No. 810,254. PATENTED JAN. 16, 1906.

H. BORNEMAN.

CLIMBING APPARATUS.

APPLICATION FILED APR. 21, 1905.

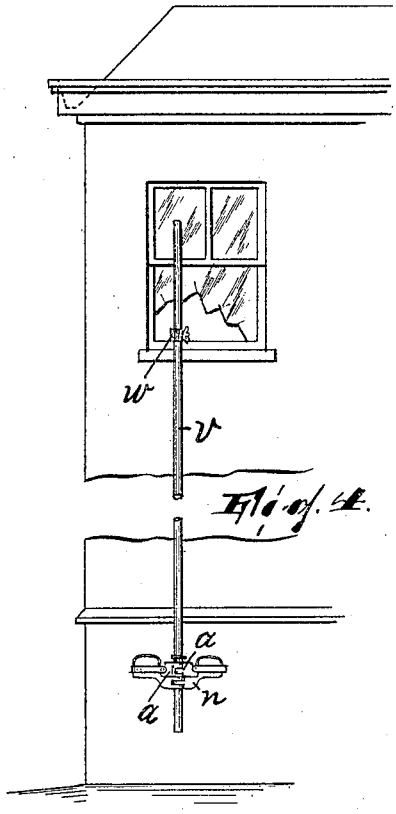


Fig. 4.

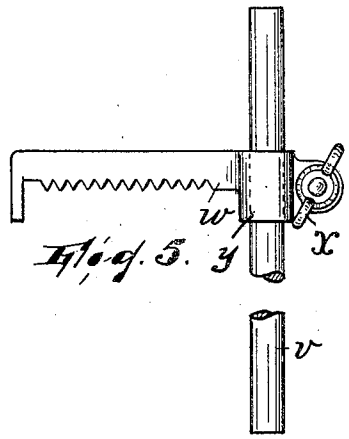


Fig. 5.

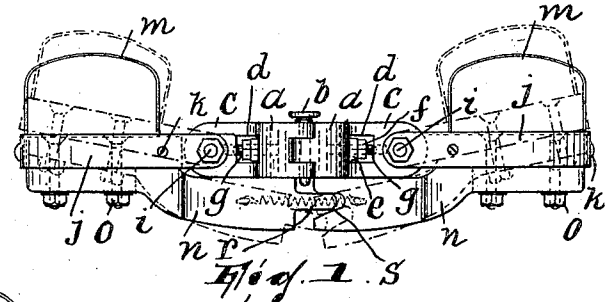


Fig. 1.

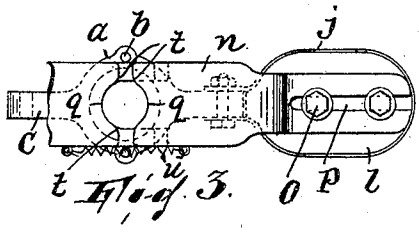


Fig. 3.

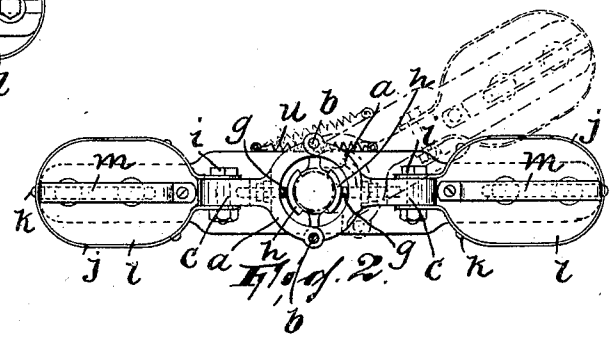


Fig. 2.

WITNESSES:

Wm. D. Bell

Adele Glatt.

INVENTOR,

Henry Borneman,

BY

Gartner & Howard.

ATTORNEYS.

UNITED STATES PATENT OFFICE.

HENRY BORNEMAN, OF PATERSON, NEW JERSEY.

CLIMBING APPARATUS.

No. 810,254. Specification of Letters Patent. Patented Jan. 16, 1906.

Application filed April 21, 1905. Serial No. 256,712.

To all whom it may concern:

Be it known that I, HENRY BORNEMAN, a citizen of the United States, residing in Paterson, county of Passaic, and State of New Jersey, have invented certain new and useful Improvements in Climbing Apparatus; and I 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.

