

(No Model.)

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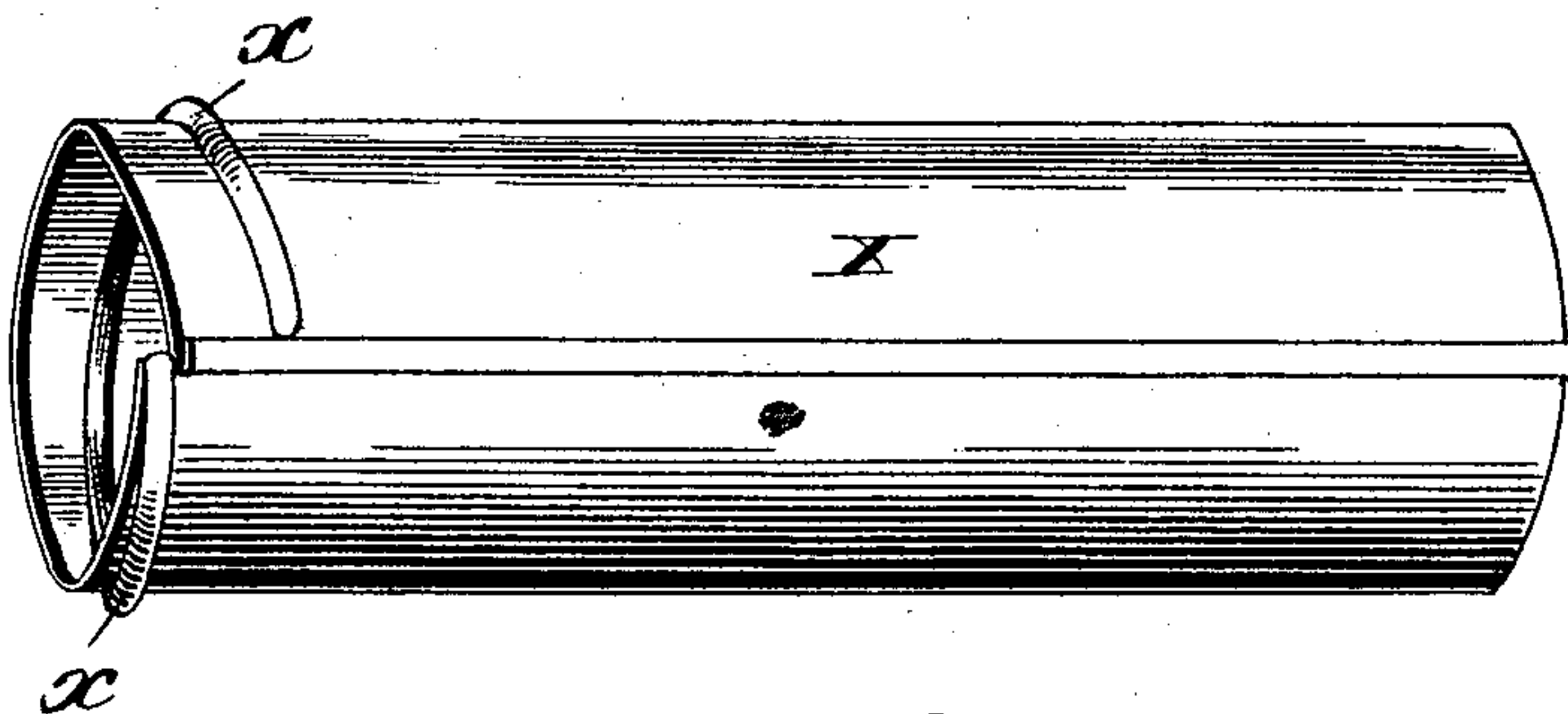
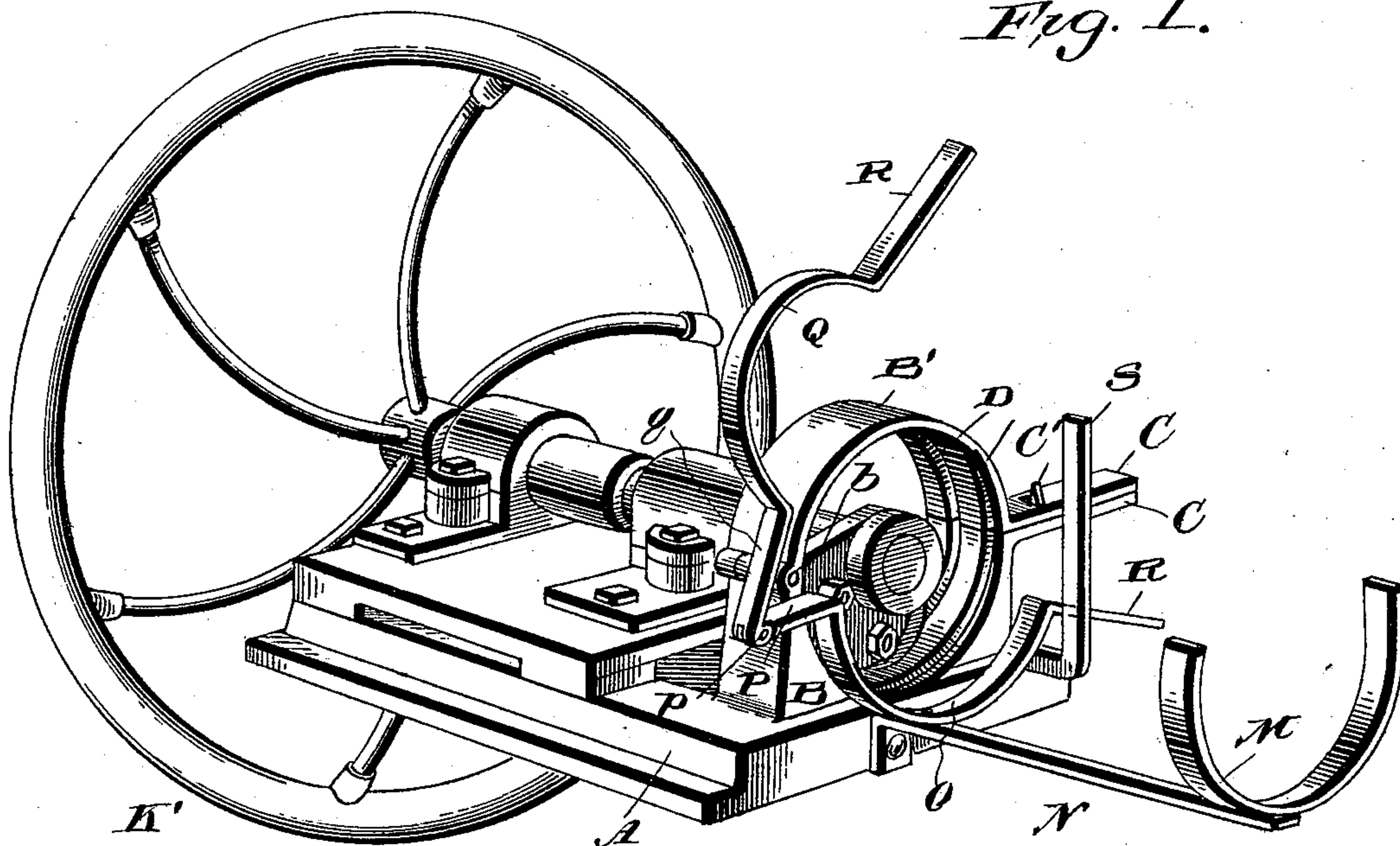
J. A. NELSON.

