

(No Model.)

2 Sheets—Sheet 1.

E. T. PRINDLE.

CARPET SWEEPER.

No. 328,610.

Patented Oct. 20, 1885.

Fig. 1.

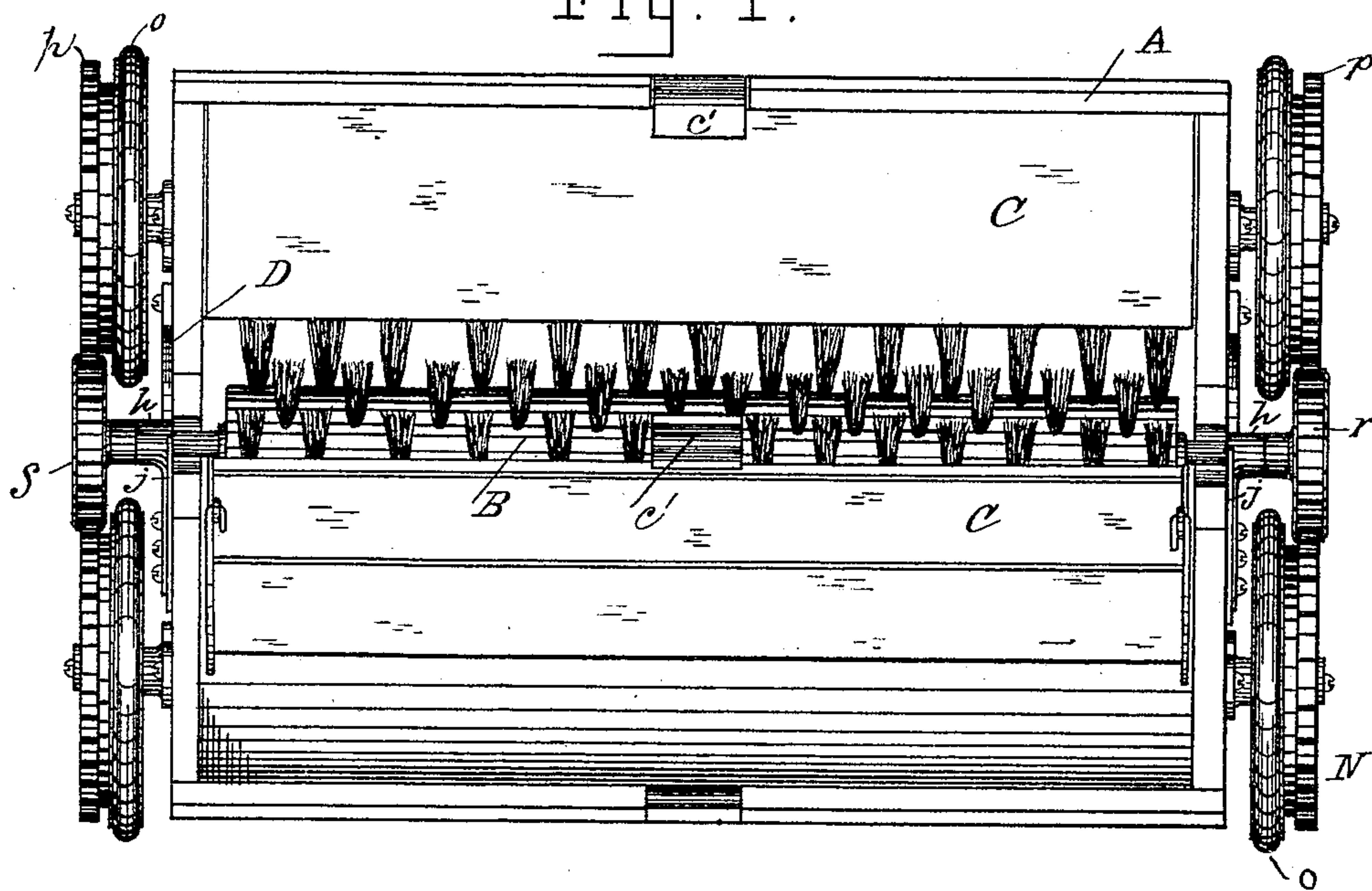
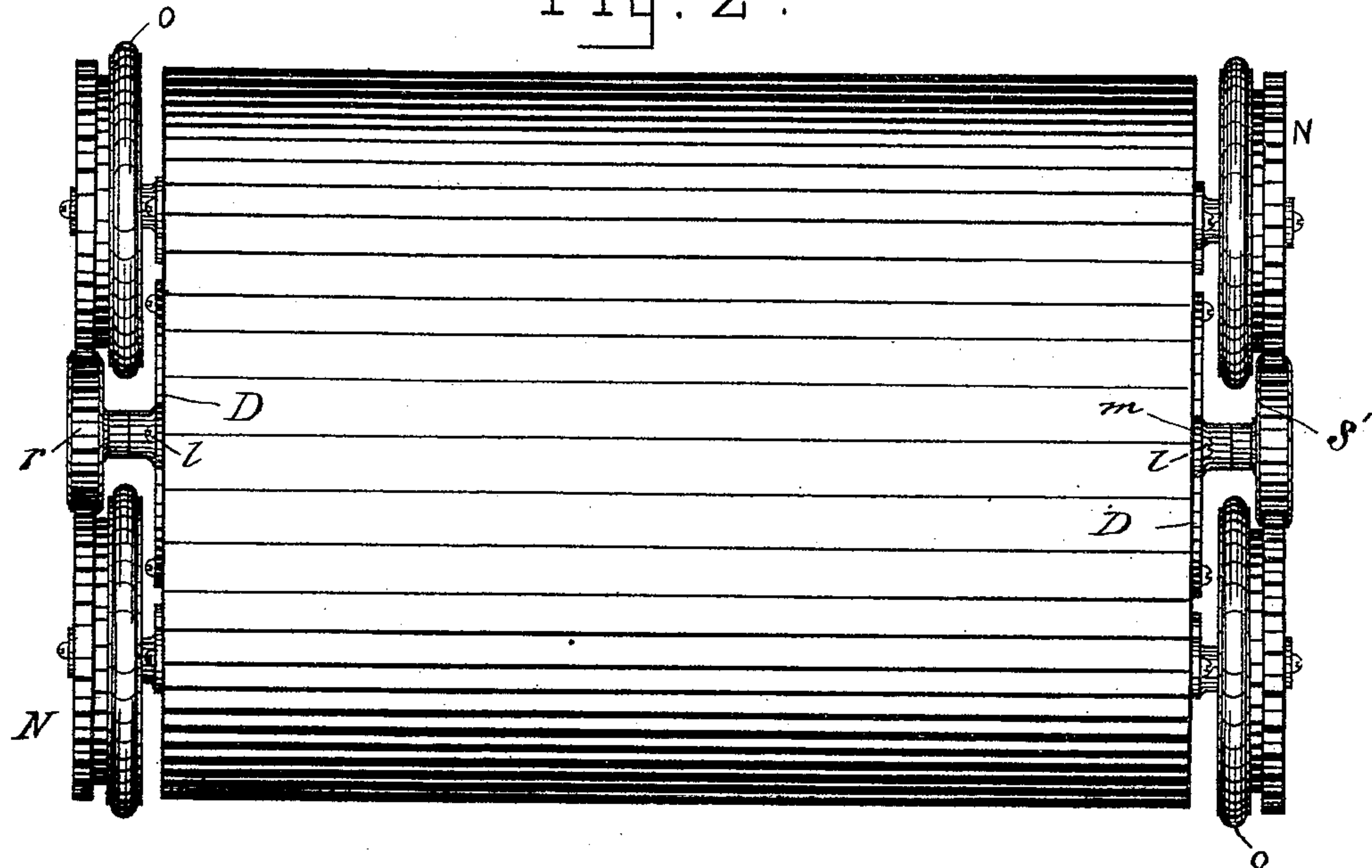


