

J. CHARLESWORTH.
FOLDING UMBRELLA.
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928,426.

Patented July 20, 1909.

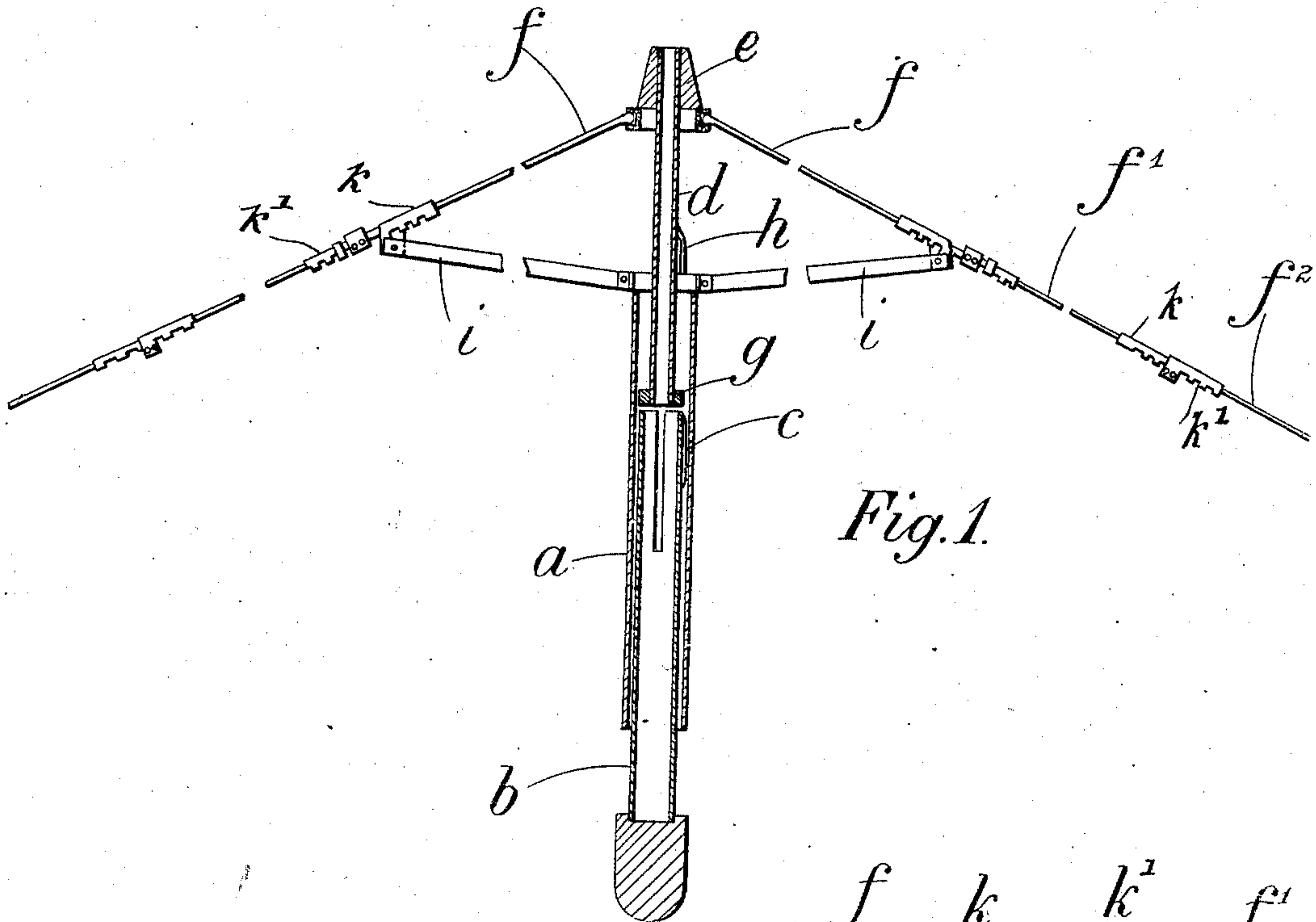


Fig. 1.

