

No. 750,828.

PATENTED FEB. 2, 1904.

J. DESMOND.
TOOL FOR DRESSING EMERY WHEELS.

APPLICATION FILED MAY 25, 1903.

NO MODEL.

Fig. 1.

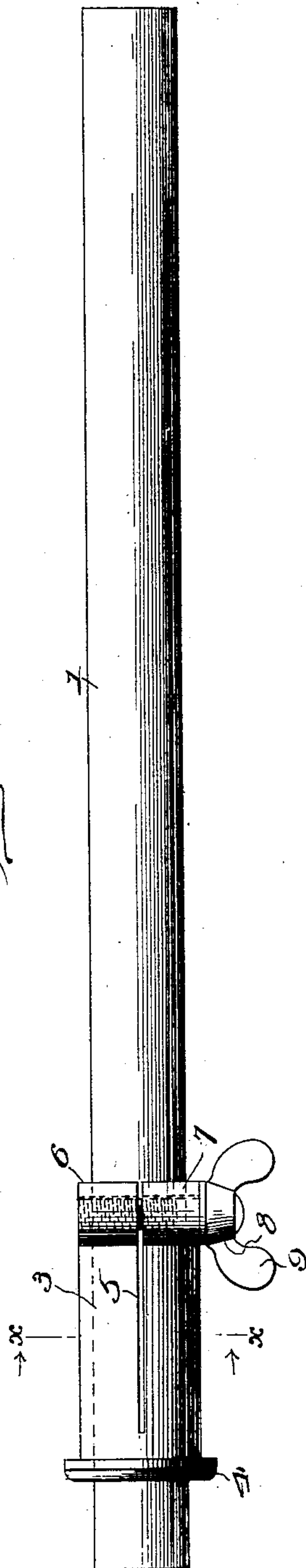


Fig. 3.