Fig. 2.



WITNESSES:

Percy White.
J. L. Brown.

INVENTOR:

Edward T. Prindle.
By John J. Hausted & Son,
his Attys.

(No Model.)

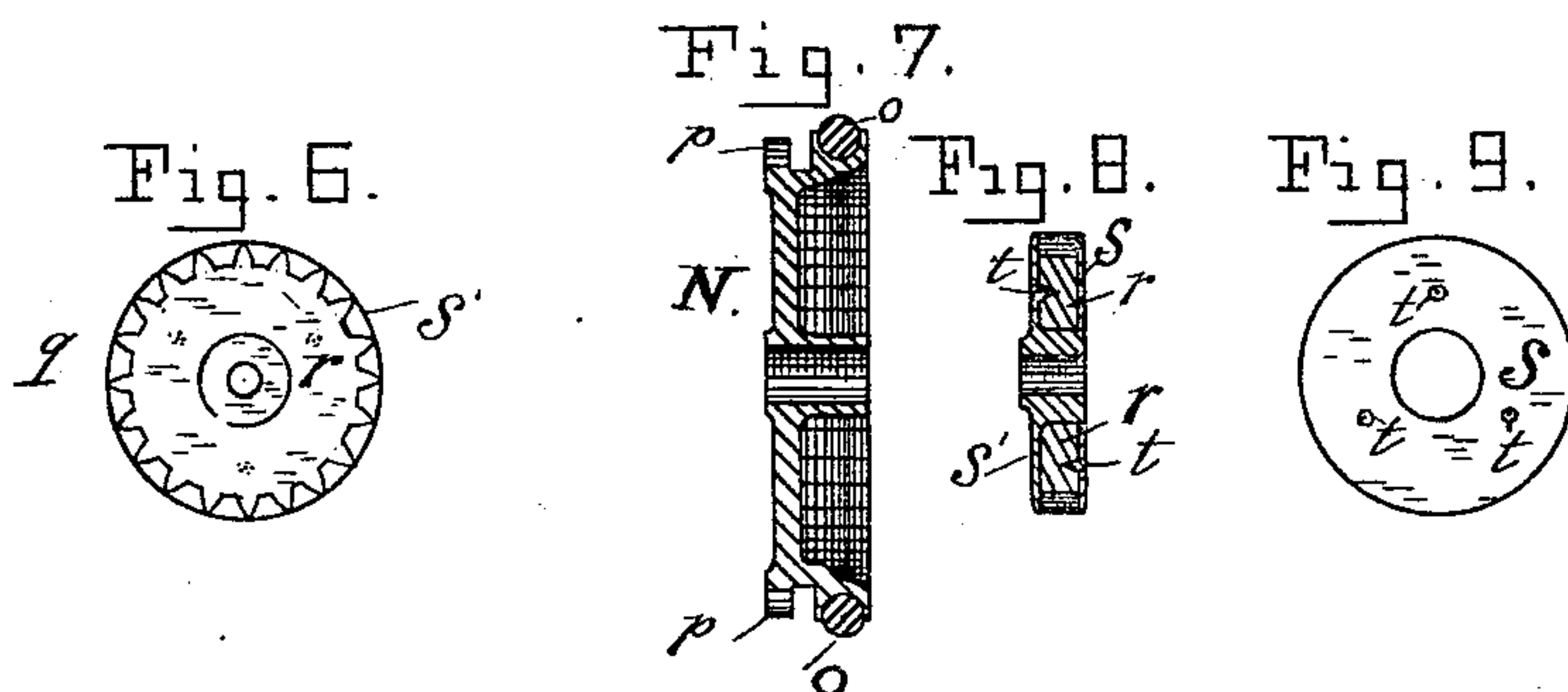
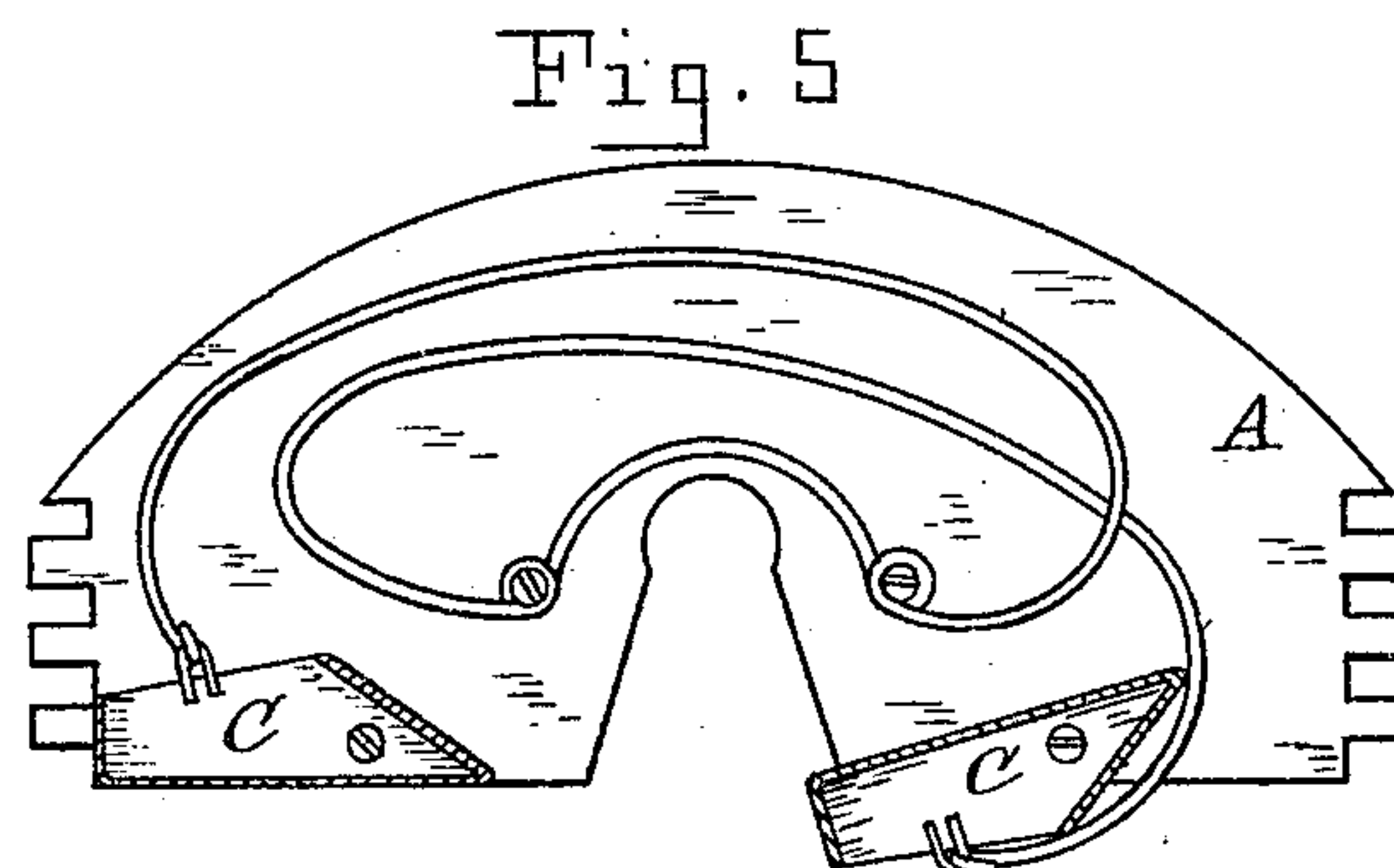
