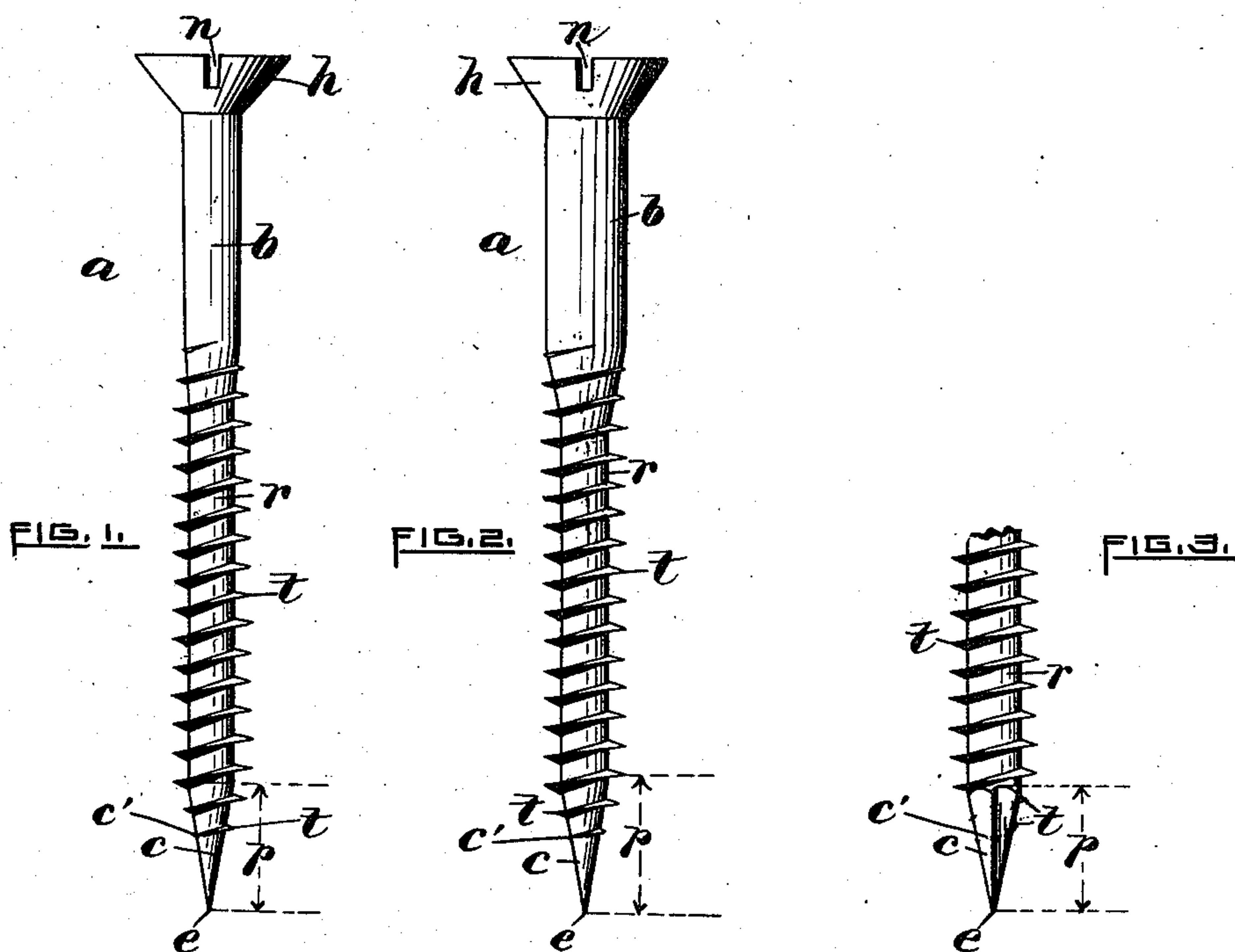


(No Model.)

C. D. ROGERS.
WOOD SCREW.

No. 413,968.

Patented Oct. 29, 1889.



WITNESSES.

Charles Hannigan,

Herbert F. Fountellot.

INVENTOR.

Charles D. Rogers.

Remington J. Anthony
Attys.

UNITED STATES PATENT OFFICE.

CHARLES D. ROGERS, OF PROVIDENCE, RHODE ISLAND, ASSIGNOR TO THE
AMERICAN SCREW COMPANY, OF SAME PLACE.