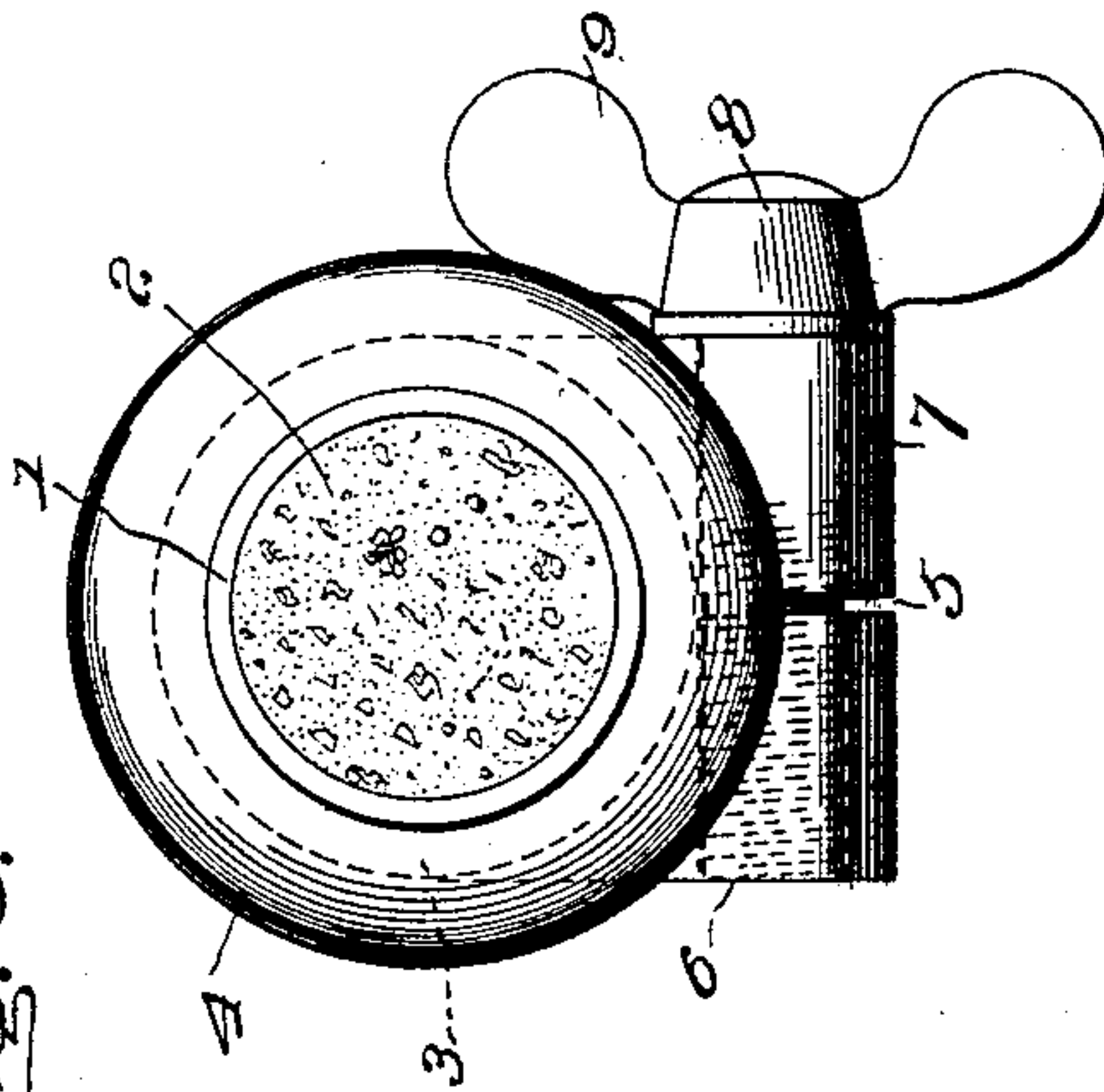
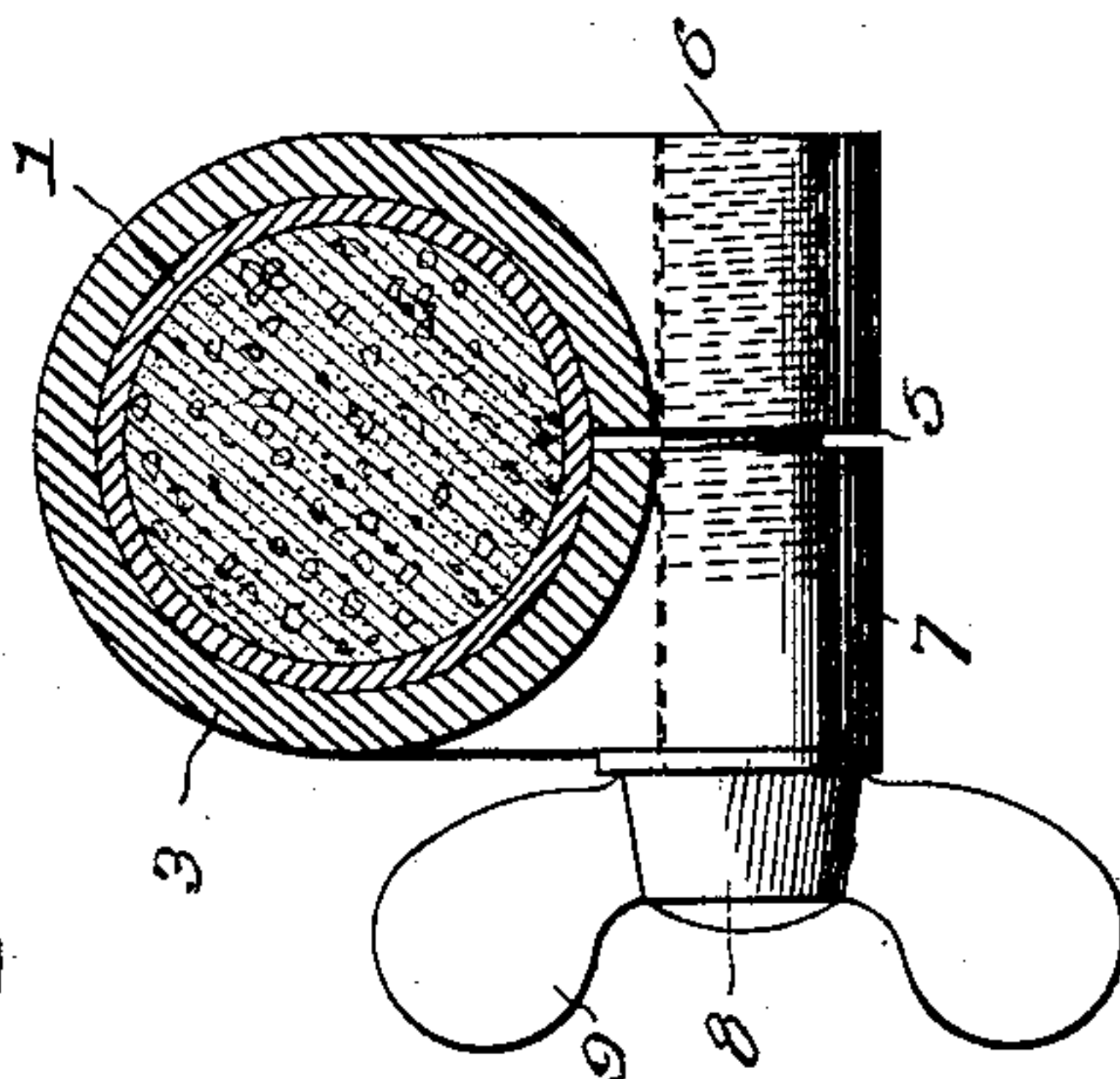


Fig. 2.



Witnesses

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UNITED STATES PATENT OFFICE.

