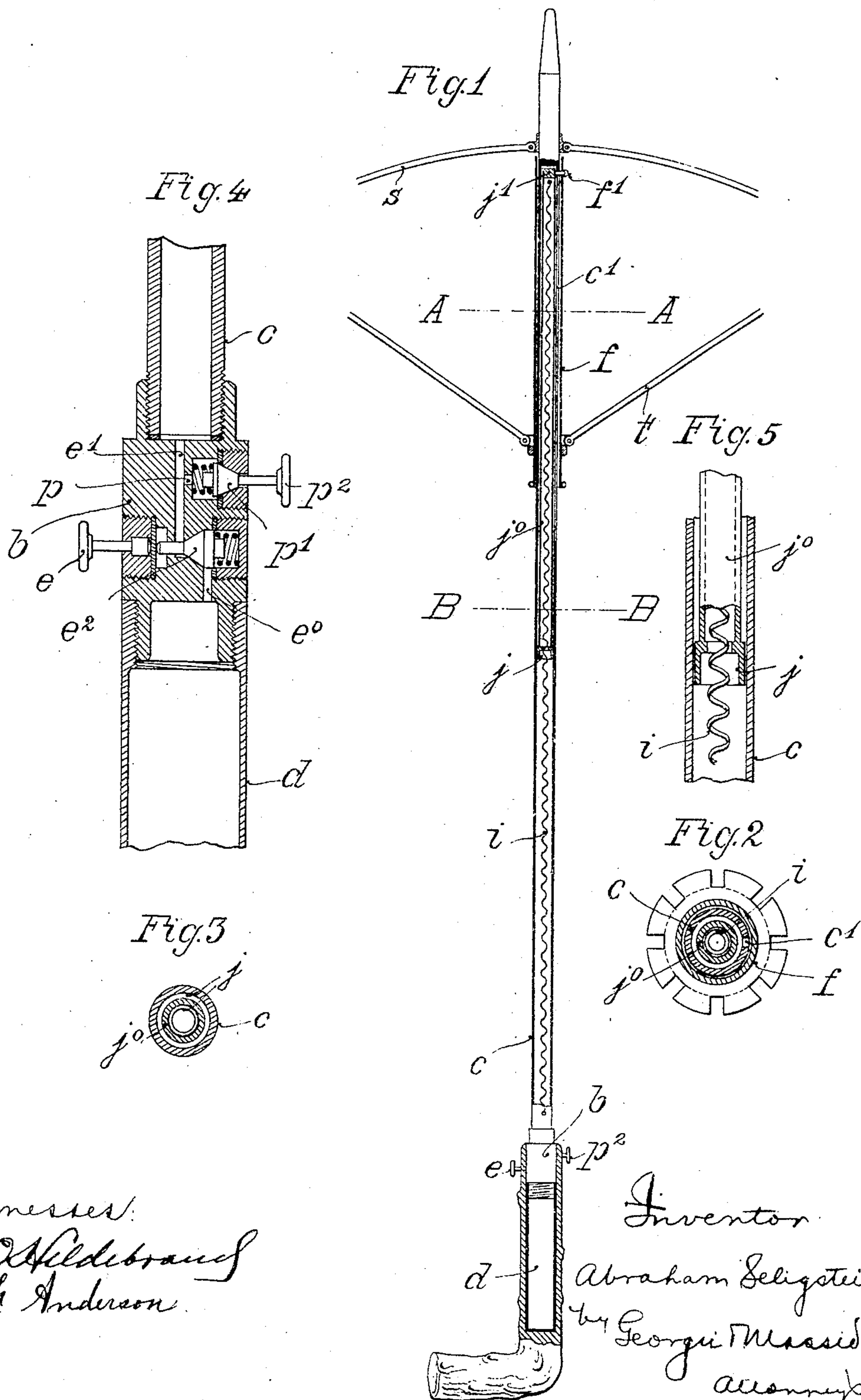


A. SELIGSTEIN.  
UMBRELLA.

APPLICATION FILED NOV. 3, 1904.



Witnesses:  
E. C. Alderbrand  
A. F. Anderson.

Inventor  
Abraham Seligstein  
by George Massie  
attorney



# UNITED STATES PATENT OFFICE.

ABRAHAM SELIGSTEIN, OF MUNICH, GERMANY.

## UMBRELLA.

No. 803,630.

Specification of Letters Patent.

Patented Nov. 7, 1905.

Application filed November 3, 1904. Serial No. 231,230.

*To all whom it may concern:*

Be it known that I, ABRAHAM SELIGSTEIN, a citizen of Germany, residing at Munich, Bavaria, Germany, have invented certain new and useful Improvements in Self Opening and Closing Umbrellas, Parasols, and the Like; 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 self opening and closing umbrellas, parasols, and the like; and it consists of the details of construction hereinafter set forth, and particularly pointed out in the claims.

In order to render the present specification easily intelligible, reference is had to the accompanying drawings, in which similar letters of reference denotes similar parts throughout the several views.

