

No. 864,817.

J. B. WISE.

PATENTED SEPT. 3, 1907.

SHEET METAL HANDLE.

APPLICATION FILED OCT. 27, 1906.

Fig. 1.

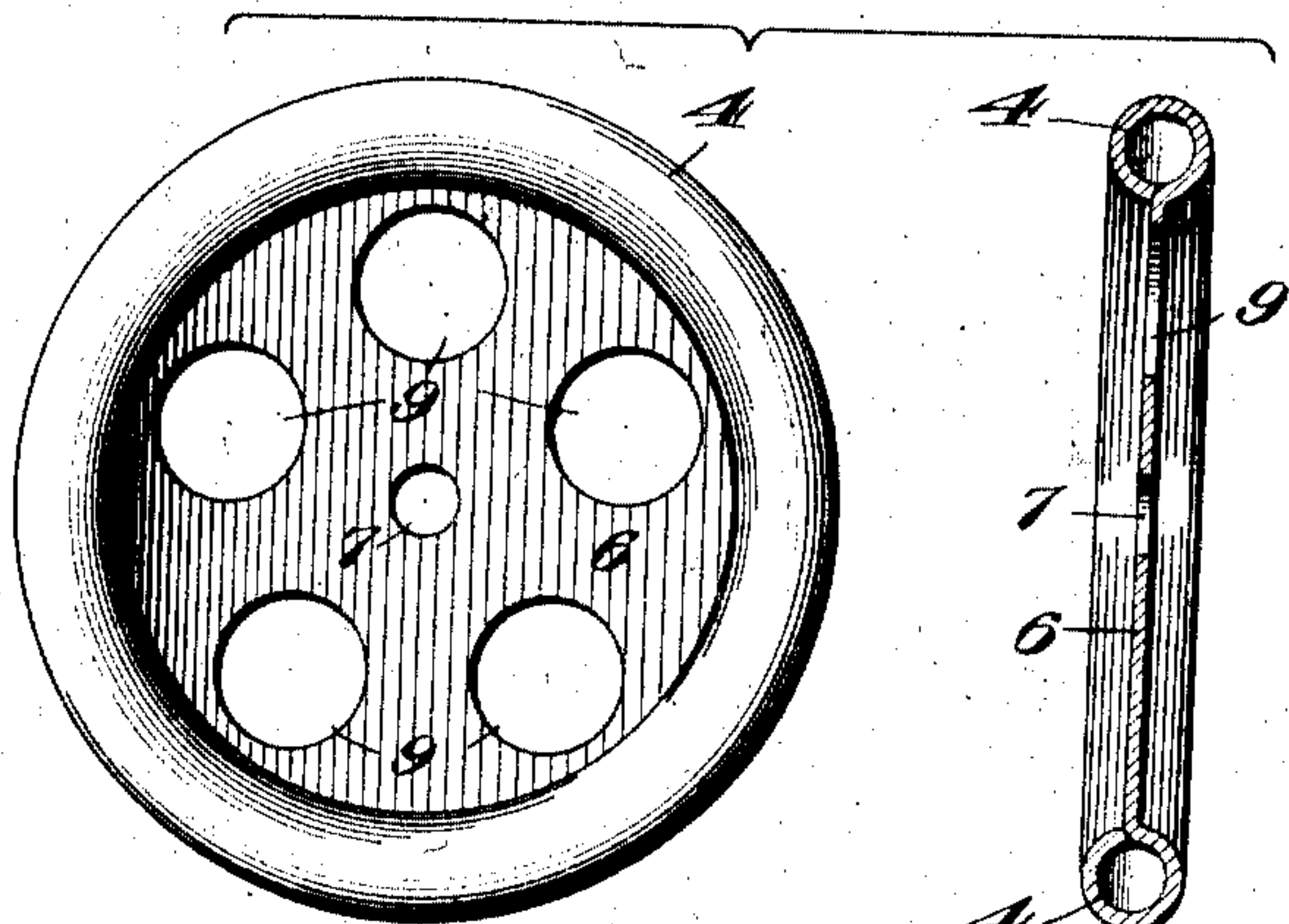


Fig. 2.

