(No Model.) 2 Sheets—Sheet 1.

J. LANZ.

PNEUMATIC TOOL APPLIANCE.

No. 596,781. Patented Jan. 4, 1898.

Fig. 2.

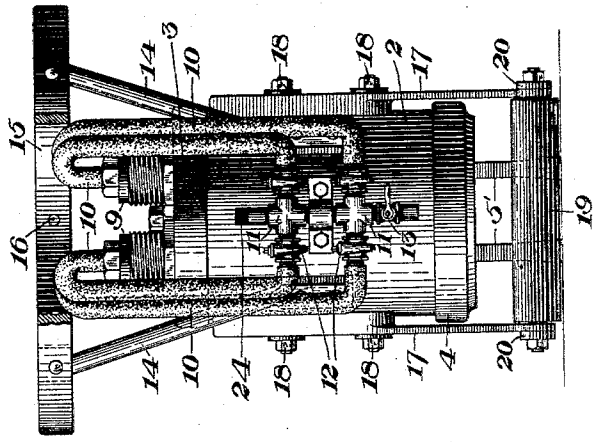
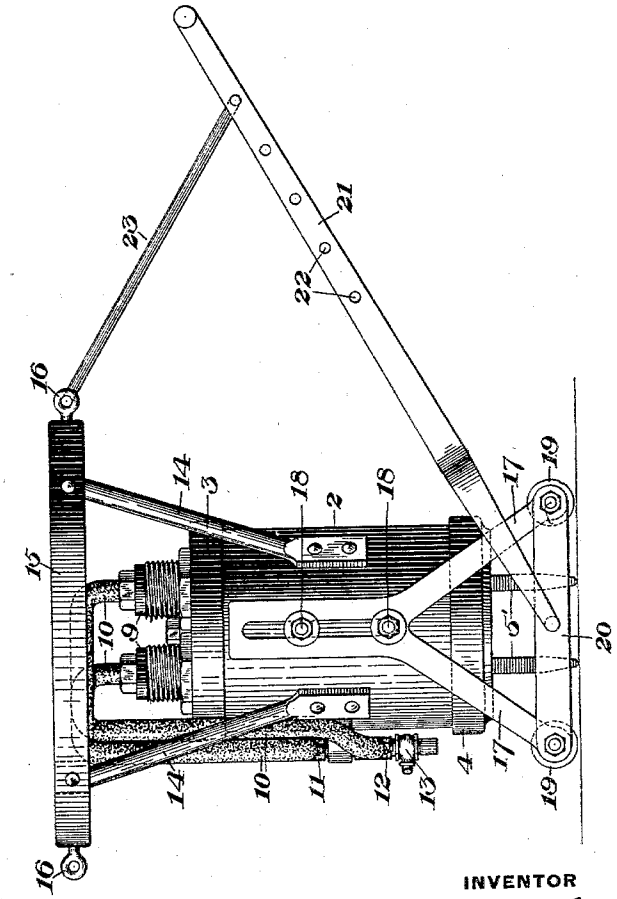


Fig. 1.



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(No Model.) 2 Sheets—Sheet 2.

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PNEUMATIC TOOL APPLIANCE.

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Fig. 4.

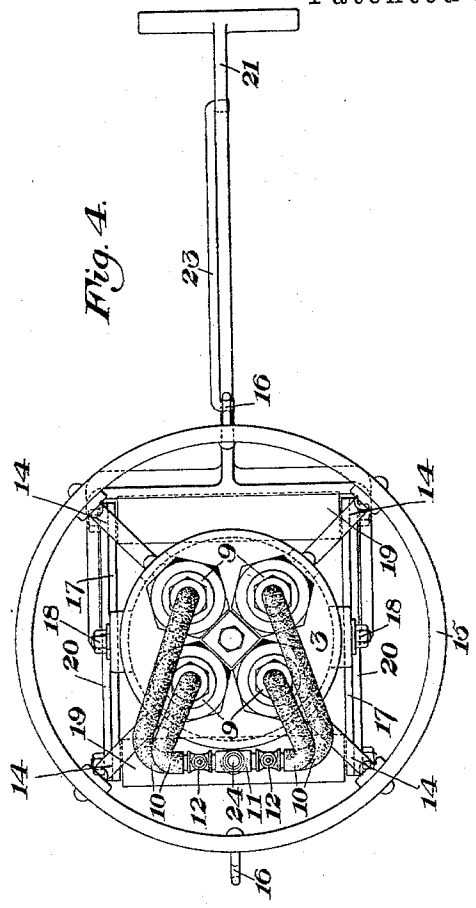
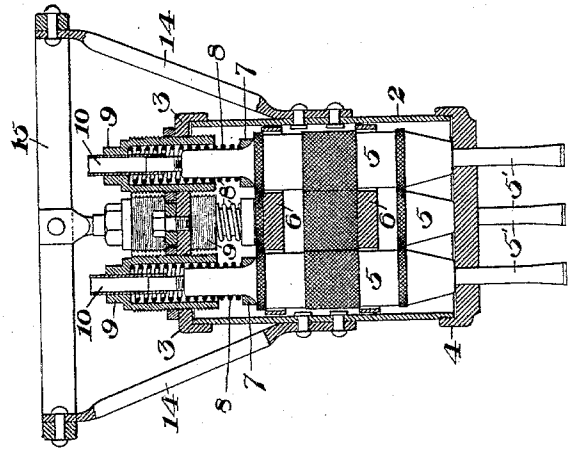


Fig. 3.



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UNITED STATES PATENT OFFICE.

JOHN LANZ, OF PITTSBURG, PENNSYLVANIA, ASSIGNOR TO THE CARNEGIE STEEL COMPANY, LIMITED, OF SAME PLACE.