MACHINE FOR MAKING SCREW JOINTS IN STOVEPIPES.

No. 583,766.

Patented June 1, 1897.

*Fig. 1.*



*Fig. 2.*

*Witnesses:*

*L. C. Hills.*  
*J. M. Pfeiffer*

*Inventor:*

*John A. Nelson,*  
*by Franklin H. Hough*  
*Att'y.*

(No Model.)

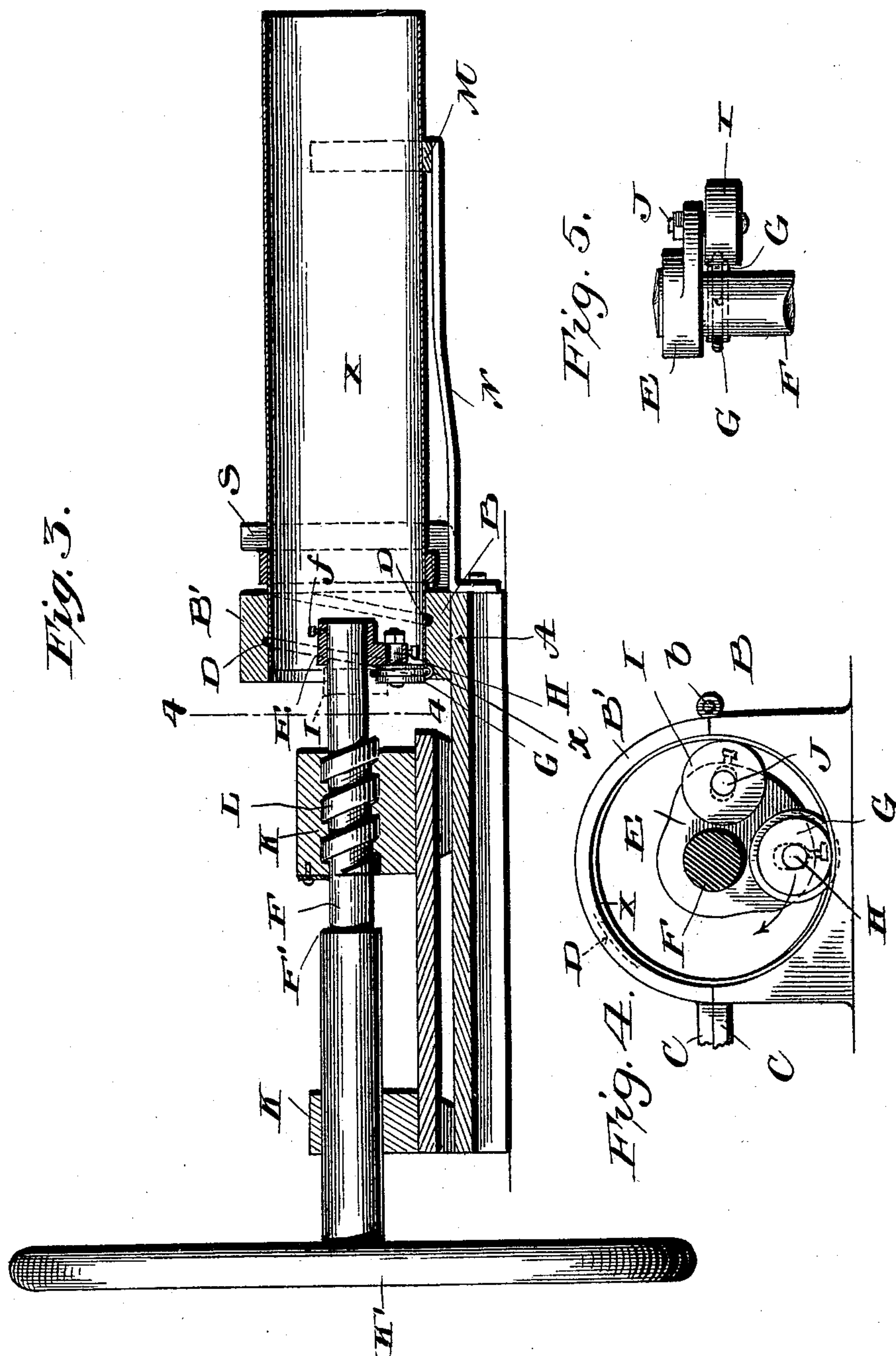
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L. C. Mills.  
J. M. Pfeiffer

Inventor:  
John A. Nelson,  
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# UNITED STATES PATENT OFFICE.

JOHN A. NELSON, OF NEBRASKA CITY, NEBRASKA, ASSIGNOR OF ONE-HALF  
TO HENRY SCHWAKE, OF SAME PLACE.

## MACHINE FOR MAKING SCREW-JOINTS IN STOVEPIPES.

SPECIFICATION forming part of Letters Patent No. 583,736, dated June 1, 1897.

Application filed November 25, 1896. Serial No. 613,431. (No model.)

*To all whom it may concern:*

Be it known that I, JOHN A. NELSON, a citizen of the United States, residing at Nebraska City, in the county of Otoe and State of Nebraska, have invented certain new and useful Improvements in Machines for Making Screw-Joints in Stovepipes; and I do 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, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form a part of this specification.

15 This invention relates to certain new and useful improvements in forming screw-joints in stovepipes and the like; and it has for its object, among others, to provide a simple and cheap device for this purpose that can be readily set up in any desired position—for instance, as a bench-tool—and by which the screw or spiral web and groove can be quickly formed. The apparatus is composed of few parts—those readily assembled and not liable to get out of order. It may be operated by hand or by any suitable motive power. The beader carries or is followed by a smoother to smooth down any inequalities that may be left by the beader. The pipe is held fixedly, while the head carrying the beader and smoother are moved forward by a screw of the same pitch as the threads to be formed on the pipe. Suitable means are provided for holding the pipe while being operated upon and permitting of its ready removal when completed.

40 Other objects and advantages of the invention will hereinafter appear, and the novel features thereof will be specifically defined by the appended claims.

45 The invention in this instance resides in the peculiar combinations and the construction, arrangement, and adaptation of parts, all as more fully hereinafter described, shown in the drawings, and then particularly pointed out in the claims.

50 The invention is clearly illustrated in the accompanying drawings, which, with the letters of reference marked thereon, form a part of this specification, and in which—

Figure 1 is a perspective view of my im-

proved machine shown in position to receive a pipe. Fig. 2 is a perspective view of a length of the completed pipe. Fig. 3 is a vertical longitudinal section through the machine and a pipe therein. Fig. 4 is a vertical cross-section through the same on the line 4 4 of Fig. 3. Fig. 5 is a top plan of the head removed.

