(No Model.)

J. H. WESTCOTT.

CHUCK.

No. 308,541. Patented Nov. 25, 1884.

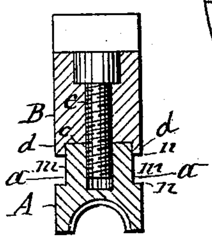

FIG-V-

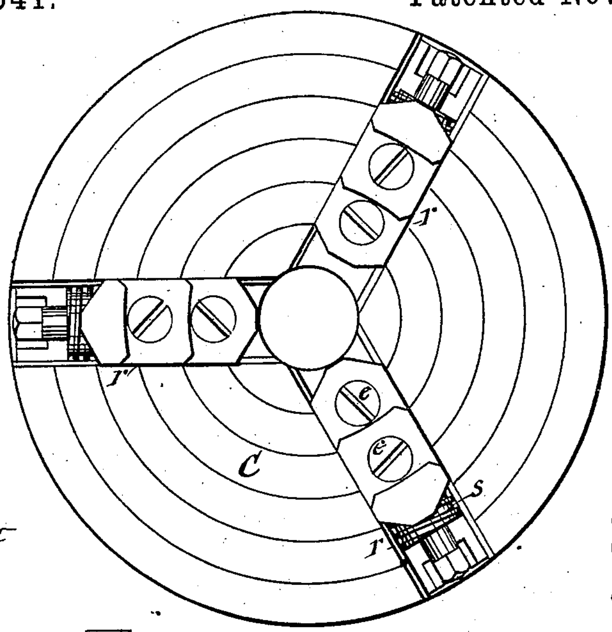

FIG-I-

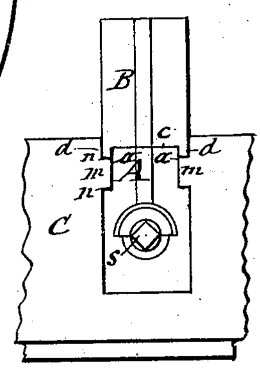

FIG-III-

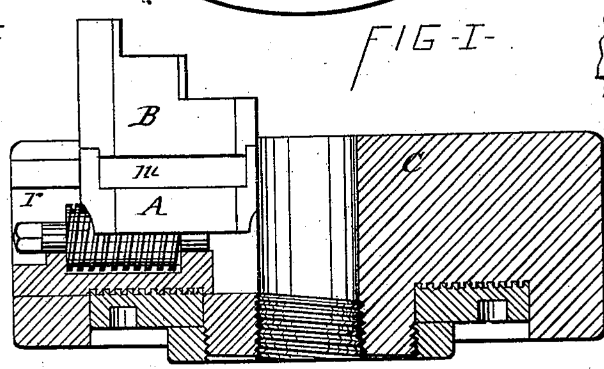

FIG-II-

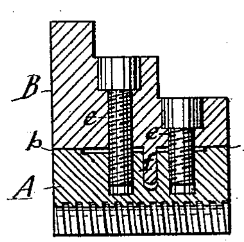

FIG-IV-

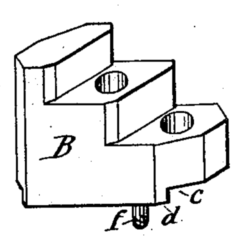

FIG-VI-

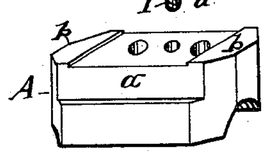

FIG-VII-

WITNESSES

C. Bendixon

Wm. C. Raymond

INVENTOR

John H. Westcott

per Duell, Laass & Hey
his attys.

N. PETERS. Photo-Lithographer. Washington, D. C.

UNITED STATES PATENT OFFICE.

JOHN H. WESTCOTT, OF ONEIDA, NEW YORK.

CHUCK.

SPECIFICATION forming part of Letters Patent No. 308,541, dated November 25, 1884.

Application filed April 7, 1884. (No model.)

To all whom it may concern:

Be it known that I, JOHN H. WESTCOTT, of Oneida, in the county of Madison, in the State of New York, have invented new and useful Improvements in Chucks, of which the following, taken in connection with the accompanying drawings, is a full, clear, and exact description.