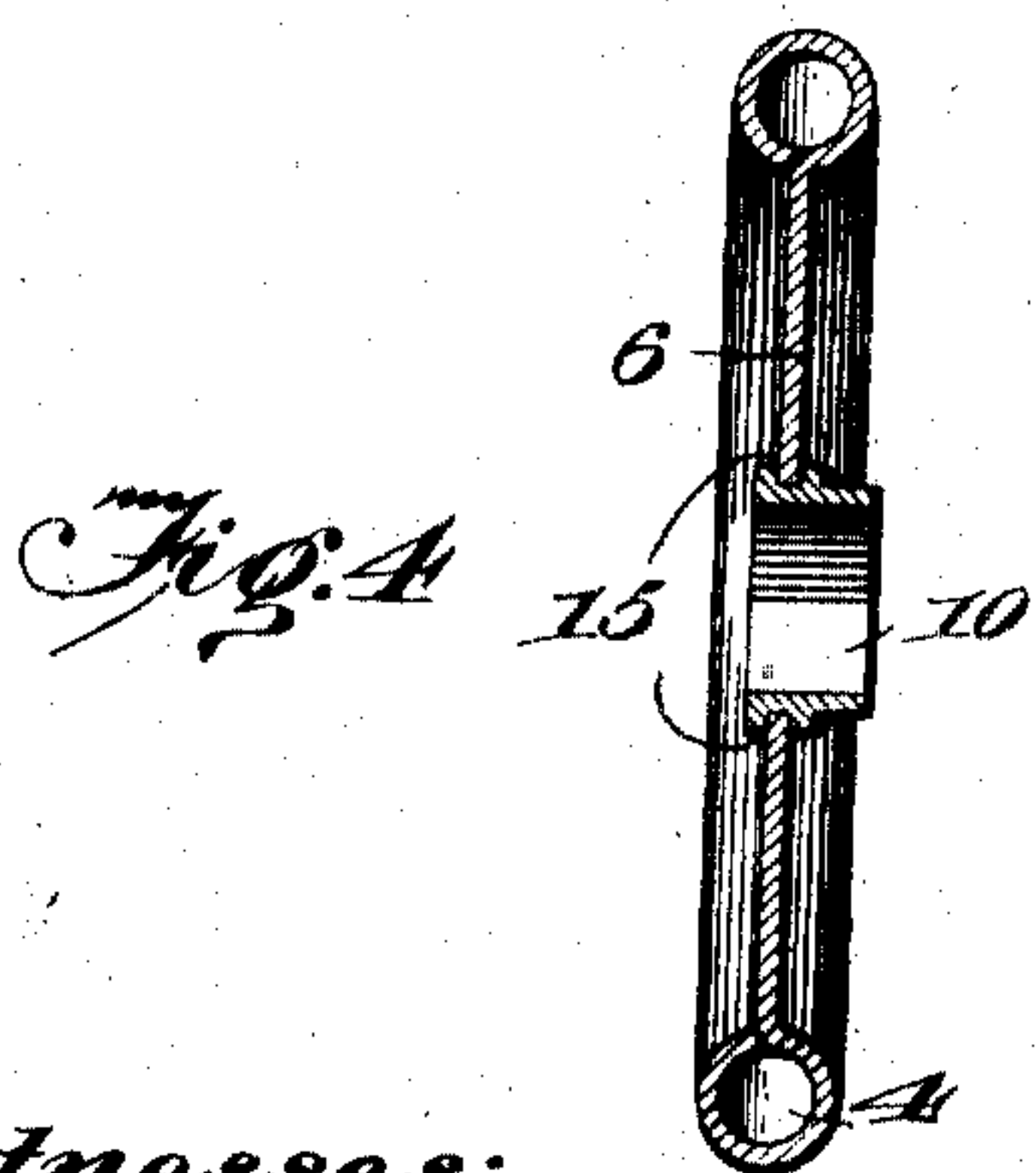