Figure 1 is a vertical section through the stick of an umbrella, showing such parts as are necessary for the proper explanation of the invention. Fig. 2 is a section on line A A of Fig. 1, drawn to a larger scale. Fig. 3 is a section on line B B of Fig. 1, also drawn to a larger scale. Fig. 4 is a vertical section through a valve situated near the handle, and Fig. 5 is a vertical section through the lower part of a piston working in the umbrella-stick.

In the present case the umbrella is opened by means of a fluid under pressure, such as liquefied air or carbonic-acid gas, being stored in the handle, and it is closed by spring-pressure.

The umbrella-stick *c* is hollow and is separated from the hollow handle *d* by means of the valve-housing *b*. The runner *f* is connected by a pin *f'* to the upper end of an elongated piston consisting of the lower tightly-fitting piston *j*, Fig. 5, the intermediate part *j'*, and the upper part *j''*. The pin *f'* works in a slot in the hollow stick; but the slot is not long enough to extend below the lower piston *j* when the umbrella is open, so that no fluid under pressure will escape through the said slot. To the upper part *j'* of the piston is attached the upper end of a spring or elastic band or the like *i*, the lower end of which is secured in the stick above the valve-housing.

Any suitable form of valve may be employed to control the fluid under pressure.

In Fig. 4 a double valve is shown, the spring-pressed conical valve *e*<sup>2</sup> being adapted to control the flow of the fluid from the holder *d* through the port *e*<sup>0</sup> and the channel *e'* to the hollow stick and having a button *e*, by means of which it may be pressed open to establish the communication, and the valve *p'* is provided with button *p*<sup>2</sup>, by which it is opened to exhaust the fluid under pressure from the hollow stick through the channel *e'* and port *p* to the open air when it is desired to close the umbrella.

*s* designates the ribs, and *t* the stretchers pivoted to the ribs at one end and to the runner at the other in the usual manner.

The umbrella may be kept open either by allowing the fluid under pressure to remain in the stick under the piston *j*, or it may be held open in the usual manner by means of the ordinary spring-catch gripping under the runner.

To open the umbrella, it is only necessary to depress the valve *e*<sup>2</sup> by means of its button *e*, when the fluid under pressure will drive up the piston *j*, at the same time stretching the spring *i*. To close the umbrella, the exhaust-valve *p p'* is pressed open, when the fluid will flow from the hollow stick to the open air and the spring *i* will close the umbrella. If a catch is employed, it would have to be pressed in before the umbrella could be closed by the spring *i*, as will be readily understood.

The holder *d* for the fluid-pressure should be large enough to contain sufficient fluid, gas, or the like under pressure to enable the umbrella to be opened repeatedly before the fluid is exhausted.

I claim as my invention—

1. In an umbrella, the combination, with a holder for fluid under pressure, and a cylinder connected therewith, of a piston in the cylinder arranged to be acted upon by said fluid, a connection between the piston and the runner of the umbrella, and means for controlling the action of the pressure fluid.

2. In an umbrella, the combination, with a holder for fluid under pressure arranged in the handle of the umbrella, and a cylinder connected therewith, of a piston in the cylinder arranged to be acted upon by said fluid, a connection between the piston and the runner of the umbrella, and a valve for controlling the action of the pressure fluid.

3. In an umbrella, the combination, with a



holder for fluid under pressure arranged in the handle of the umbrella, a hollow umbrella-stick communicating with the holder, a piston within said hollow stick, a connection  
5 between the piston and the runner of the umbrella, and a valve controlling the flow of the fluid under pressure from the holder to the hollow stick.

4. In an umbrella, the combination, with a  
10 holder for fluid under pressure arranged in the handle of the umbrella, a hollow umbrella-stick communicating with the holder, a piston arranged within the stick, a connection between the piston and the runner of the  
15 umbrella, a valve controlling the passage of the pressure fluid from the holder to the stick, and means for exhausting the pressure fluid from the stick.

5. In an umbrella, the combination, with a  
20 holder for fluid under pressure arranged in the handle of the umbrella, a hollow umbrella-stick communicating with the holder, a piston arranged in the hollow stick, a connection between the piston and the runner of  
25 the umbrella, a valve controlling the passage of the pressure fluid from the holder to the hollow stick to open the umbrella, means for exhausting the pressure fluid from the hollow stick to the atmosphere, and means for

closing the umbrella when the pressure fluid 30  
is exhausted.

6. In an umbrella, the combination, with a handle having an interior cavity forming a holder for fluid under pressure, and an umbrella-stick provided with a longitudinal cylindrical cavity communicating with the hollow handle, of a piston arranged within the hollow handle, a connection between the piston and the runner of the umbrella whereby the reciprocation of the piston will open and  
40 close the umbrella, a double valve arranged between the holder in the handle and the piston in the stick, means for operating said valve to permit the passage of the pressure fluid from said holder into the hollow stick  
45 below the piston to open the umbrella, means for operating said valve to exhaust the pressure fluid from the hollow stick to the open air to permit the closing of the umbrella, and  
50 a spring connecting the piston with a fixed support to close the umbrella when the pressure fluid is exhausted.

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

ABRAHAM SELIGSTEIN.

Witnesses:

MATHILDE H. HELD,  
GEORG KÖRNER.