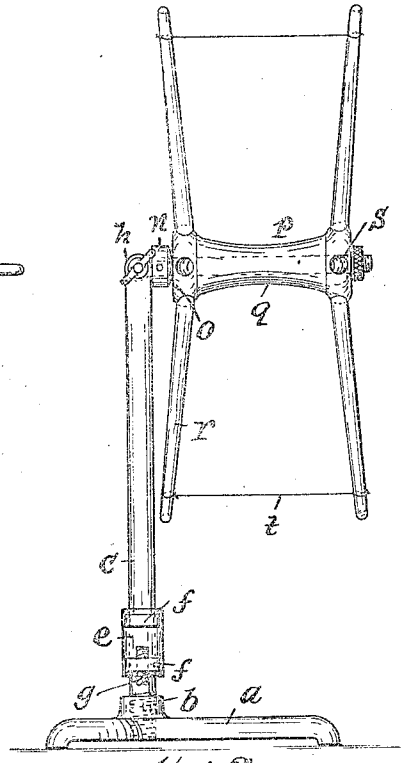


Fig. 2.

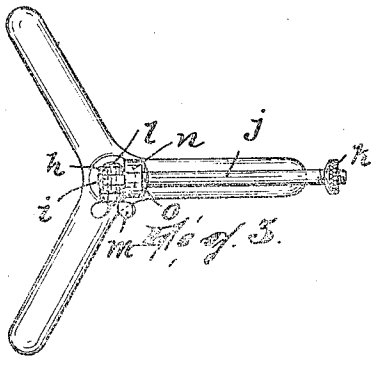


Fig. 3.

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UNITED STATES PATENT OFFICE.

HARRY B. FROST AND ANTHONY B. VAN RIPER, OF PATERSON, NEW JERSEY.

COMBINED SWIFT AND SUPPORT THEREFOR.

No. 821,999. Specification of Letters Patent. Patented May 29, 1906.

Application filed November 19, 1904. Serial No. 233,463.

To all whom it may concern:

Be it known that we, HARRY B. FROST and ANTHONY B. VAN RIPER, citizens of the United States, residing in Paterson, in the county of Passaic and State of New Jersey, have invented certain new and useful Improvements in Combined Swifts and Supports Therefor; and we do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to letters of reference marked thereon, which form a part of this specification.

The present invention, which constitutes certain improvements in swifts, has for its object to provide a swift which is adapted both for use in factories and mills and also domestic use.

Its principal object is to so contruct the swift and its support that the swift can be adjusted to any angle and so that the whole can be taken apart and packed in comparatively small compass for shipping or storing away.

In the accompanying drawings, Figure 1 is a front view of the improved swift and support. Fig. 2 is a side view thereof, and Fig. 3 is a plan view of the support alone.

In said drawings, *a* is a three-footed base into a socket *b* on which is screwed an upright *c*. On this upright is adjustably fastened, by means of a set-screw *d*, a bracket comprising a sleeve *e*, receiving said upright, and two parallel arms *f*, one of which has a clamping-screw *g*.

Thus the upright *c* is adapted to either rest on its base *a* or upon removing the base to be clamped, by means of the bracket, to a bench or table the edge whereof will be received by the arms *f* and held therein by the clamping-screw *g* at the desired height, owing to the adjustability of sleeve *e*.

The upper end of the upright *c* is forked, as at *h*, and receives the flattened end *i* of a spindle *j*, having a thumb-nut *k* screwed onto the end thereof. For clamping the flattened end in the fork portion of the upright we provide a screw *l*, having a thumb-nut *m*. Adjacent the flattened end *i* of said spindle there is a shoulder *n*, whose face toward the bearing portion of the spindle is convex, as at *o*, and whose opposite face is adapted to abut against the upright to limit the pivotal movement of the spindle, and thus prevent the arms *r* from interfering with the upright *c*.

p is the swift. This comprises a hub *q* and pairs of arms *r*, which are screwed into the hub, as at *s*. Said arms are connected in the usual manner by cords *t* or other means, on which to place the skeins of yarn or thread. By providing the convex face *o* on the shoulder *n* the nut *k* can be screwed relatively snugly against the end of hub *q*, so that while there is no lost motion there is also comparatively little friction. As thus constructed the swift can be taken apart and packed in small compass by removing the upright, from its base *a* or the bracket, (or both of them, should both be attached,) uncoupling the spindle from the upright, where it is held by the screw *l*, removing the swift from the spindle by first removing nut *k*, and then unscrewing and detaching the arms *r* of the swift.

Having thus fully described our invention, what we claim as new, and desire to secure by Letters Patent, is—

1. The combination of an upright, a spindle carried by said upright, and pivoted thereto to swing in a vertical plane, a swift journaled on said spindle, a shoulder adjacent one end of said spindle adapted to abut against said upright to limit the pivotal movement of said spindle and having the face thereof toward the swift convex, and a nut screwed on the other end of said spindle and coöperating with said shoulder to limit axial movement of the swift, substantially as described.

2. In a combined swift and support therefor, the combination of a swift, an upright, a spindle carried by said upright, said swift being journaled on the spindle, and a sleeve secured on said upright for adjustment longitudinally thereof and carrying clamping-arms, substantially as described.

In testimony that we claim the foregoing we have hereunto set our hands this 18th day of November, 1904.

HARRY B. FROST.
ANTHONY B. VAN RIPER.

Witnesses:
ALFRED GARTNER,
ROBERT J. POLLITT.