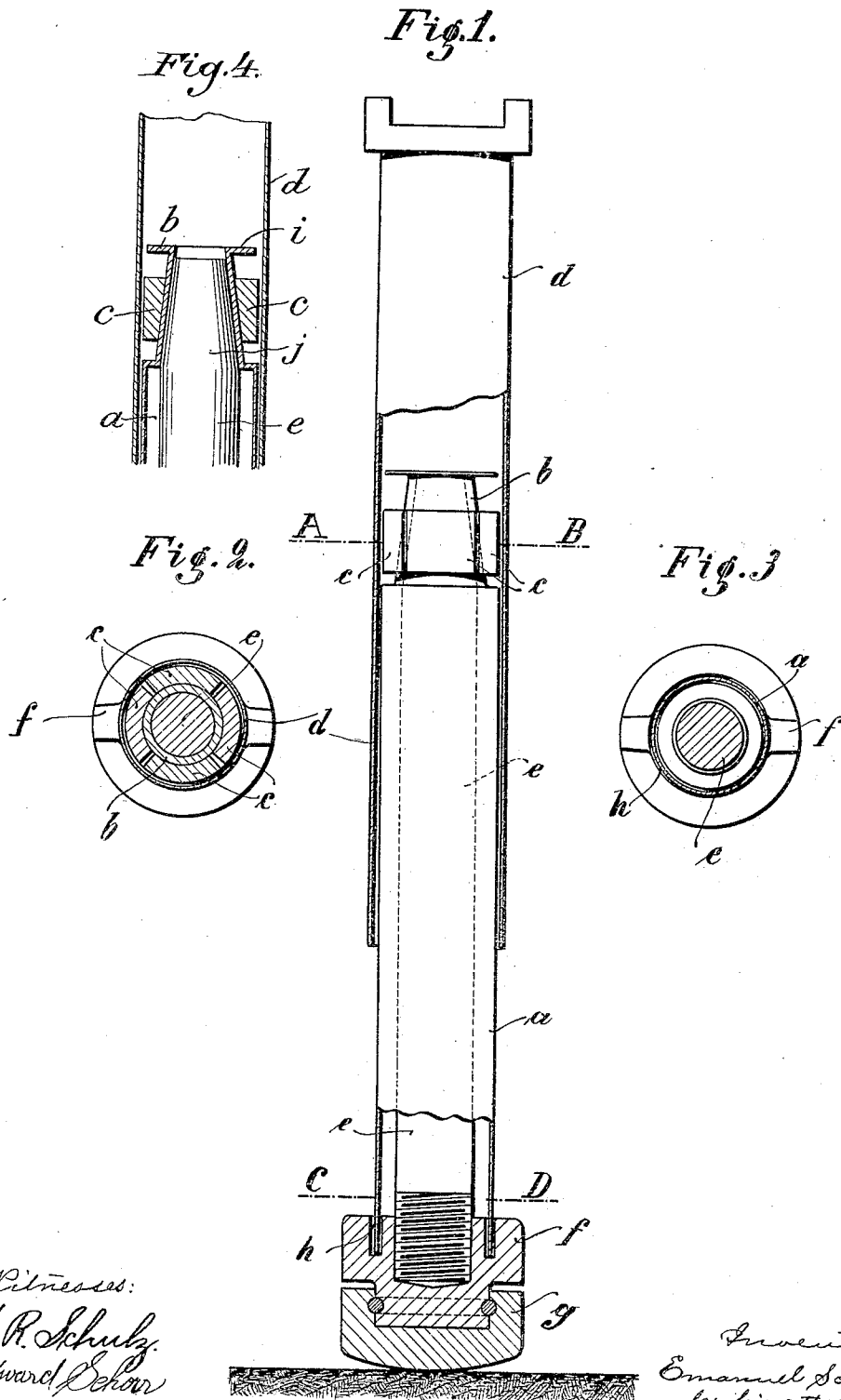


946,879.

Patented Jan. 18, 1910.



Witnesses:
H. R. Schulz
Edward Schorr

Inventor:
Emanuel Schäfer
by his attorney
J. W. P. Pilsen

UNITED STATES PATENT OFFICE.

EMANUEL SCHÄFER, OF DUSSELDORF, GERMANY.

MINE-PROP.

946,879.

Specification of Letters Patent.

Patented Jan. 18, 1910.

Application filed June 24, 1909. Serial No. 503,999.

To all whom it may concern:

Be it known that I, EMANUEL SCHÄFER, a subject of the German Emperor, residing at Dusseldorf, Germany, have invented a new and Improved Mine-Prop, of which the following is a specification.

This invention relates to a mine prop composed of telescoped pipe sections which are so connected by a concealed friction joint that any increase of pressure on the prop will correspondingly increase the resistance of the joint.

In the accompanying drawing: Figure 1 is a side elevation, partly in section, of my improved mine prop; Fig. 2 a cross section on line A—B, Fig. 1; Fig. 3 a cross section on line C—D, Fig. 1, and Fig. 4 a longitudinal section through the joint.

The prop is composed of two telescoping pipes *a*, *d*, of which lower pipe *a*, is provided with an upper coniform neck *b*, received within pipe *d*, and having a top flange *i*. Between tapering neck *b*, and outer pipe *d*, is interposed a divided ring *c*, shown to be composed of four sections, though the number of such sections may obviously be varied. Ring *c*, has an inner wall tapered to correspond to the conicality of neck *b*, while its cylindrical outer wall is adapted to frictionally engage the inner wall of pipe *d*. Within pipe *a*, is centered a rod *e*, having a tapering head *j*, that fits into the tapering neck *b*, and thus supports pipe *a*. The lower threaded end of rod *e*, is tapped into a nut *f*, having an upper groove within which the lower end of pipe *a*, is received. Nut *f*, is rotatably mounted upon a foot *g*, that rests upon the floor of the mine.

In use, the pipe *d*, is raised until it engages the roof of the mine, in which position it will be maintained by the wedging of ring-sections *c*, between pipe *d*, and neck *b*. Any increase of pressure on the prop will increase the wedging action of the ring-sections, so that the joint will be correspondingly tightened. By turning nut *f*, the prop may be either slackened or distended whenever necessary.

I claim:

1. A mine prop comprising an upper pipe, a telescoped lower pipe having a coniform neck within the upper pipe, and a sectional ring interposed between said neck and upper pipe.

2. A mine prop comprising an upper pipe, a telescoped lower pipe having a coniform neck within the upper pipe, a sectional ring interposed between said neck and upper pipe, and a rod inclosed by the lower pipe and having a tapering head that engages the neck.

3. A mine prop comprising an upper pipe, a telescoped lower pipe having a coniform neck within the upper pipe, a sectional ring interposed between said neck and upper pipe, a rod fitted within the lower pipe and having a threaded lower end, a nut engaging said end, and a foot rotatably supporting the nut.

Signed by me at Cologne, Germany this 11th day of June 1909.

EMANUEL SCHÄFER.

Witnesses:

JOSEPH T. MAY,
LOUIS VANDORN.