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H. F. HOLTMANN.

ADJUSTABLE ELECTRIC LAMP HOLDER.

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Fig. 1.

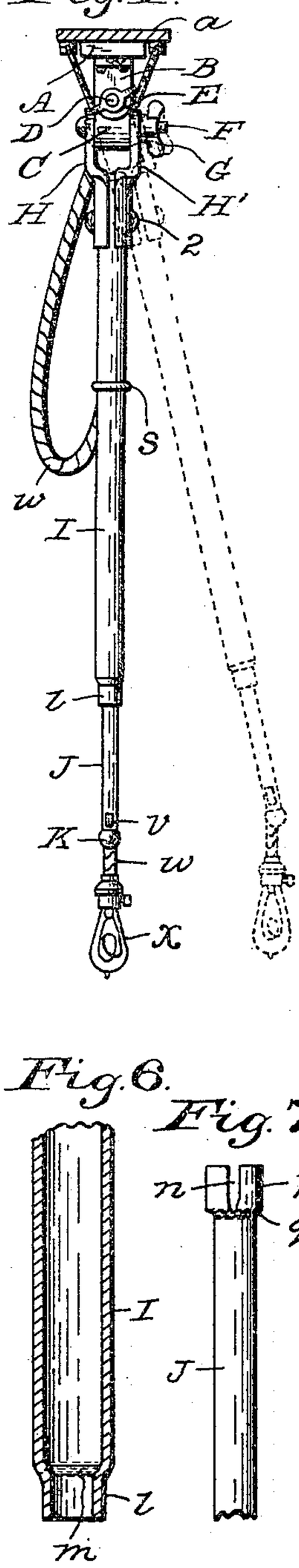

Fig. 2.