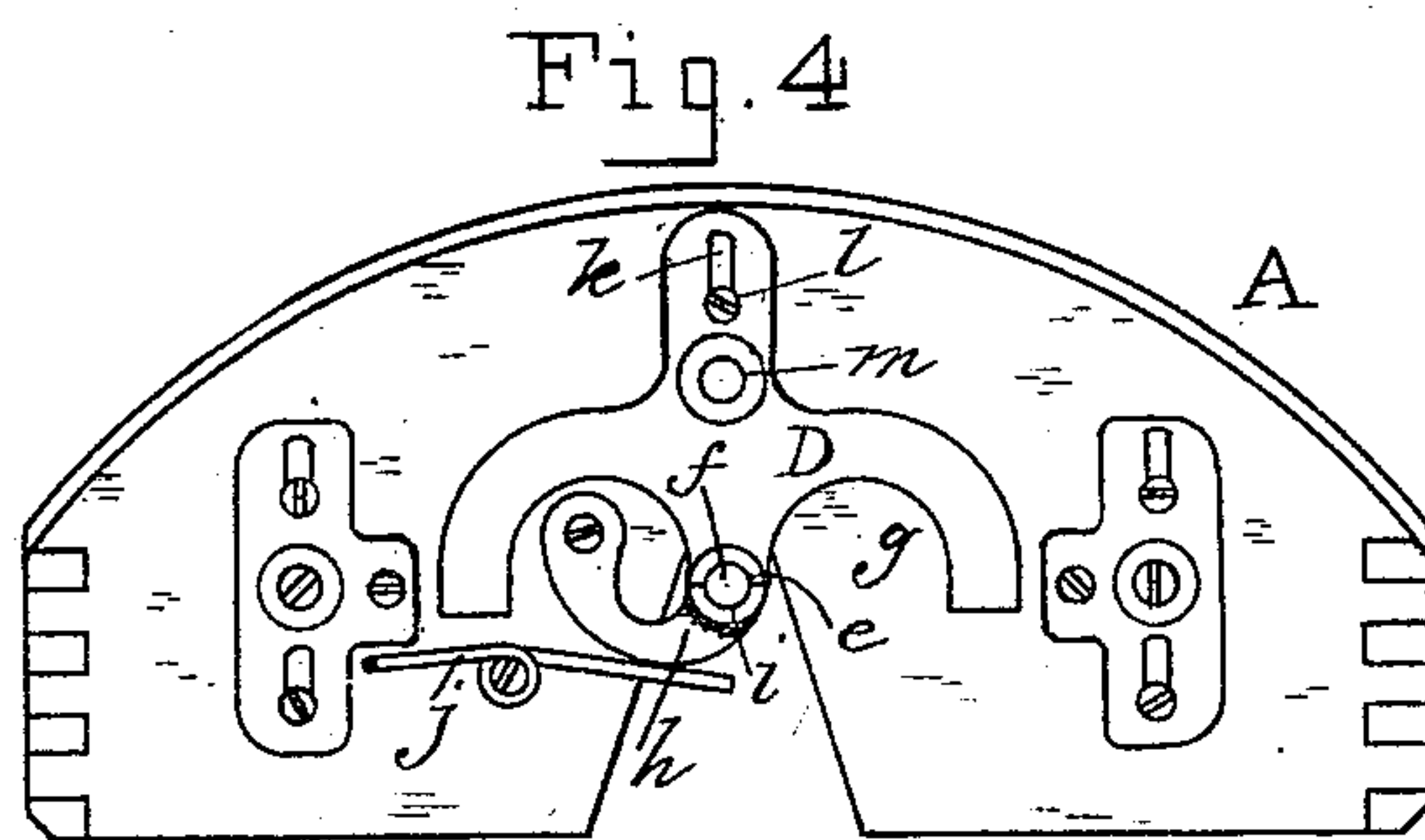
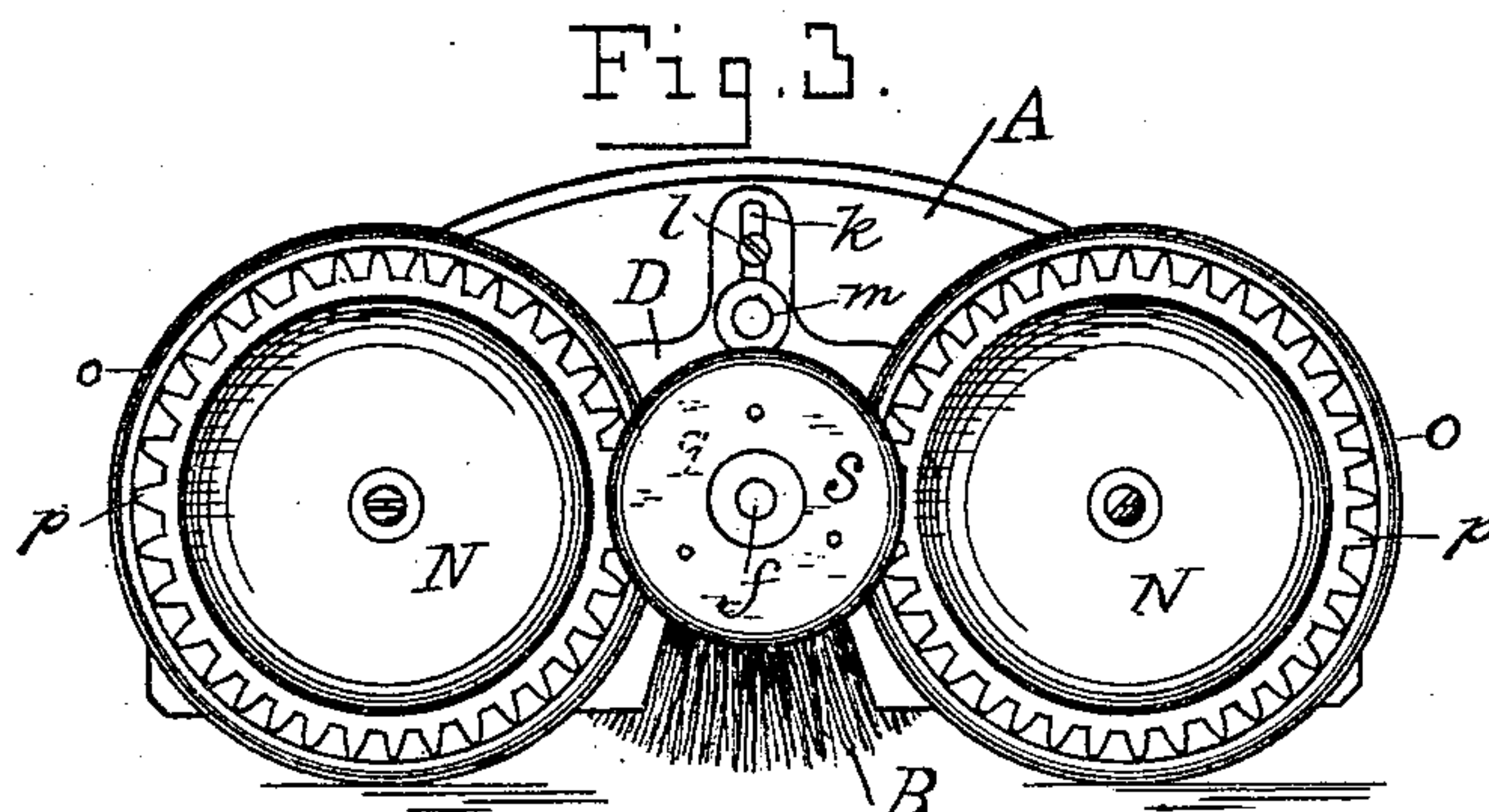
2 Sheets—Sheet 2.