Like letters of reference indicate like parts throughout the several views.

Referring now to the details of the drawings by letter, A designates the base-plate, upon which the operating parts are supported. At one end of this base is the die B, which may be of any required size, the lower half being preferably formed integral with the base and the upper half B' hinged thereto, as seen at b, so that it may be turned up after the screw has been formed on the pipe, so that the latter may be easily removed and another inserted in its place. The upper and lower parts of the die are provided with the extensions C, which are designed to be held to secure the two parts of the die firmly in their closed position. In this instance I have shown a spring-latch C' for this purpose, but this is but one of the many means that may be employed. On the inner face of this die is a screw D of the size to be pressed on the pipe, commencing at the inner edge and terminating at the outer edge of the die, as shown best in Fig. 3.

E is the head. It is secured to the shaft F in any suitable manner, in this instance shown as held by the set-screw f, engaged in the hub of the head, so that the latter may be easily removed when necessary. This head is preferably of the shape shown best in Fig. 4 and carries the beader and the smoother. As shown best in Figs. 4 and 5, the beader G is carried by the stub-shaft H, extending laterally from the head, and is of the proper depth to form the screw of the required depth in the pipe. It is removably mounted, as shown, as is also the smoothing-roller I, as seen in Fig. 4, which is carried by the stub-shaft J, projecting from the head, the smoother being so situated or disposed with relation to the beader as to follow the same and smooth or press down any inequalities or roughness caused by the beader. It is of sufficient



width to cover the screw formed by the beader, as seen best in Fig. 5.

The shaft F is mounted in suitable bearings K on the base-plate, and at its outer end it is provided with the hand-wheel, one revolution of which is all that is required to form the screw on the pipe. This shaft is provided with a screw L, engaging a corresponding threaded socket in the bearing, in which it is mounted to revolve, as seen in Fig. 3. Turning of the wheel K' causes the shaft to revolve and to advance, so that the beader is made to advance and form the screw on the pipe.

X represents the pipe. It is placed in position with its end entered in the female die, as seen best in Fig. 3. It is there firmly held while being acted upon. It is supported near its outer end in the substantially semicircular support M, which is mounted on the horizontal arm N, secured to the base-plate, as shown, while its inner end rests in the substantially semicircular arm or support O, mounted on the said arm N and having at one end the lateral extension P, to which is hinged, as at p, one end of the lateral extension q of the reversely-curved arm Q, and each of these arms has at the other end the extension R, which serve as handles by which the curved portions may be held about the end of the pipe in proximity to the point where the screw is being formed in the said pipe, and then the upper one turned upon its hinge to allow of the easy removal of the pipe.

S is a bracket-arm provided for the purpose of holding the clamp-arms R stationary, which prevents the pipe from moving longitudinally when the threads are being formed.

With the parts constructed and arranged substantially as described the operation will be readily understood and, briefly stated, is as follows: The upper portion of the die and the curved arm Q are thrown up and the end of the pipe inserted in the die, after which the upper part of the die is thrown down and held by the spring-latch or the other means employed for this purpose, and then the upper part of the clamp is thrown down and held by the hand or otherwise. The wheel K' is then

given a revolution, and the shaft F is revolved and at the same time advanced by reason of its screw L, and this gives to the beader a rotary and advancing motion, and thus the screw is formed on the pipe, as seen at x. The smoother, following in the wake of the beader, smooths down any roughness or inequalities that may have been caused by the beader. The shaft F is formed with a shoulder F' to limit the movement of the shaft and prevent more than one revolution of the wheel.

The beader is adjusted by its set-screw so that the impression can be made deep or shallow, as may be required. The smoother is likewise adjusted by its set-screw in accordance with the adjustment of the beader.

Modifications in detail may be resorted to without departing from the spirit of the invention or sacrificing any of its advantages.

What is claimed as new is—

1. In a machine for forming threads on pipes, the combination with the shaft F, having removably held to the end thereof the plate B, of the thread-forming wheel G, adjustably held to the said plate, and the flat-circumferenced adjustable wheel I carried on the stub-shaft on the said plate, of the hinged die-plates B and B', the free ends of which are adapted to be locked together by means of the spring-actuated catch C', substantially as shown and described.

2. In a machine for threading pipes, the combination with the main shaft and die-plates, of the clamp-bands O and Q, pivoted together at their corresponding ends, of the bracket member S, secured to the base of the machine, and adapted to hold the said clamping-arms against any lateral movement thereof, while the threads are being formed, substantially as shown and described.

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

JOHN A. NELSON.

Witnesses:

E. F. WARREN,  
F. H. RILEY.