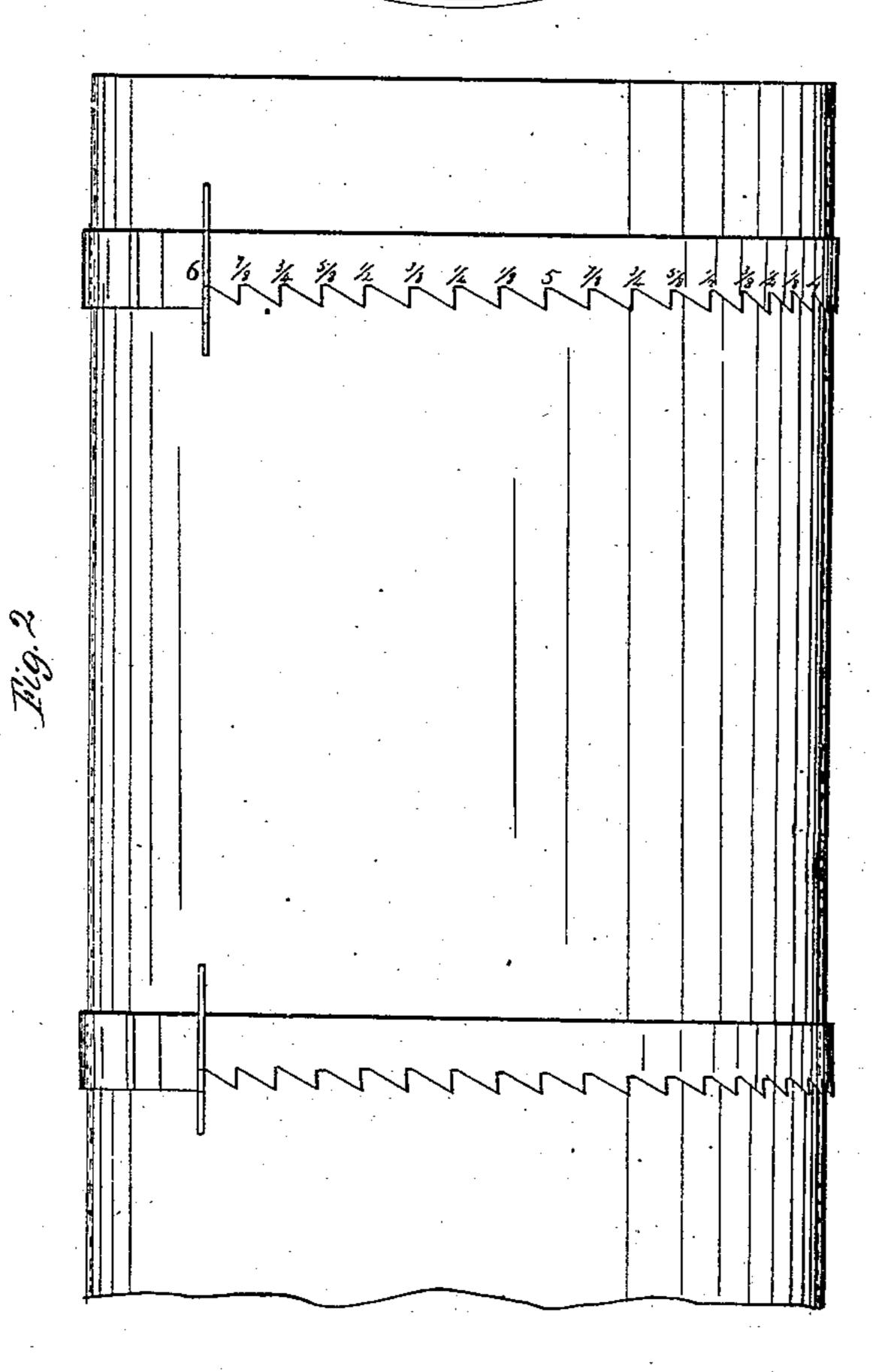
J. S. Harner,

Molding Pipe:

Patented June 5, 1860.

Nº28,574. Patented Just



## United States Patent Office.

JOHN S. HARPER, OF BALTIMORE, MARYLAND.

## IMPROVEMENT IN CORE-BOXES.

Specification forming part of Letters Patent No. 28,574, dated June 5, 1860.

To all whom it may concern:

Be it known that I, John S. Harper, of Baltimore city, in the county of Baltimore and State of Maryland, have invented a new and useful improved adjustable box for the purpose of making cores out of dry sand for foundry and other purposes where cores are applicable; and I do hereby declare that the following is a full and exact description of the same, reference being had to the accompanying drawings, and making a part of the specification, in which—

Figure 1 is a cross-section, and Fig. 2 being

a longitudinal section.

I construct, in the first place, the body of my box of sheet-steel or any other elastic material, and form it into a circle or scroll form. I surround the outer surface with two or more bands, one edge of each band, which is notched, thereby constructing the gage, giving the exact diameter of the core. When fastened in notch No. 4 in said outer band, as seen on drawings, gives a core of four inches in diameter. By moving said band one notch forward, which will expand the aforementioned

circular scroll of steel or other elastic material out of which it may be made, will enlarge the diameter, thereby making a core four and one-eighth inches in diameter; and thus by moving back or forward, thereby expanding or contracting the circular scroll of steel, there can be any given size core made that is desired.

The foregoing is a full and clear description

of my adjustable core-box.

What I claim as my invention, and desire

to cover by this caveat, is—

A core-box which is capable of being expanded and contracted in diameter, in the manner described, by the use of two or more toothed bands with catches, and figured to designate the size of core required, in connection with the open cylinder, or in any other way substantially the same, and which will produce the intended effect.

JOHN S. HARPER.

Witnesses:

F. S. MYER, D. D. GILL.