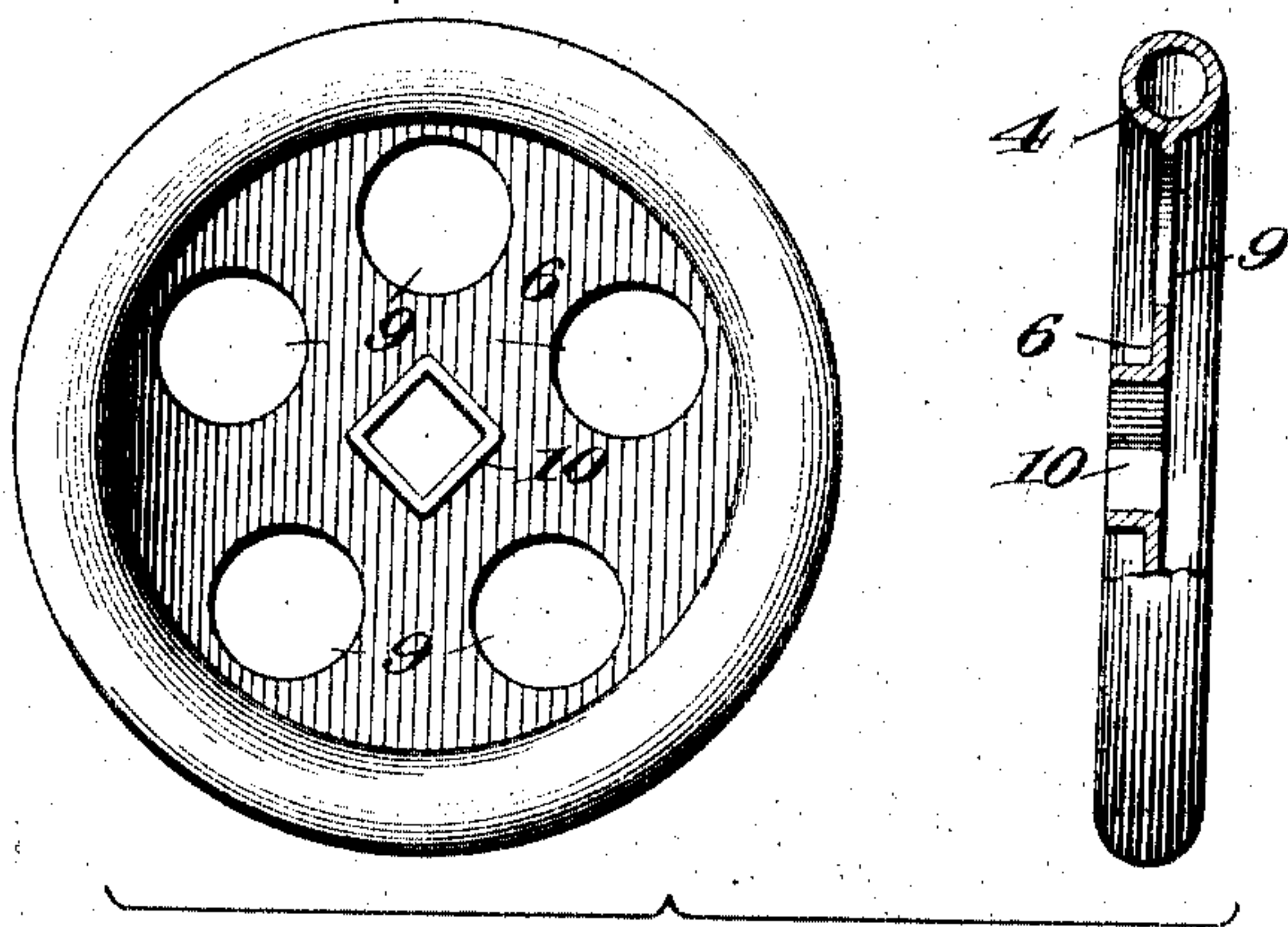
