

No. 660,856.

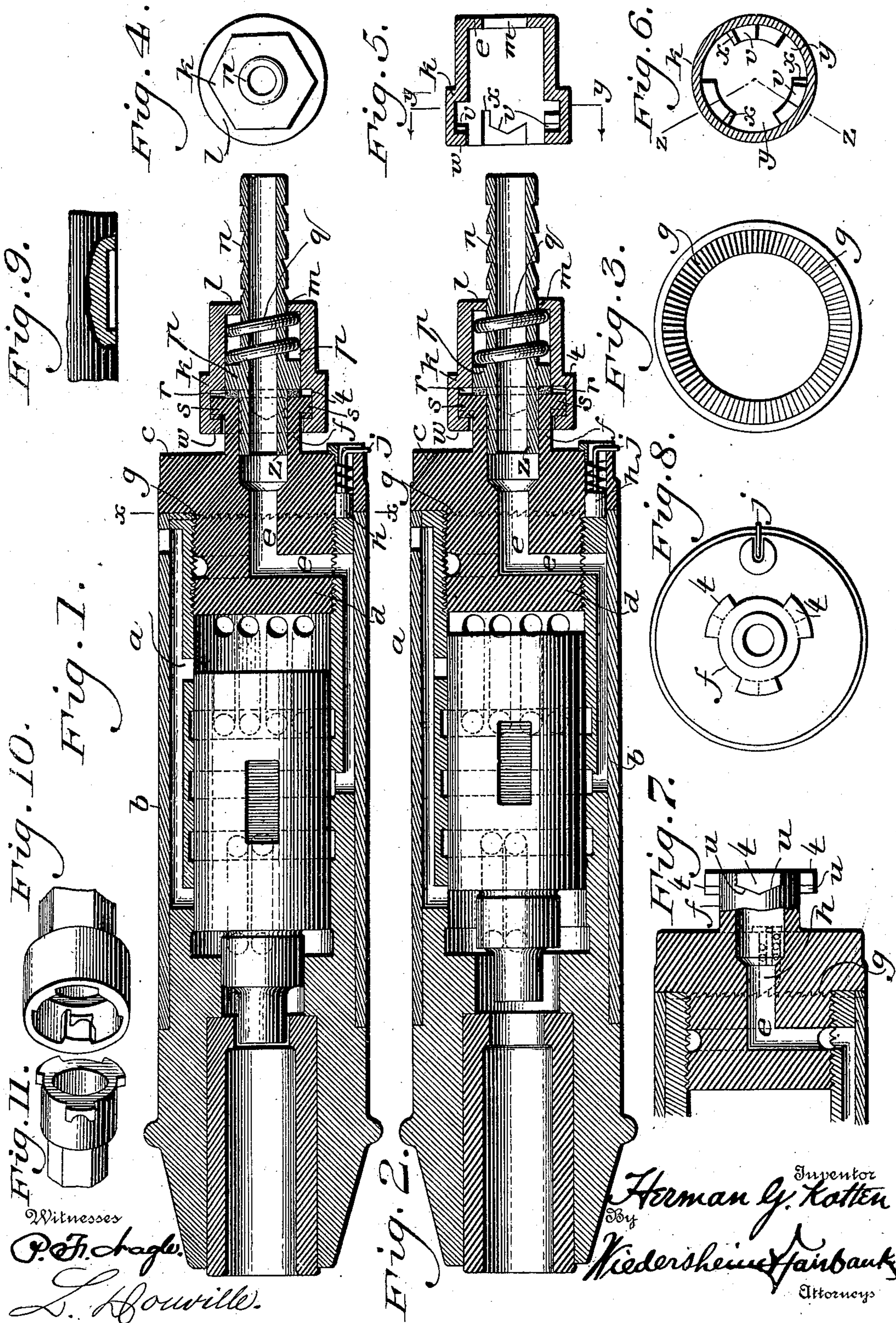
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H. G. KOTTEN.

PIPE COUPLING FOR PNEUMATIC TOOLS.

(Application filed Oct. 16, 1899.)

(No Model.)



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# UNITED STATES PATENT OFFICE.

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## PIPE-COUPLING FOR PNEUMATIC TOOLS.

SPECIFICATION forming part of Letters Patent No. 660,856, dated October 30, 1900.

Application filed October 16, 1899. Serial No. 733,715. (No model.)

*To all whom it may concern:*

Be it known that I, HERMAN G. KOTTEN, a citizen of the United States, residing at Englewood, in the county of Bergen, State of New Jersey, have invented a new and useful Improvement in Pipe-Couplings for Pneumatic Tools, which improvement is fully set forth in the following specification and accompanying drawings.