WOOD-SCREW.

SPECIFICATION forming part of Letters Patent No. 413,968, dated October 29, 1889.

Application filed June 28, 1889. Serial No. 315,914. (No model.)

To all whom it may concern:

Be it known that I, CHARLES D. ROGERS, a citizen of the United States, residing at Providence, in the county of Providence and State of Rhode Island, have invented certain new and useful Improvements in Wood-Screws; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to letters or figures of reference marked thereon, which form a part of this specification.

Heretofore in the manufacture of wood-screws it has been usual to prolong the threads from the cylindrical portion of the screw to the extreme end of the point portion, thereby producing upon the screw the well-known "gimlet-point." In certain classes of screws—as, for example, "drive-screws"—the entire point portion is unthreaded, the thread terminating at the base of the point, while in other forms of drive-screws the thread, which is in the form of a quick spiral, is formed on both the cylindrical and point portions.

An objection to the use of the gimlet-pointed wood-screw is that it does not readily enter into the wood in starting unless a hole be first made for its reception. If a hammer is used for starting such a screw into wood, the thread upon the screw-point obviously acts to prevent its ready entrance, as it can enter only by rupturing the fibers of the wood. At the same time the spiral thread also acts to force the screw to one side or laterally, thereby rendering it somewhat difficult to enter the screw centrally into the wood.

The object of my present improvement is to overcome the disadvantages just named, and to that end I provide a wood-screw with a point portion which combines a plain or unthreaded centering part which first enters the wood or into which material it may be inserted, and a screw-thread which commences at the base of the plain part of the point and extends rearwardly in a gradually-increasing depth until it reaches the base of the point, where it unites with and forms a part of the thread formed on the cylindrical or body portion of

the screw. By means of a point thus formed the screw may be first entered true and centrally into the wood by a slight blow, the resistance offered being very small, after which the screw may be driven home by a screw-driver or other means, as usual.

In the appended drawings, Figure 1 is a perspective view of my improved wood-screw, the diameter across the threads exceeding the size of the wire or unthreaded portion of the shank. Fig. 2 is a similar view, the threaded and unthreaded portions of the screw-shank being of the same diameter; and Fig. 3 is a portion of a screw having a sharpened polygonal point provided with a thread which vanishes about midway of the point's length.

In the drawings, *a* indicates my improved wood-screw complete.

b small designates the unthreaded shank portion of the screw, and *t* the screw-thread, the root or core at the base of the threads being indicated by *r*. The head of the screw may be provided with a head *h*, having a screw-driver nick *n* therein, as usual; or the screw may be provided with any well-known form of head.

My invention resides in the novel construction of the point portion *p* of the screw. This portion I, preferably make tapering, terminating at the end in a sharpened point *e*. The thread *t* extends from the body portion of the screw, past the base of the point portion, and terminates about midway thereof, as clearly shown by the drawings. The thread is, as before stated, a continuation of the main thread *t*. The normal size of the thread ceases at the base of the point portion, and is continued therefrom toward the point at substantially the same pitch, but gradually decreasing in width and depth until it vanishes at a point *c'* into the point's surface, the remaining part *c* of the point portion *p* being plain or unthreaded and terminating in the sharpened point *e*, as represented in Figs. 1 and 2.

Without departing from the spirit of my invention I may make the point portion *p* of a screw polygonal and form a more or less connected diminishing thread *t* thereon, terminating at *c*, substantially as shown in Fig. 3.

My improved screw may be made by cutting away the metal, as in making "cut screws;" or it may be produced by suitably-operated swaging-dies by what is known as the "rolling" process.

I claim as my invention—

1. As a new article of manufacture, a wood-screw having the point portion thereof provided with a sharpened unthreaded part for entering the wood and centering itself therein, and having the other part of the point portion provided with a thread gradually increasing in width and depth until it forms a part of the normal thread at the base of the point, substantially as hereinbefore described.

2. A wood-screw having a sharpened cone-shaped point portion *p*, provided with a diminishing thread *t* and a plain or unthreaded part *c*, extending from the termination of said thread to the end *e* of the point, substantially as shown, and for the purpose hereinbefore described.

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

CHARLES D. ROGERS.

Witnesses:

CHARLES HANNIGAN,
GEO. H. REMINGTON.