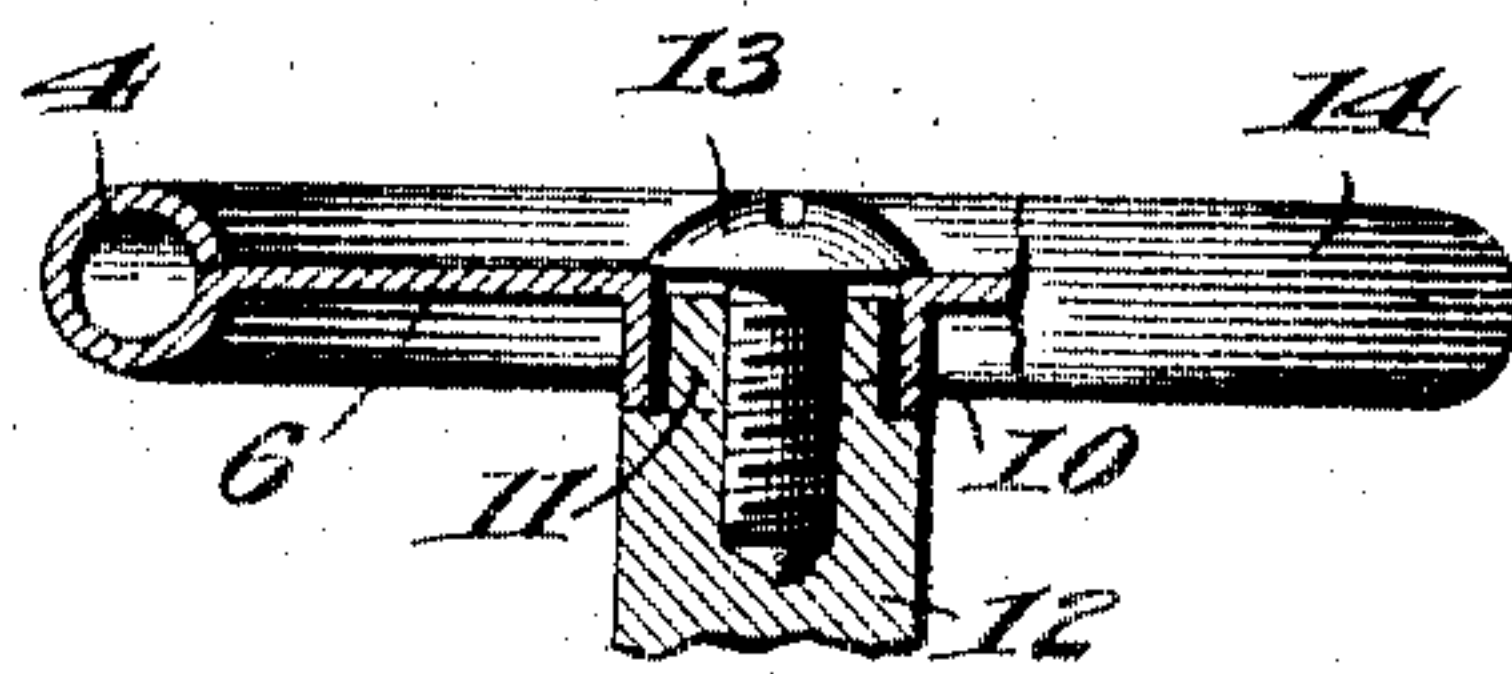


