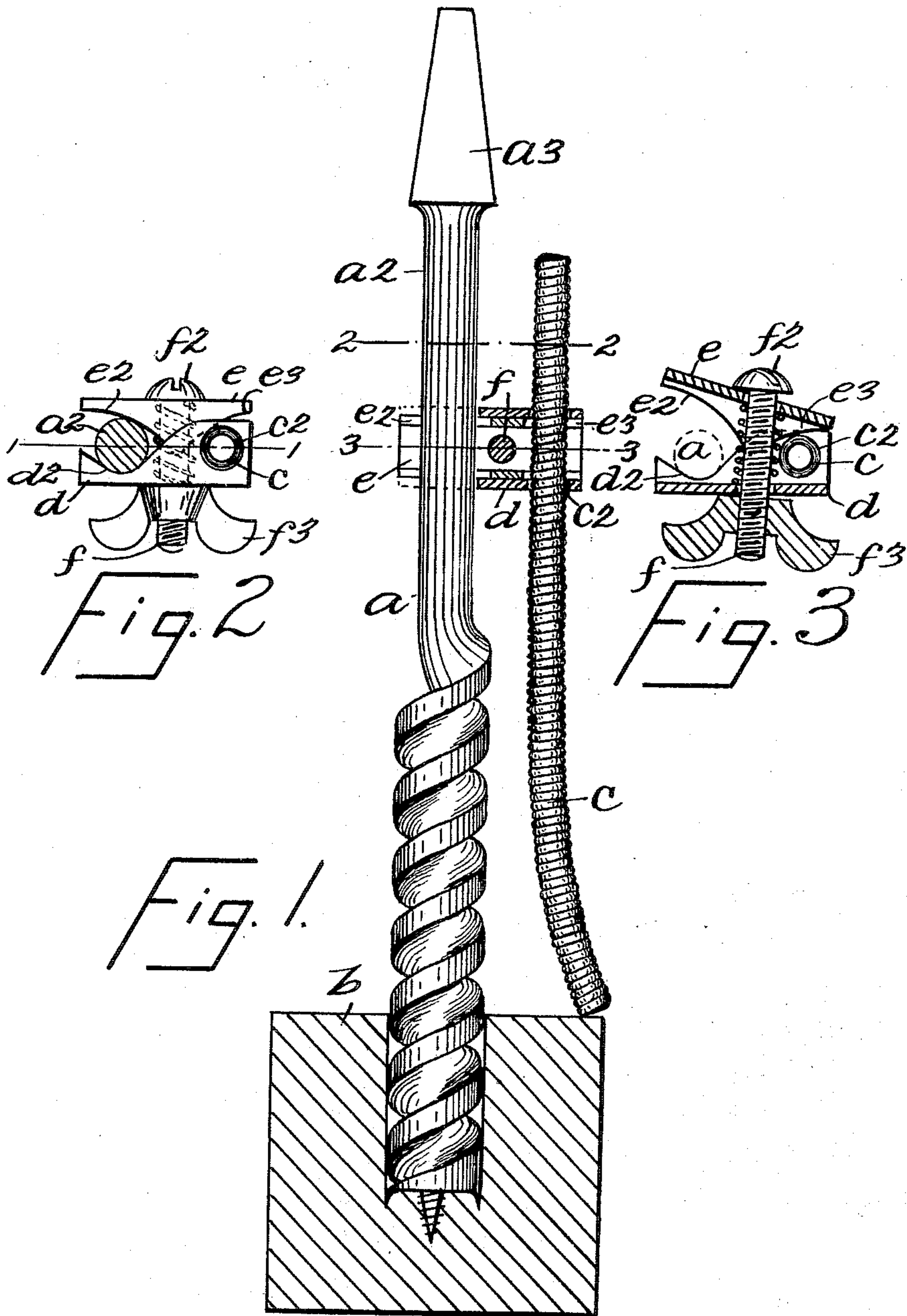


W. POTTER.
BORING MACHINE ALARM.
APPLICATION FILED SEPT. 22, 1909.

995,178.

Patented June 13, 1911.



Witnesses:
George F. Bentley
G. Robert Thomas

Inventor
William Potter
By Attorney J. Chris Larsen

UNITED STATES PATENT OFFICE.