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WITNESSES:

Percy White.
J. L. Brown.

INVENTOR:

Edward T. Prindle.
By John J. Skelton & Son
his Attyys.

UNITED STATES PATENT OFFICE.

EDWARD T. PRINDLE, OF AURORA, ILLINOIS.

CARPET-SWEEPER.

SPECIFICATION forming part of Letters Patent No. 328,610, dated October 20, 1885.

Application filed November 20, 1884. Serial No. 148,401. (No model.)

To all whom it may concern:

Be it known that I, EDWARD T. PRINDLE, of Aurora, in the county of Kane and State of Illinois, have invented certain new and useful
5 Improvements in Carpet-Sweepers; and I do hereby declare that the following is a full, clear, and exact description of the invention, which will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings,
10 and to letters of reference marked thereon, which form a part of this specification.

My improvements relate to the means for supporting the brush, and whereby it may be
15 readily removed for cleaning or for other purposes, to the construction of the wheels which carry the sweeper and drive the brush, and to a special construction of the driven wheel affixed to the brush or brush-shaft.

20 Figure 1 is an under side view of a sweeper embodying my improvements, one of the dust-pans being turned upside down to show it in its dust-dumping position. Fig. 2 is a top or plan view; Fig. 3, an end view; Fig. 4, an end
25 view, the wheels being removed; Fig. 5, an end view, the wheels and one end of the box being removed; Fig. 6, one of the middle wheels, one of its side plates being removed; Fig. 7, a section of one of the driving-wheels;
30 Fig. 8, a section of one of the middle wheels, and Fig. 9 a face view of the outer side of a middle wheel.