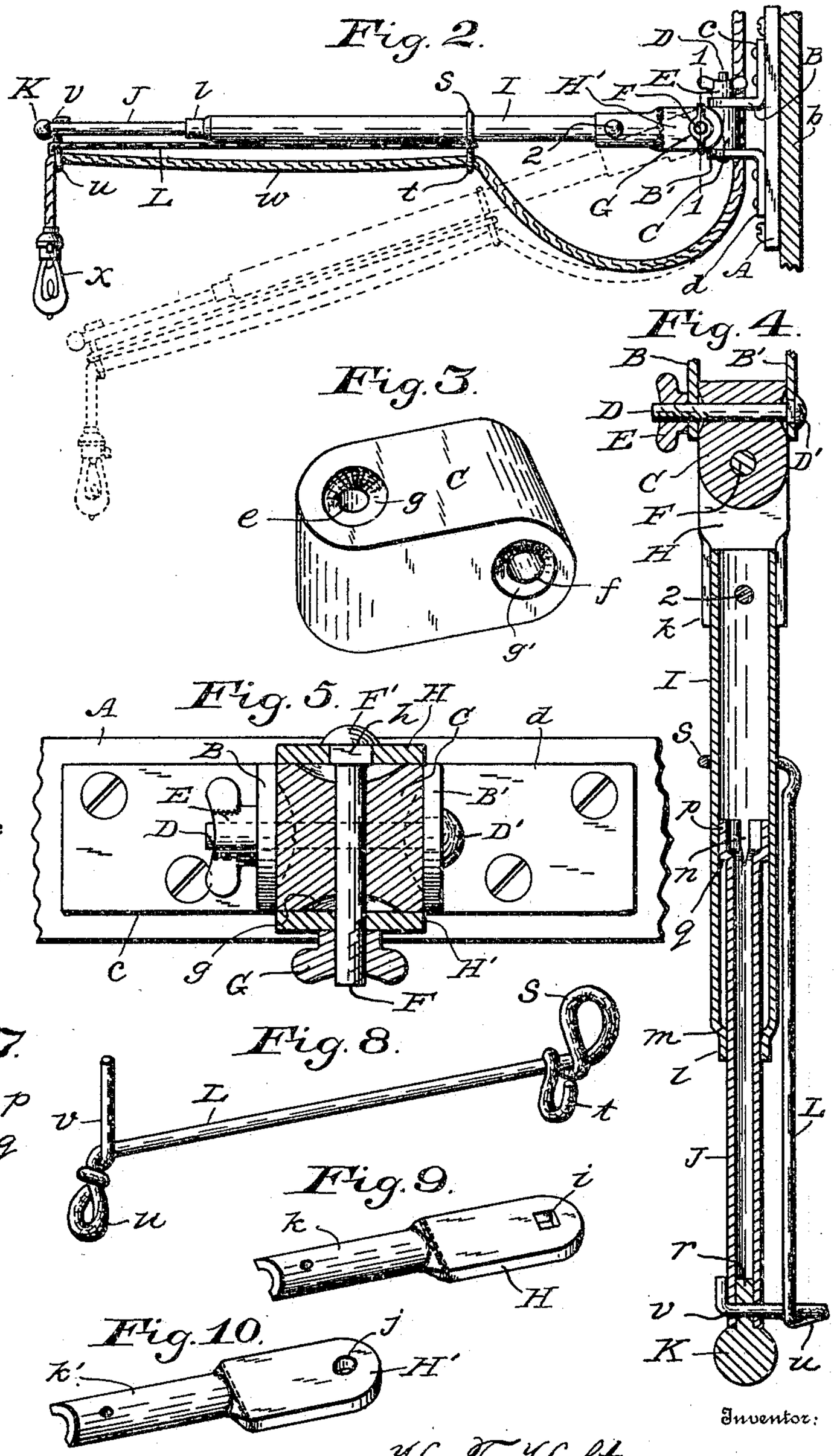

Fig. 3.

Fig. 4.

Fig. 5.

Fig. 6.

Fig. 7.

Fig. 8.

Fig. 9.

Fig. 10.

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ADJUSTABLE ELECTRIC-LAMP HOLDER.

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To all whom it may concern:

Be it known that I, HENRY F. HOLTMANN, a citizen of the United States, residing at Indianapolis, in the county of Marion and State of Indiana, have invented new and useful Improvements in Adjustable Electric-Lamp Holders; and I do declare the following to be a full, clear, and exact description of the invention, reference being had to the accompanying drawings, and to the letters and figures of reference marked thereon, which form a part of this specification.

The invention relates to the class of holders that are designed to be attached to walls and ceilings and to posts in workshops and other places where incandescent electric lamps may be used, the invention having reference particularly to holders whereby such lamps that are connected to hanging wires may be guided and held adjustably in convenient positions near to the workmen and their work.

The objects of the invention are to provide electric-lamp holders which may be cheaply constructed, readily set in place for use, quickly adjusted when desired, and which may hold the lamps suspended non-rigidly in various positions, so that they will not be liable to be broken when accidentally collided with by workmen or by various tools or implements and so that the insulation of the circuit-wires will not be ruptured or damaged.

With the above-mentioned and other objects in view the invention consists of an improved extensible holder having novel forms of universal and other friction joints or couplings and novel means for supporting the lamp and for holding up the slack in the circuit-wires; and the invention consists, further, in the parts and the combination and arrangement of parts, as hereinafter particularly described and claimed.

Referring to the drawings, Figure 1 is a view of the holder shown as when hanging from a ceiling; Fig. 2, a side view of the holder shown as when supported by a vertical wall or post; Fig. 3, a perspective view of the friction-head of the universal joint of the holder-arm; Fig. 4, a longitudinal central sectional view of the holder in which portions of the supporting parts are broken away; Fig. 5, a transverse sectional view taken as at the line 1 1 in Fig. 2; Fig. 6, a fragmentary longitudinal central sectional view of the main part of the holder-arm; Fig. 7, a fragmentary external view of the extension part of the arm; Fig. 8, a perspective view of the circuit-wire guide and holder, and Figs. 9 and 10 are perspective views of the two friction-blades of the holder-arm jaw.

Similar reference characters in the drawings designate corresponding parts or features.

In construction a base A, preferably of wood, is provided that is adapted to be secured to a ceiling or a wall or to a block *a* or *b*, to which the circuit-wires are usually anchored by means of insulators. A spring-blade B has a foot *c*, which is secured to the base A, and a spring-blade B′ has a foot *d*, which is also secured to the base A, the two blades being oppositely disposed and together forming a spring-jaw in which is pivoted a friction-head C, having two pivotal holes *e* and *f*, whose axes are at right angles one to the other. About each end of each hole in the head C is a circular depression, as *g* and *g′*, so that the contacts of the blades with the head are at a little distance from the holes. The pivotal connection is made by means of a pivot-bolt D, extending through the pivot-hole in one end of the head and suitable holes in the jaw-blades and suitably secured against turning in the blades, the bolt having a head D′ at one end and provided at its opposite end with a friction adjusting-nut E, bearing against the adjacent blade, so that the head is pivoted and held frictionally between the two blades B and B′, and will remain at any position to which it may be adjusted pivotally. In the pivot-hole in the opposite end of the head C is a pivot-bolt F, having a head F′ and an adjusting-nut G, pivotally connecting two spring-blades H and H′ thereto, the blades bearing against the head about the recesses that extend about the pivot-hole therein. The bolt F is prevented from turning in the jaw-blades by means of a square part *h* thereof seated in the blade H. The blade H has a square bolt-hole *i* and the blade H′ a circular bolt-hole *j* to receive the pivot-bolt F, and the blades have shanks *k* and *k′*, which together form a socket in which the main part I of the holder-arm is secured rigidly by a rivet 2, so that the arm may move radially on the pivots D and F to any degree of angularity within ninety degrees to the plane of the support of the arm. The part I is hollow, as a tube, and has a contracted end *l*, forming an extended friction-bearing and an internal stop-shoulder *m*.