JOHN DESMOND, OF URBANA, OHIO, ASSIGNOR TO HIMSELF, CHARLES H. STEPHAN, GEORGE W. STEPHAN, AND HENRY STEPHAN, OF URBANA, OHIO, A COPARTNERSHIP DOING BUSINESS UNDER NAME OF DESMOND-STEPHAN MANUFACTURING COMPANY.

TOOL FOR DRESSING EMERY-WHEELS.

SPECIFICATION forming part of Letters Patent No. 750,828, dated February 2, 1904.

Application filed May 25, 1903. Serial No. 158,574. (No model.)

To all whom it may concern:

Be it known that I, JOHN DESMOND, a citizen of the United States, residing at Urbana, in the county of Champaign and State of Ohio, have invented certain new and useful Improvements in Tools for Dressing Emery-Wheels, of which the following is a specification, reference being had therein to the accompanying drawings.

This invention relates to tools for dressing emery-wheels, and has for its object to provide a relatively inexpensive tool to take the place of the diamond tool usually employed in dressing such wheels, such improved tool being capable of use until practically its entire substance is worn away and being provided with means for holding it firmly in position while in use.

To these ends my invention consists in certain novel features, which I will now proceed to describe and will then particularly point out in the claim.

In the accompanying drawings, Figure 1 is a plan view of a tool embodying my invention in one form. Fig. 2 is a sectional view of the same, on an enlarged scale, taken on the line *x x* of Fig. 1 and looking in the direction of the arrows; and Fig. 3 is a front end elevation on the same scale as Fig. 2.

In carrying out my invention I provide a tubular casing 1 of any desired length, the same being constructed of any suitable substantially rigid material—such, for instance, as a metal or alloy, brass being preferred. This tubular casing is filled with a body 2, composed of a suitable abrasive and a binder. The abrasive which I prefer to employ is corundum, while the binder may be of any suitable material or metal which will not melt under the temperature generated in the dressing process. I may use as a binder cement, glass, cast-iron, or other metal or alloy. Preferably the tubular casing serves as a mold during the formation of the body 1. While the tool is in use, said tubular casing serves as a support and retaining device for the body inclosed therein.

There is mounted upon the tubular casing 1 a sleeve 3, adapted to be moved freely along said casing to any desired point and to be secured thereon after adjustment. This sleeve is provided with a flange 4, forming a stop, said flange being preferably located at the forward end of the sleeve. The means for securing the sleeve which I prefer is that shown, in which the sleeve is split longitudinally, preferably for a portion of its length only, as indicated at 5. The opposite margins of the slit are provided with lugs 6 and 7, the former of which is internally threaded to receive a clamping-screw 8, which passes loosely through the lug 7 and is provided with a winged head 9 or other means for readily turning it.

In practice the sleeve is so adjusted on the casing that when the front end of the tool is in proper operative position relatively to the periphery of the wheel to be dressed the stop-flange 4 of the sleeve abuts against the edge of the usual tool-rest, over which it is hooked, so as to enable the operator to hold the dressing-tool rigidly against the wheel. As the corundum or other abrasive wears away both the binder and the tubular casing are worn away with it, so that fresh abrasive surfaces or points are continuously presented at the front end of the tool, and the sleeve 3 is adjusted to accommodate the wear of the other parts of the tool. In this way the tubular casing and its contents may be continuously used until practically all of the same has been worn away by use. The tool is much less expensive than the usual diamond-tool and does not require such frequent renewal, at the same time doing its work with practically equal efficiency.

I do not wish to be understood as limiting myself to the precise details of construction hereinbefore described, and shown in the accompanying drawings, as the same may obviously be modified without departing from the principle of my invention.

It will be observed that the tubular casing is constructed of a metal of a character and

thickness such that the said casing is substantially rigid and will not only protect the inclosed body, so as to prevent its being fractured or crumbled under the strains to which
5 it is subjected, but will also withstand the compressing strain of the clamping devices by means of which the stop-sleeve is secured on said casing, so that the clamping of said stop-sleeve in place on the tool will not tend to
10 fracture or break up the body of the material inclosed within the tube. It will be understood, of course, that in the case where any fractures or cracks in the material within the tubular casing exist the efficiency of the tool
15 is correspondingly impaired, since the casing and the inclosed body will not then wear away gradually and uniformly throughout the length of the tool; but fragments of the filling will be broken out in relatively large
20 pieces where such fractures occur.

Having thus fully described my invention,

what I claim as new, and desire to secure by Letters Patent, is—

A tool for dressing emery-wheels and similar wheels, comprising a tubular casing of a
25 substantially rigid metal of the character described, a body molded in said casing so as to fill the same, said body being composed of a binder and an abrasive distributed with substantial uniformity throughout the body, a
30 stop-sleeve mounted on said tubular casing and movable longitudinally relatively thereto, and means for clamping said stop-sleeve in adjusted position on said tubular casing, substantially as described. 35

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

JOHN DESMOND.

Witnesses:

E. L. BODEY,
GEORGE WAITE.