A is the case; B, the revolving brush, and C C the dust-pans having catches *c'*. For
35 supporting the brush I have devised the following devices or instrumentalities:

At each end of the case or box A, I attach a plate, D, having in its lower edge a recess, *e*,
40 or journal-bearing adapted to receive the journal or shaft *f* of the brush, and this plate has also other recesses or arches in its lower edge, as shown at *g*, to permit the pivoting to the case in one of these last-named recesses of a lever, *h*, whose extremity is concaved, as shown
45 at *i*, such concave being adapted to and bearing upward upon the shaft, thus constituting, in conjunction with the recesses *e e* in the plates D, divided journal-bearings for the brush-shaft. Springs *j*, pressing upward
50 against the free ends of levers *h*, serve to hold them and the brush in place; but whenever it is

desirable to remove the brush it is necessary merely to pull down the brush on the levers against the light force of the springs, and it is at once released at both ends alike, both of
55 the journaled bearings being similar in their construction and action. Thus there is no need of pulling the brush endwise, a movement and action which are unavoidable where either bearing is an undivided hole or socket,
60 and inasmuch as my construction, as will presently be seen, has no driving belt or cord, there is no overstraining or liability of breaking or disarranging any part in order to remove or to reinsert the brush, and the most
65 unskilled house-servant can do it without trouble and without risk of injuring the sweeper.

The plates D are adjustable up or down by means of slots *k* and suitable screws, *l*, and
70 have a boss, *m*, to receive a handle, as usual, for propelling the sweeper.

The four driving-wheels N, two at each side of the sweeper, are each, in fact, double wheels, side by side, but cast integral or all
75 in one piece, and at their larger periphery are grooved to receive noiseless rubber tires *o*, and their smaller peripheries are made with gear-teeth *p*, as shown, to engage with peculiar and noiseless gear-wheels *q* on the ends of
80 the brush-shaft. These wheels thus serve both as noiseless carriage-wheels for the sweeper, and also as geared driving-wheels for driving the brush, the construction of the gear on this brush-shaft, as will next be described,
85 being such that although directly meshing together by their gear-teeth with the metal teeth of the driving-wheels, yet no needless noise is made, as no metal teeth come in contact with each other. These brush-shaft gears *q*
90 are made as follows: That part *r* in which the teeth are formed is made of leather, rawhide, paper-pulp, or any suitable non-metallic material, and it is securely held between metal plates or disks *s s'*, which may be made by
95 drop-forging or of malleable iron, one of these pieces, *s'*, as shown, having a hub which passes through and helps to support the toothed part *r* and the part *s*, and these parts *s s'* are firmly united together to hold the part *r*
100 tightly between them, and the inner faces of the parts *s s'* are preferably made with small

pins or projections *t*, to penetrate the faces of the non-metallic part *r*, and thus prevent any slipping of the latter around the hub. If desired, pins or rivets may pass entirely through these parts *r s s'* to prevent such slipping. In such case the projections *t* would not be needed.

The diameter of the metal disks *s s'* should not be less than that of the non-metallic part *r*; but it may be greater, so as to project beyond the teeth. These teeth are thus positively prevented from being forced out of shape, and while having all the requisite freedom from noise, they have practically the solidity and strength of metal without its liability to break, and the breaking of a tooth is next to impossible, and but little, if any, lubricating material is needed.

The handle of the sweeper is not shown. It may be of any well-known kind.

I claim—

1. In a carpet-sweeper, in combination, a brush adapted to be removed from its bearings by a downward pull, and journal-bearings for the same divided horizontally and about equally, the lower half being in a lever upheld by a spring and the upper half being in the under side of plates *D*, as set forth.

2. In combination with the brush removable in the manner set forth, the vertically-

adjustable plates *D*, one at each end of the box or case, and provided with a half journal-box, the pivoted lower bearings, and springs serving to uphold such bearings, all substantially as set forth.

3. In a carpet-sweeper, wheels serving both as carriage and as driving wheels, each having a semicircular peripheral groove, a rubber tire in such groove cylindrical in cross-section, and a toothed gear made integral with the body of the wheel, as and for the purposes set forth.

4. In a carpet-sweeper, a gear-wheel composed of metal side plates or disks, *s s'*, combined with and firmly holding between them a gear or toothed wheel made of leather or its described non-metallic equivalent, these disks having a diameter substantially equal to that of the toothed part, all as set forth.

5. In combination with the case, the wheels *N*, constructed as described, the compound toothed wheels *s s'*, constructed as described, and the divided journal-boxes at both ends of the case.

EDWARD T. PRINDLE.

Witnesses:

PERCY WHITE,
C. L. HALSTED.