In the part I is an extension part J, that is also hollow or tubular and adapted to slide endwise therein, the part fitting closely in the end *l* and having at its inner end a slit *n* in an enlarged part *p*, which frictionally engages the part I, the enlarged part having a shoulder *q*, adapted to engage the shoulder *m*. An ornament K is secured, by means of a shank *p* thereof, to the end of the arm part J.

The circuit-wire guide and support, which connects the lamp to the end of the holder-arm, comprises a rod L, that extends parallel to the holder-arm and which is provided at one end thereof with a collar *s*, that slides on the arm part I, the rod being also provided with a flexible loop *t* near the collar and a loop *u* at the opposite end thereof, which is also flexible, and a projection *v*, that is attached to the rod near the loop *u*, extends through the end of the part J and also through the shank *r* and is secured thereto, so that the rod moves outside of the holder-arm in unison with the part J of the arm. The two circuit-wires being insulated in a cable *w*, the lamp *x* is connected thereto in the usual manner, the cable extending through the loops *t* and *u* and the lamp being suspended by the cable and free to swing about the loop *u*. The loops are pressed and closed against the cable, so that the latter may be held against slipping through the loops, a portion of the cable between its wall-fastenings and the loop *t* being slack when the part J is entirely within the part I of the arm—that is, when the arm is contracted. The rod L is sufficiently long to hold the cable near the lamp out of the way of the workmen. The collar *s*, the loops *t* and *u*, and the projection *v* are all integral with the rod L, but may be otherwise formed.

In practical use when the holder is supported overhead, as by a ceiling, the arm may be moved about, as indicated by broken lines in Fig. 1, so as to carry the lamp *x* to the desired position, the lamp being suspended so as to swing freely at the end of the cable *w*. When the holder is supported by a wall or other vertical object, the arm may extend horizontally upwardly or laterally, or it may be drawn downwardly, as indicated in broken lines in Fig. 2, to various degrees, the lamp being suspended at the end of the cable. When desired, the arm may be either lengthened or shortened by moving the part J thereof endwise relatively to the main part I, the portion of the cable *w* between the loops *t* and *u* being at all times kept straight close to the arm.

Having thus described the invention, what is claimed as new is—

1. An extensible electric-lamp holder comprising a main arm part, an extensible arm part mounted slidingly in the main arm part, and cable-holders comprising a rod provided at one end thereof with a collar extending slidingly about the main arm part and also with a loop extending oppositely from the collar, the rod being also provided at the opposite end thereof with a flexible loop and also with a projection that is secured to the outer end of the extensible arm part, and a circuit-wire cable extending through the loops of the rod and secured in the flexible loop thereof.

2. An extensible electric-lamp holder comprising a main arm part, an extensible arm part mounted slidingly in the main arm part and having a transverse aperture in the outer end thereof, a rod twisted at one end thereof in the form of a loop and also a projection, the projection extending through and secured in the transverse aperture of said extensible arm part, said rod being also provided at its opposite end with a collar extending movably about said main arm part and with a loop extending oppositely to the collar thereof, and a circuit-wire cable extending through said loops.

3. An adjustable electric-lamp holder comprising a base, a pair of spring jaw-blades having each a foot secured to the base, a friction-head pivoted between the jaw-blades and having depressions in opposite sides thereof extending about the pivot thereof adjacent to the jaw-blades, said pivot-head having a pivot-bolt therein and recesses in opposite sides thereof extending about the pivot-bolt thereof, a pair of spring jaw-blades mounted on the pivot-bolt of the head and having shanks that are concavo-convex transversely together forming a socket, a main holder-arm part secured in said socket, an extensible arm part movable in said main arm part, a flexible loop attached to the end of the extensible arm part, a collar movable on said main arm part and provided with a flexible loop, a rod attached to both of said loops, and a circuit-wire cable extending through said loops.

4. In an adjustable electric-lamp holder, the combination with a hollow main holder-arm part, and an extensible arm part slidingly arranged in the main arm part, of a rod secured to the extensible part and provided thereat with a cable-holder, a collar movable over the main arm part and attached to the rod, a cable-holder attached to the rod near the collar, a cable guided by the cable-holders, and a lamp attached to the cable.

In testimony whereof I affix my signature in presence of two witnesses.

HENRY F. HOLTMANN.

Witnesses:
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