10 My invention relates to an improved construction of a pipe-coupling for pneumatic tools; and it consists of a novel means for enabling the fluid-supply pipe to be readily coupled to and uncoupled from the tool.

15 Figures 1 and 2 represent longitudinal sectional views of a pipe-coupling for pneumatic tools embodying my invention. Fig. 3 represents a section on line *xx*, Fig. 1. Fig. 4 represents an end elevation of the coupling-sleeve. Fig. 5 represents a sectional view of the coupling-sleeve in detached position, the section being taken on line *zz*, Fig. 6. Fig. 6 represents a section on line *yy*, Fig. 5, viewed in the direction of the arrows. Fig. 7 represents a sectional view of the inlet piece or plug having a portion thereof shown in elevation. Fig. 8 represents an end view of Fig. 7. Fig. 9 represents a sectional view of the hammer employed. Figs. 10 and 11 represent perspective views of another form of coupling device.

Similar characters of reference indicate corresponding parts in the figures.

Referring to the drawings, *a* designates a pneumatic tool having the casing *b*, which is provided at its inlet end with the threaded inlet piece or plug *c*, which has the body portion *d*, in which is contained the inlet-port *e*, with which communication is had by means of the opening in the neck *f*, the abutting faces of said cylinder and plug being serrated, as indicated at *g*, and the parts being held locked in the desired position by means of the spring-pressed latch or its equivalent *h*, which is manipulated from the exterior by the finger-piece *j*.

50 *k* designates a coupling-sleeve which has at its outer portion the inwardly-extending lip or flange *l*, which has the opening *m* therein, through which passes the coupling-nipple *n*, the outer portion thereof being roughened

for engagement with a hose, (not shown,) while the inner portion thereof has the flange or abutment *p*, against which contacts an end of the coupling-spring *q*, the other end thereof abutting against the lip *l*, said spring being contained within the sleeve *k*.

*r* designates the coupling-washer, which is interposed between the flange *p* and the outer surface of the head *s* of the neck *f*. The outer portion of the neck is provided with the lugs *t*, which have the converging walls *u*, which are adapted to engage similarly-shaped seats *v* at the inner end *w* of the sleeve *k*, said seats having the walls or abutments *x*, which serve as stops and to limit the extent of rotation of the sleeve when the parts are assembled, it being understood that the openings *y* permit said sleeve to be inserted in place on the neck *f*, after which said sleeve is turned until the lugs *t* strike the stops *x*, the coupling-spring holding the parts firmly in assembled position, while the portion *z* of the coupling-nipple extends into the neck *f* and leakage is prevented by means of the washer *r*.

In Figs. 10 and 11 I have shown another form of coupling device wherein the contacting portions of the coupling are provided with curved surfaces, as will be evident, the curved under portions 20 of the lugs 21 resting upon the curved seat 22 when the parts are assembled, the extent of rotation of the coupling-sections being limited by the shoulder which meets the curved portion 22, (best seen in Fig. 10,) as will be apparent.

It will be apparent that slight changes may be made by those skilled in the art which will come within the scope of my invention; and I do not, therefore, desire to be limited in every instance to the exact construction I have herein shown and described.

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

1. In a pipe-coupling for a pneumatic tool, an inlet-piece having an inlet-port therein for the motive fluid, a neck attached to said piece and having laterally-extending lugs thereon, a coupling-sleeve recessed and provided with means for engaging said lugs, a coupling-nipple, a washer interposed between said coupling-nipple and the outer surface of said



inlet-piece and a spring interposed between said sleeve and nipple.

2. In a pipe-coupling for a pneumatic tool, the combination of an inlet-piece having a  
 5 port therein for the admission of the motive fluid, a neck attached to said inlet-piece and provided with lugs having curved walls, a coupling-sleeve, openings in said sleeve for permitting the insertion of said lugs, recesses  
 10 or depressions upon said sleeve for the reception of said lugs, stops for limiting the movement of said lugs, a coupling-nipple, a flange thereon, a washer interposed between said flange and inlet-piece, an inwardly-pro-  
 15 jecting flange on said coupling-sleeve and a spring held between said flange and coupling-nipple.

3. In a pipe-coupling, an inlet-piece, a neck attached to said inlet-piece and provided with

lugs, a coupling-sleeve, openings in said sleeve 20 for permitting the insertion of said lugs, depressions and projections common to said lugs and sleeves, stops for limiting the rotation of said sleeve relative to said lugs, a coupling-nipple, a washer interposed between 25 said nipple and inlet-piece, and a spring interposed between said nipple and sleeve.

4. The combination of a pneumatic tool, an inlet-piece therefor, a neck on said inlet-piece, lugs projecting from said neck, a coup- 30 ling-sleeve engaging said lugs, a coupling-nipple and a spring interposed between said sleeve and nipple.

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