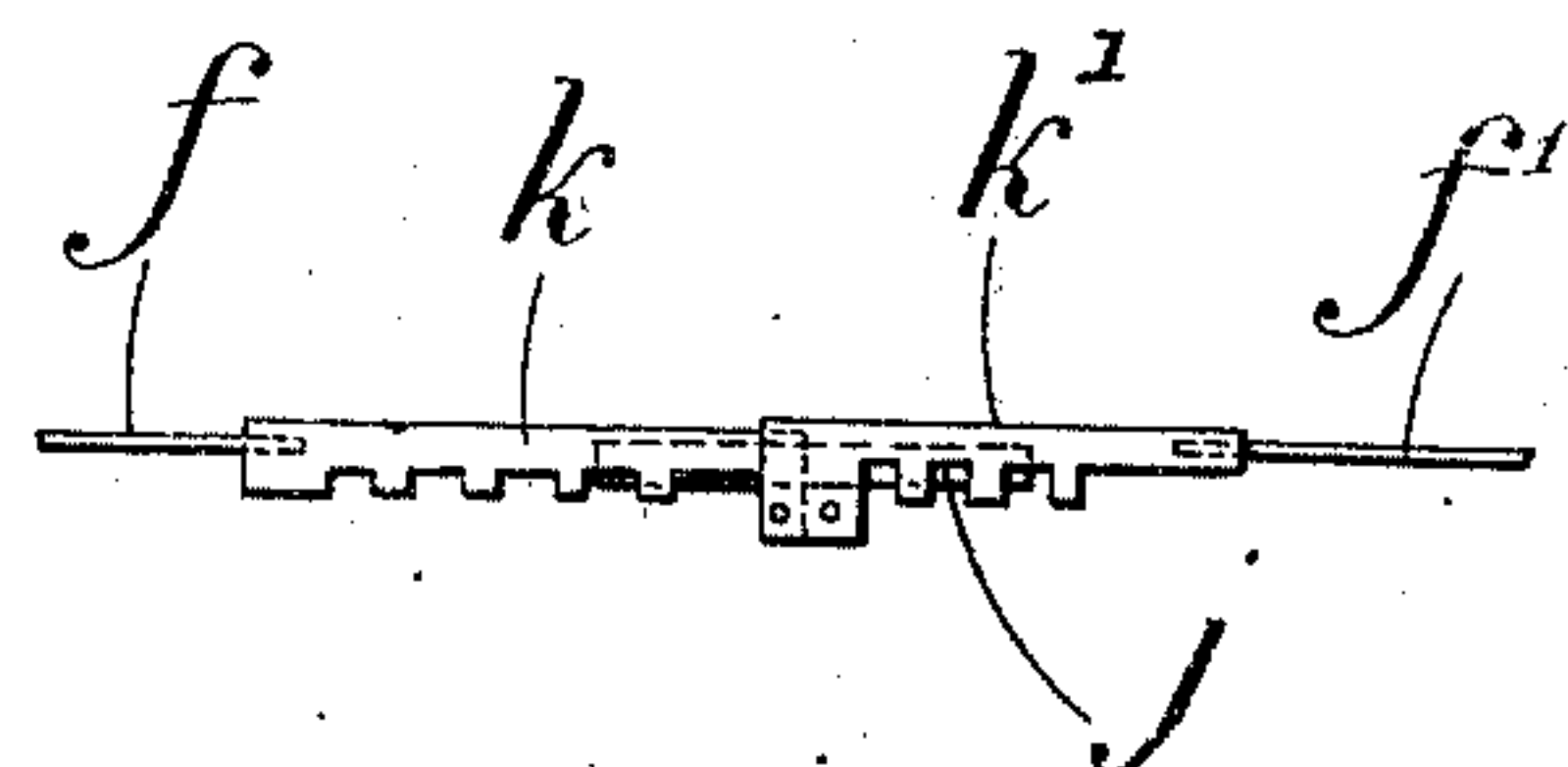


Fig. 3.