WILLIAM POTTER, OF NEW YORK, N. Y.

BORING-MACHINE ALARM.

995,178.

Specification of Letters Patent. Patented June 13, 1911.

Application filed September 22, 1909. Serial No. 518,994.

To all whom it may concern:

Be it known that I, WILLIAM POTTER, a citizen of the United States of America, and residing at New York, in the county of New York and State of New York, have invented certain new and useful Improvements in Boring-Machine Alarms, of which the following is a specification, such as will enable those skilled in the art to which it appertains to make and use the same.

The object of this invention is to provide an alarm device for boring and drilling machines, whereby an operator is audibly notified when the boring has reached a predetermined depth; a further object being to provide a device of this class which is readily adaptable to boring machines of various kinds and classes; a further object being to provide means for use in connection with the ordinary carpenter's bits, of any size.

A further object is to provide such a device which is readily adjustable in the usual manner, and also in slightly appreciable degree by the mere rotation of an element thereof; and a still further object being to provide such a device which is very simple in construction and use, and which is very inexpensive.

My invention is fully described in the following specification, of which the accompanying drawings form a part, in which the separate parts thereof are designated by the same reference characters in each of the views, and in which:—

Figure 1 is a view of a bit with my invention in operative position, partially in section; Fig. 2 is a section on the line 2—2 of Fig. 1; and Fig. 3 is a section on the line 3—3 of Fig. 1.

In the drawings forming a part of this application, I have shown a bit *a* of the usual type, adapted to be driven into a section *b* of wood and the like, said section being adapted to be touched by the lower end of a flexible rod *c* connected to the bit by means of a clamp *d*, formed of a bottom plate having angular extensions *d*² so formed as to approximately fit the bit, as shown. Registering with the plate *d* is a similar plate *e* provided with angular extensions *e*² also formed to engage the bit *a* upon the shank *a*² thereof, said bit being also provided, as shown, with a tang *a*³. The plates *d* and *e* are held together by means of a bolt

f provided with a head *f*² and with a thumb-nut *f*³ and, in practice, I also prefer to employ a coil spring to separate the said plates when the thumb-nut is released.

The extensions *d*² are provided with holes *c*² therethrough for the rod *c* and in which position it is held by means of the portion *e*³ of the extensions *e*², said rod *c* being formed of wire spirally coiled whereby it is made flexible and, at the same time, is more readily engaged by the members *d* and *e* than if smooth, and it will be seen that rotation of the rod *c* will adjust the same, in slight degree, in the clamp although, if a considerable adjustment is desired, the thumb-nut may be loosened and the rod *c* moved longitudinally thereof within the said clamp, or the clamp and rod may be moved on the bit *a*.

When, in the process of boring, a depth corresponding to the adjustment of the rod *c* has been reached, the end of the said rod engages the material being bored and notifies the person using the device that the limit has been reached, either by the sense of feeling or by making the fact audible to him by the rod end springing from the material at an edge thereof, thereby giving a whirring sound, and it will be understood that the said rod *c* is made sufficiently flexible so as not to injure the material being bored or drilled.

It will, therefore, be seen that I provide an alarm acting both upon the senses of touch and hearing; which is readily adjusted in the clamp by being slid therein or by rotation therein, and I also provide a clamp which is readily adjustable on a bit, and which clamps both the bit and rod by means of the same elements operable from one point, but my invention consists, primarily, of a rod formed of wire spirally wound in order to give a desired flexibility, produce the desired alarm, and be inexpensive in manufacture.

It will be obvious that many changes in and modifications of the construction shown and described may be made within the scope of the following claims and,

Having now fully described my invention, what I claim as new and desire to secure by Letters Patent, is:—

1. In a boring machine, an alarm, comprising a flexible rod formed of wire spirally

wound, and means for connecting the same with said machine.

2. In a boring machine, an alarm, comprising a flexible rod formed of wire spirally
5 wound, and means for adjustably connecting the same with said machine.

In testimony that I claim the foregoing as

my invention I have signed my name in presence of the subscribing witnesses this 18th day of September 1909.

WILLIAM POTTER.

Witnesses:

GEORGE F. BENTLEY,
J. C. LARSEN.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."