Fig. 3.



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UNITED STATES PATENT OFFICE.

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SHEET-METAL HANDLE.

No. 864,817.

Specification of Letters Patent.

Patented Sept. 3, 1907.

Application filed October 27, 1906. Serial No. 340,794.

To all whom it may concern:

Be it known that I, JAMES B. WISE, a citizen of the United States, residing at Watertown, in the county of Jefferson and State of New York, have invented certain new and useful Improvements in Sheet-Metal Handles, of which the following is a specification.

This invention relates to improvements in handles, designed for use in connection with the operating parts of machinery generally, and the invention relates particularly to a sheet metal handle for employment on valves and other like parts, in place of the old style or make of cast and composition handles.

The object of this invention is to provide a handle for use in manually operating valves and like mechanism, which is formed entirely out of sheet metal of any suitable kind or gage, and wherein but one sheet or piece of metal is employed in making the same.

A further object of the invention is to provide a handle of the class which is simple and strong, and which can be produced from lighter material and at less expense than any of the old forms of handles employed for the same purpose.

Features and parts of the invention will be readily understood from the detail description which follows, and by reference to the accompanying drawings which form a part of this specification, and in which

Figure 1 is a plan view and section, showing a central hole or perforation; also showing a series of larger perforations or holes disposed around the center of the handle; Fig. 2 is a plan view and partial section of the back of the handle, showing the central hole in the blank made square, to receive the squared end of the operating stem or rod of a valve; Fig. 3 is a view partly in elevation and partly in section, showing the handle secured to the end of an operating stem or rod; also showing means for holding the handle in place on said stem, and Fig. 4 is a view, showing a modified form of handle, having a bushing of thin metal secured in rigid position in the center of the handle, instead of the integral sleeve shown in Figs. 2 and 3.

Similar characters of reference are assigned to corresponding parts throughout the several views.

Any suitable kind of gage of sheet metal may be employed for constructing my handles, but I prefer to use for the purpose tough sheet brass or bronze, or soft sheet metal. Aluminium or soft sheet-iron may also be employed with good results.

In the drawing, the numeral 4 represents the hollow rim of the handle, which is formed integrally with the web 6 disposed centrally between the opposite sides of the hollow rim, as shown in section in Figs. 3, 4, 5, 6 and 7.

7 represents a circular opening or perforation which is made through the center of web 6, and 9 9 indicate a series of larger perforations or holes made through the web between the central hole 7 and the hollow rim 4.

The holes 9 are provided for the purpose of reducing the weight of the handle, and also for the purpose of facilitating the turning or operating of the handle, as by the use of a lever or other device inserted through said holes, at times when direct manual power is not sufficient to operate the handle.

10 represents a sleeve formed on the back of the handle, integral with the web, and which is preferably square or angular, in cross section, outside and inside. This sleeve is provided with a square or angular hole or opening adapted to fit the squared or angular shaped end 11 of a valve stem or other operating part 12. These parts are made square to prevent the handle from turning on the stem. The length of the sleeve may be varied to suit the requirements of the different sizes of handles. On handles of the size shown in the drawings herein, the sleeve should preferably be about one-fourth of an inch in length.

13 represents a screw employed for securing the handle to the end of the stem 12. The threaded portion of screw 13 fits a threaded hole in the end of stem 12, and the head of the screw should be large enough in diameter to completely cover or conceal the square hole in center of the handle and have a solid bearing on the face side of the web 6. Any other suitable means may be employed for securing my handle to an operating stem, if desired.

14 represents the nurling of the outer edge of the hollow rim (shown in Fig. 3), which makes an uneven or irregular gripping surface and is intended for increasing the grip or purchase of the hand that operates the handle. The nurling may be effected by a suitable machine, or otherwise.

In Fig. 4 I have shown a view of a modified handle, in which the novel features consist principally in constructing the sleeve 10 as a separate part, preferably a piece of metal tubing, which is inserted through hole 7 in the center of the disk or web, and then clenched to the web by upset portions 15 of the tube as shown in said figure. A square tube may be employed for this purpose in the first instance; after hole 7 has been squared; or a round tube may be used, and after the same has been secured, as described, the sleeve and the circular hole 7 may be formed square or made angular in cross section by suitable tools, providing the metal is soft and pliable enough for the purpose.

Having described my invention and set forth its merits, what I claim is:—

1. A handle of the class described, comprising a web of sheet metal having a hollow annular rim integrally formed on said web with the edge of said rim terminating substantially in the plane of the web, and a centrally disposed sleeve extending from said web on the side thereof on which the edge of the annular rim terminates, substantially as described.

2. A handle of the class described, comprising a web of sheet metal having a hollow annular rim integrally formed on said web with the edge of said rim terminating sub-

stantially in the plane of the web, a centrally disposed portion of said web being projected beyond the plane of the web on the side thereof on which the edge of the annular rim terminates, to form a centrally disposed sleeve, substantially as described.

3. A handle of the class described, comprising a web of sheet metal having a hollow annular rim integrally formed on said web with the edge of the rim terminating substantially in the plane of the web, a centrally disposed sleeve extending from said web on the side thereof on which the edge of the annular rim terminates, said sleeve being concentric with a centrally disposed opening in the

web, a stem fitting in said sleeve, and a headed screw entering said stem from the side of the web opposite to that on which said sleeve is formed, the head of said screw being of a diameter sufficient to cover the opening in said web, substantially as described. 15

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

JAMES B. WISE.

Witnesses:

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L. C. MITCHELL.