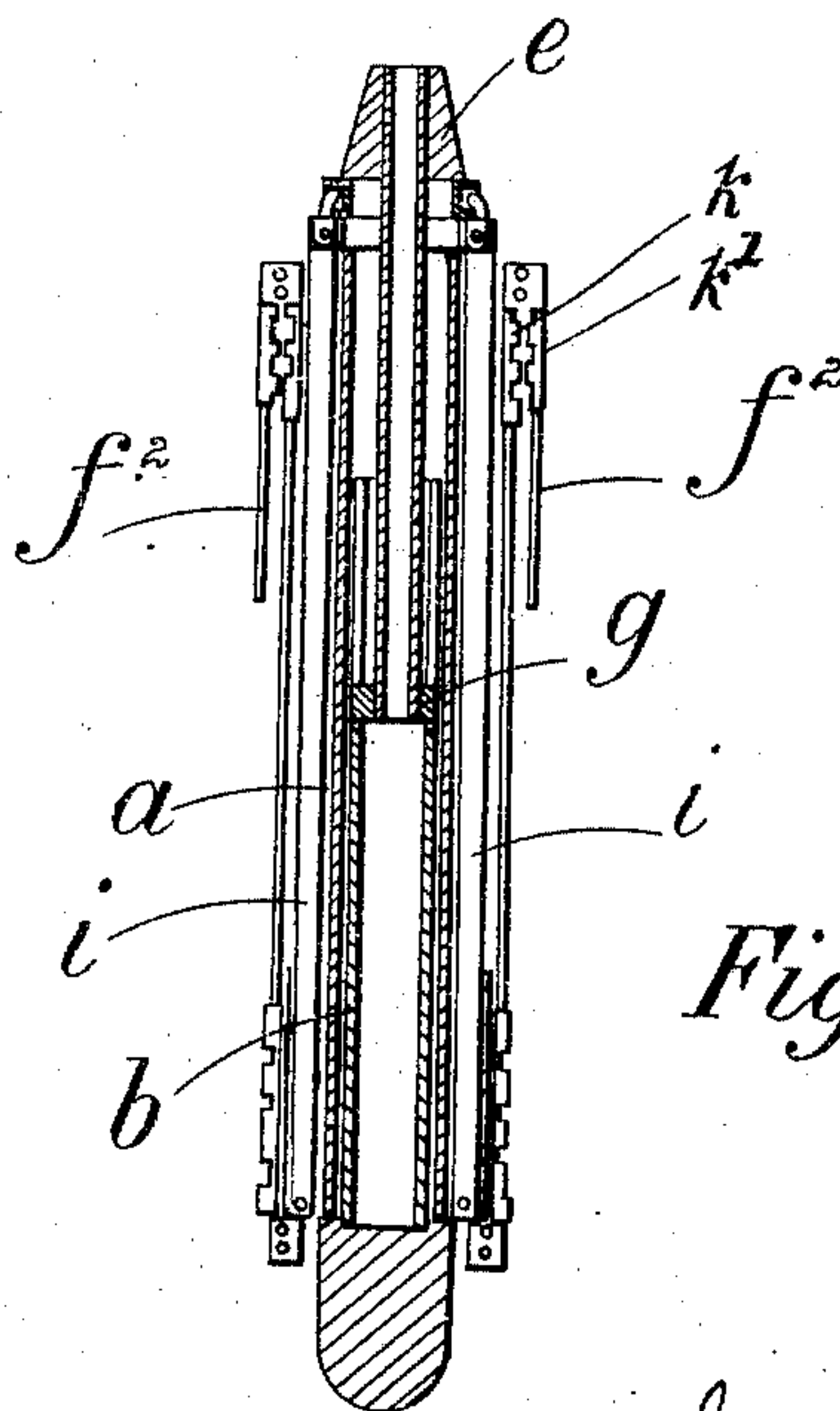


Fig. 2.