This invention relates more particularly to the class of jaws which slide radially in grooves or ways in the chuck, the sides of said jaws being provided with corresponding shoulders or grooves for engaging with those of the chuck, so as to firmly and accurately guide the jaws. The bearing-surfaces of the aforesaid shoulders and grooves require to be fitted perfectly true and closely, so as to effectually prevent lost motion, and thus insure accurate adjustment of the work on the chuck. Inasmuch as the jaw requires to be case-hardened, it has been found difficult to obtain the desired accuracy in the fitting of the jaws to the chuck, the grooves and shoulders formed in the jaw frequently becoming distorted in the process of case-hardening, and cannot, therefore, be planed or dressed by a tool. To obviate this defect I divide the jaw longitudinally, and provide the upper or outer section with longitudinal flanges, and with a plain rectangular longitudinal groove between said flanges, and provide the other section with a rectangular longitudinal tongue, and with longitudinal shoulders along opposite sides of the tongue, which shoulders, together with the aforesaid flanges, form the channels to receive the guide-ribs in the channels of the face-plate, all as hereinafter more fully explained, and specifically set forth in the claims.

In the annexed drawings, Figure I is a face view of a lathe-chuck provided with jaws embodying my invention. Fig. II is a transverse section of the same. Fig. III is an end view of the jaw with the adjacent portion of the chuck. Fig. IV is a vertical longitudinal section of the jaw. Fig. V is a transverse section of the same, and Figs. VI and VII are perspective views of the jaw-sections detached.

Like letters of reference denote like parts in all the figures.

C represents the face-plate of the chuck, provided with radial channels *r*, in which the work-holding jaws are fitted to slide, said jaws being adjusted in their requisite position by means of screws *s*, journaled in suitable bearings in the chuck, and engaging screw-threads on the under side of the jaw, as shown, or by any other suitable and well-known means, the particular means of the aforesaid adjustment of the jaws being immaterial in my present invention. The channels *r* are generally of dovetail form, and the jaws are provided with corresponding grooves, *m*, and shoulders *n*, fitted closely to the neck of the channels *r*. The said chuck-jaw I divide longitudinally, and the upper or outer section thereof I provide with longitudinal flanges *d d*, and with a longitudinal groove, *c*, between said flanges, said groove being of a plain rectangular form in cross-section. The other or inner jaw-section I form with rabbets *a a*, thereby producing a plain rectangular tongue, which enters the groove *c*, and is of sufficient width to form between the shoulders *n n* of the rabbets and flanges *d d* of the outer jaw-section the two guide-grooves *m m*. The two sections A and B are tied to each other by bolts *e e*, passing vertically from the upper into the lower section, as shown in Fig. IV of the drawings, and in order to further guard against the shifting of one section on the other a dowel, *f*, is inserted in the adjacent faces thereof. The metal of one or both of the adjacent faces of the jaw-sections is not chilled or case-hardened like the other portions of the jaw, but is in its nomal condition susceptible of being filed or dressed by a planer or other suitable tool. Whenever it becomes necessary to narrow the grooves *m* of the jaw so as to compensate for the wear and abrasion of the shoulders of said grooves or in the channel *r* of the chuck, the jaw can be taken apart, and the adjacent faces of the sections A B trimmed down to bring the flange *d* of the upper or outer section sufficiently nearer to the shoulder of the rabbet *a* of the other section to bring said flange and shoulder to a proper bearing on the neck of the channel *r* in the chuck. Thus, it will be observed, all lost motion of the chuck-jaw can be taken up and the jaw properly sustained for securely holding the work on the chuck.

I am aware that chuck-jaws have been divided longitudinally, and the sections thereof

fitted to each other by a dovetail tongue and groove; but it will be observed that when said jaw is repaired by trimming down or shaving off the face of the tongue in the manner hereinbefore set forth the head portion of the dovetail tongue is reduced in depth, and thus loses more or less of the requisite bearings thereof against the sides of the groove, inasmuch as the narrow portion of the tongue enters the wide portion of the groove; whereas in my invention the sides of the tongue and groove are maintained in full and uniform bearings.

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

1. In a chuck-jaw, the combination of the section A, formed with case-hardened rabbets *a a* and normal-metal bearings *b*, the section B, provided with the channel *c*, and having the flanges *d d* parallel with the shoulders of the rabbets *a a*, and the bolts *e e*, tying said sections together, substantially in the manner described and shown.

2. In a chuck-jaw, the combination of the sections A and B, dowel *f*, and bolts *e e*, substantially as described and shown.

In testimony whereof I have hereunto signed my name and affixed my seal, in the presence of two attesting witnesses, at Syracuse, in the county of Onondaga, in the State of New York, this 18th day of March, 1884.

JOHN H. WESTCOTT. [L. S.]

Witnesses:

FREDERICK H. GIBBS,

W. C. RAYMOND.