PNEUMATIC TOOL APPLIANCE.

SPECIFICATION forming part of Letters Patent No. 596,781, dated January 4, 1898.

Application filed November 17, 1896. Serial No. 612,404. (No model.)

To all whom it may concern:

Be it known that I, JOHN LANZ, of Pittsburg, in the county of Allegheny and State of Pennsylvania, have invented a new and useful Improvement in Pneumatic Tool Appliances, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming part of this specification, in which—

Figure 1 is a side elevation of my improved pneumatic tool appliance. Fig. 2 is a front elevation of the same, partly broken away. Fig. 3 is a vertical section, and Fig. 4 is a top plan view.

My invention relates more especially to the pneumatic tools which are employed for removing the surface scale from armor-plates and other metal plates, though it may be used for other purposes, and is designed to provide an appliance whereby a single operator may handle several of these tools simultaneously, thus doing away with the necessity of an operator for each tool, as formerly.

To that end it consists in a suitable inclosing case or support in which are movably or loosely supported several of these pneumatic tools, together with means whereby the operator may move the case over the plate or other article operated upon. It also consists in the construction and arrangement of the parts as hereinafter more fully described, and set forth in the claims.

In the drawings, 2 represents a cylindrical case having end caps or heads 3 and 4 and containing within it the pneumatic tools 5, of which I have shown four, though any desired number may be used. The chisels 5′ of the tools pass through square holes in the lower cap, so as to keep them in the same relative working position. The tools themselves rest upon the lower cap 4 and are held in suitable position by spacing-plates 6 6, which fit neatly within the case and are provided with suitable holes for the tools, these plates being preferably held in place by pins projecting from the upper and lower head of the case, respectively. The neck of each tool is provided with an encircling ring 7, the upper face of which gives a bearing for the lower end of a spiral spring 8, which surrounds the neck of the tool, and at its upper end bears against the inner shoulder of a screw-cap 9, which engages suitable screw-threads in the top cap, through which it passes. The air-tubes 10 pass through the holes in the screw-caps 9, and by means of these screw-caps the pneumatic tools are confined between the upper and lower heads of the casing with a yielding pressure, which may be easily regulated by means of said caps. The flexible air-tubes 10 extend downwardly to suitable T connections 11, secured to the side of the case, suitable cocks 12 being provided for each tube, together with a release-cock 13 below the T connection.

Secured to the case by four inclined standards 14 is an upper ring 15, having upon each side an eye 16. Upon each side of the case is secured a forked standard 17, having a slot through which the securing-bolts 18 pass, so that it may be adjusted upon the case, each leg of the one standard being connected with the corresponding leg of the other by a transverse shaft provided with a roller 19. The legs of each standard are connected with each other by a bar 20, each bar having a hole with which engages the lower end of a forked handle 21. The handle is provided with a series of holes 22, any one of which may be engaged by the bent end of the link 23, the other bent end of which enters one of the eyes 16 upon the upper ring.

The operation of the device is apparent. The air passing in through a main tube connected at the point 24 passes through the several flexible air-tubes to the pneumatic tools and operates the same, the operator moving the case with its tools over the surface of the plate by the handle 21. The air under pressure passing to the pneumatic tools is exhausted from these tools in the usual way and passes out through holes in the frame or case. This handle can be changed from one side of the appliance to the other by merely removing the link 23, springing the lower ends of the handle out of the holes of the bars 20, and then connecting the parts in the same way upon the opposite side. The standards with their rollers and connecting-bars support the appliance in proper posi-

tion, whether in the intermediate portion of the plate or at the corner or edge, where without the supports it would be difficult to hold the appliance in position.

The advantages of my invention result from the fact that one operator may handle several tools with as much ease as he formerly did one, thus greatly decreasing the cost of removing the scale and making the operation much quicker.

The device is comparatively simple, the tools are easily inserted and replaced, and it is not liable to get out of order.

Within the scope of my invention as defined in the claims changes may be made in the form and arrangement of the parts.

What I claim is—

1. The combination with a portable self-sustaining frame or support arranged to rest upon the material operated upon, of several pneumatic tools having their shells vertically movable therein, means for applying a yielding pressure to such shells and fluid connections for said tools, substantially as described.

2. The combination with a portable self-sustaining case arranged to rest upon the material acted upon, of several pneumatic tools having their shells vertically movable therein, and springs between the tools and the upper part of the case, arranged so that a yielding pressure is brought upon the shells of the tools; substantially as described.

3. The combination with a portable self-sustaining case arranged to rest upon the material operated upon, of several pneumatic tools having their shells vertically movable therein, means for applying a yielding pressure to such shells, and forked standards secured to the case and having connecting-bars, substantially as described.

4. The combination with a portable self-sustaining case arranged to rest on the material operated upon, of several pneumatic tools having their shells vertically movable therein, means for applying a yielding pressure to such shells, and supports at each side of the case, said supports having rollers between their lower ends, substantially as described.

5. The combination with a portable self-sustaining case arranged to rest on the material operated upon, of several pneumatic tools having their shells vertically movable therein, means for applying a yielding pressure to such shells, and a ring above the case and secured thereto, said ring acting as a handle, substantially as described.

6. The combination with a portable, self-sustaining case having several pneumatic tools therein, of screw-caps in the top of the case registering with each tool, and springs placed between the screw-caps and the tools, so as to bring an adjustable yielding pressure upon such tools; substantially as described.

7. The combination with a case having several pneumatic tools therein, of holes in the case registering with the tools and of sufficient size for the tools to be drawn out therethrough, screw-caps adjustably held in said holes, and springs between the screw-caps and the tools; substantially as described.

In testimony whereof I have hereunto set my hand.

JOHN LANZ.

Witnesses:
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H. M. CORWIN.