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UNITED STATES PATENT OFFICE.

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FOLDING UMBRELLA.

No. 928,426.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, JEPSON CHARLESWORTH, musician, residing at 19 Milner road, Horfield, Bristol, England, have invented certain new and useful Improvements in Folding Umbrellas; 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.

The present invention relates to improvements in umbrellas of the kind in which, for the purpose of enabling the umbrella to be compactly stowed away, for instance in a bag or trunk when traveling, the stem of the umbrella is telescopically collapsible and the ribs thereof are adapted to fold.

The invention consists in improved details of construction and in device for securing the various parts in the extended or operative condition.

The accompanying drawing illustrates an umbrella stem and frame without its cover embodying the present improvements, and in which:—

Figure 1 is a longitudinal section showing the ribs extended and the stem collapsed. Fig. 2 is a similar view but showing the ribs in the folded condition. Fig. 3 shows a detail side view of one of the joints which connect the rib sections.

The stem comprises a pair of telescopically extending tubes *a*, *b*, the inner one *b* of which is provided with a spring catch *c* of any approved construction, for preventing the tubes from sliding when the umbrella is raised.

Sliding in the upper end of the outer tube, *a* is another tube *d* the upper extremity of which is provided with a ferrule *e* and on which the ends of the ribs *f* are pivoted. The inner or lower end of the tube *d* is fitted with a cross head *g* and the inner end of the above-mentioned tube *b* is so slotted that when the slotways coincide with the ends of the cross head *g*, the latter can slide along the slotways and thus both the tubes *b* and *d* can be pushed into the outer tube *a*. By withdrawing the tube *b* and angularly displacing it so that the ends of the cross head *g* and the slotways no longer coincide, the tube *b* on

being pushed into the tube *a* will, by bearing with its end against the cross-head, force out the tube *d* from the position shown in Fig. 2 to that shown in Fig. 1, whereupon the tube *d* will be held in the withdrawn position by a spring catch *h*. The tube *b* can be then again withdrawn.

i are the struts for the ribs *f* and they are pivotally connected respectively to the latter and to the upper end of the tube *a*. The ribs *f* consist of pivotally inter-connected sections *f*, *f*¹ and *f*².

The device for locking each section in the extended condition consists of a pin *j* (see Fig. 3), adapted to slide freely in skeleton tubular guides *k*¹ formed in the adjoining hinge sections of the rib sections *f*, *f*¹ *f*². On successively unfolding the rib sections so that they are vertically in alinement, the pin *j* of each, will slide by gravity along the guides and form a rigid connection between each pair of adjacent rib sections. The rigid connection is interrupted by inverting the umbrella so that the pins slide back again wholly within the longer of the guides.

It should be understood that the foregoing description is merely by way of example and the construction may be varied in its essential details without departing from the spirit of the invention. For instance, the part designated *d* could be solid instead of tubular and the guides *k* for the pins *j* could be complete tubes, although the skeleton form illustrated permits of access to the pins *j* by a pointed instrument for the purpose of displacing same should one or more become jammed.

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

1. In an umbrella, the combination, with a main supporting tube, of a handle-tube slidable and revoluble in the said main tube and having longitudinal slots in its upper end portion, a top portion slidable in both of the said tubes and provided with a crosshead which engages with the said slots when the parts are pushed in, ribs pivoted to the said top portion, and struts pivoted to the said ribs and to the upper part of the said main tube.

2. In an umbrella, the combination, with
two rib-sections, of two guides secured at
their opposite ends to the respective rib-sec-
tions and pivotally connected together at
5 their adjacent ends so that the said guides
can be placed in alinement to form a con-
tinuous pin-chamber between the ends of the
said rib-sections, and a locking-pin slidable

in the said guides between the ends of the
said rib-sections.

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

JEPSON CHARLESWORTH.

Witnesses:

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