(No Model.)

G. H. KAVANAUGH. FLEXIBLE BROOM HANDLE.

No. 603,694.

Patented May 10, 1898.



UNITED STATES PATENT OFFICE.

GEORGE H. KAVANAUGH, OF MIDDLETOWN, CONNECTICUT.

FLEXIBLE BROOM-HANDLE.

SPECIFICATION forming part of Letters Patent No. 603,694, dated May 10, 1898.

Application filed July 15, 1897. Serial No. 644,695. (No model.)

To all whom it may concern:

Beitknown that I, GEORGE H. KAVANAUGH, a citizen of the United States, residing at Middletown, in the county of Middlesex and 5 State of Connecticut, have invented certain new and useful Improvements in Flexible Broom-Handles; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others

10 skilled in the art to which it appertains to make and use the same.

My invention relates to a novel form of swivel-handle for brooms and the like; and the object is to provide a simple and conven-15 ient device for flexibly connecting the handle to a broom.

To this end the novelty consists in the construction, combination, and arrangement of the same, as will be hereinafter more fully

20 described, and particularly pointed out in the claim.

In the accompanying drawings the same reference characters indicate the same parts of the invention.

- Figure 1 is a perspective view of my im-25 proved broom. Fig. $\hat{2}$ is a vertical section of Fig. 3 is a perspective view of the the same. socket and handle, with the broom shown in outline.
- 1 and 2 represent counterpart plates, which 30 form a socket and to which the broom material is suitably wired in the usual manner. These plates are provided with vertical conical flaring semicircular guide-flanges 3 3, 35 which receive the broom-handle 4, pivoted
- therein on a horizontal rod 5. 6 represents a curved rod extending through the corresponding orifice 7 in the handle, and its ends are riveted or otherwise secured in

40 the upper flaring ends of the flanges 3 3. 8 8 represent spiral springs encompassing

the outer ends of the curved guide-rod between the flanges and the outside of the broomhandle, so as to permit the broom to give with reference to the handle when in use. This 45 arrangement increases the flexibility of the broom, so as to accomplish the work in more satisfactory manner and with less fatigue to the operator than would be the case where the broom is stiff or rigid with the handle, as 50 is the case with the common form now in use.

While I have illustrated the invention as applied to an ordinary broom, it will be understood that it is applicable to other forms of brooms than that shown, as well as to all kinds 55 of brushes, pitchforks, spades, shovels, whitewash-brushes, and the like.

Although I have specifically described the construction and relative arrangement of the several elements of the invention, I do not 60 desire to be confined to the same, as such changes or modifications may be made as clearly fall within the scope of my invention without departing from the spirit thereof.

Having thus fully described my invention, 65 what I claim as new and useful, and desire to secure by Letters Patent of the United States, \mathbf{is}

The combination with the plates 1 and 2, provided with the vertical conical semicircu- 70 lar flanges 3 3, and a handle 4, pivoted upon said rod, of the curved rod 6 fixed in said flanges and extending through said handle, and the springs 8 8 encompassing said rod on each side of said handle, substantially as 75 shown and described.

In testimony whereof I hereunto affix my signature in presence of two witnesses. GEORGE H. KAVANAUGH.

Witnesses:

HERBERT L. STOCKING, HENRY C. EDGERTON.