This invention relates to apparatus for use in climbing poles, ropes, and the like; and it consists in certain improvements in apparatus of this kind having for their principal objects to insure the perfect action of the gripping members, to make the parts adjustable, so as to fit the various sizes of poles, ropes, &c., and to provide for applying the apparatus without having to pass it over the end of the rope, pole, &c.

In the accompanying drawings, Figure 1 is a side view of the apparatus. Fig. 2 is a top plan view. Fig. 3 is an underneath plan view. Fig. 4 shows the apparatus applied to a special pole which may be used in connection therewith, and Fig. 5 is an enlarged side view of the pole.

The apparatus is characterized by a guiding member, through which the pole, rope, or the like extends in such manner that said guiding member has free movement thereon and two coacting gripping members which are pivoted in the guiding member. The guiding member, according to my invention, comprises two semicircular parts *a a*, normally connected in circular disposition by removable pins *b b*. Either of these pins when removed permits the parts *a a* to swing on the other pin *b* to a position such as shown in dotted lines in Fig. 2, so that the guiding member is open to receive the rope, pole, &c.

Extending diametrically from the parts *a a* are integral lugs *c c*. In each of these is formed an opening *d*, in which is a nut *e* and a lock-nut *f* on the threaded stem *g* of a curved block *h*. It is not essential that the parts *e*, *f*, *g*, and *h* be provided; but if they are it would be obvious that the blocks *h* then form the guides proper for the pole, rope, &c., and are adjustable, so that the apparatus may be fitted to different sizes of poles, ropes, &c.

In the lugs *c* are pivoted, by means of removable bolts *i*, the ends of loop-shaped metallic straps *j*, in which are secured, as by screws *k*, foot-rests *l*. To each foot-rest is secured an inverted-U-shaped foot strap or guard *m*. *n* represents the rope or pole grips. These are secured to the under sides of the foot-rests *l* by bolts *o*, extending through longitudinal slots *p* in the grips in such manner that the grips are adjustable to and from each other, so that the apparatus is capable of being applied to various sizes of ropes, poles, &c. The grips *n* are hollowed out, as at *q* in Fig. 3, at their inner ends, so as to receive the pole, rope, or the like. They have the one a tongue *r* and the other a recess *s* on each side fitting into each other in such manner that under the normal working of the gripping members around their pivots *i* the grips are never open at the sides. This latter feature, in the instance where the apparatus is used on a rope or other such flexible device, keeps it from working out laterally from between the grips. In Fig. 3 it will be observed that the corners *t* on the grips instead of being square are rounded. The object of this is to prevent the grips from simply getting an insufficient pinching hold on the rope (if a rope or the like is being used) which might seem at first to be sufficient to hold the weight of the user, but would ultimately give way under his full weight.

u is a spring which connects the gripping members and acts to normally pull the grips *n* into engagement with the pole, rope, or the like.

In operation the user grips the pole or rope with his hands and having introduced his feet into the straps *m* lifts the apparatus with his feet and then releases it, the spring *u* causing the gripping members to secure a hold on the pole or rope which under his full weight will sustain the apparatus as far as it is thus advanced until he can secure a fresh grip with his hands, and so on.

I show in Figs. 4 and 5 a special form of pole which may be used with my apparatus. Here *v* is the pole, and *w* a head, which is adjustably secured thereon by a thumb-screw *x*, controlling a clamp *y* on the head. This arrangement permits the head to be adjusted to various positions on the pole, so that the pole may be suspended from supports having

different heights, as, Fig. 4, the sill of a window casing.

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

1. The combination of a guiding member, and coacting gripping members, the one having on each side of the axial line of the guiding member a projection and the other a recess corresponding projections and recesses fitting into each other, substantially as described.

2. The combination of a guiding member comprising two parts removably connected together, and coacting gripping members pivoted the one in the one and the other in the other of said guiding members, substantially as described.

3. The combination of a guiding member, and coacting gripping members pivoted therein, said gripping members having their gripping portions adjustable to and from each other in their respective gripping members, substantially as described.

In testimony that I claim the foregoing I have hereunto set my hand this 20th day of April, 1905.

HENRY BORNEMAN.

Witnesses:
JOHN W. STEWARD,
WM. D. BELL.