

(No Model.)

G. C. WARREN.
TONNAGE COMPUTER.

No. 528,703.

Patented Nov. 6, 1894.

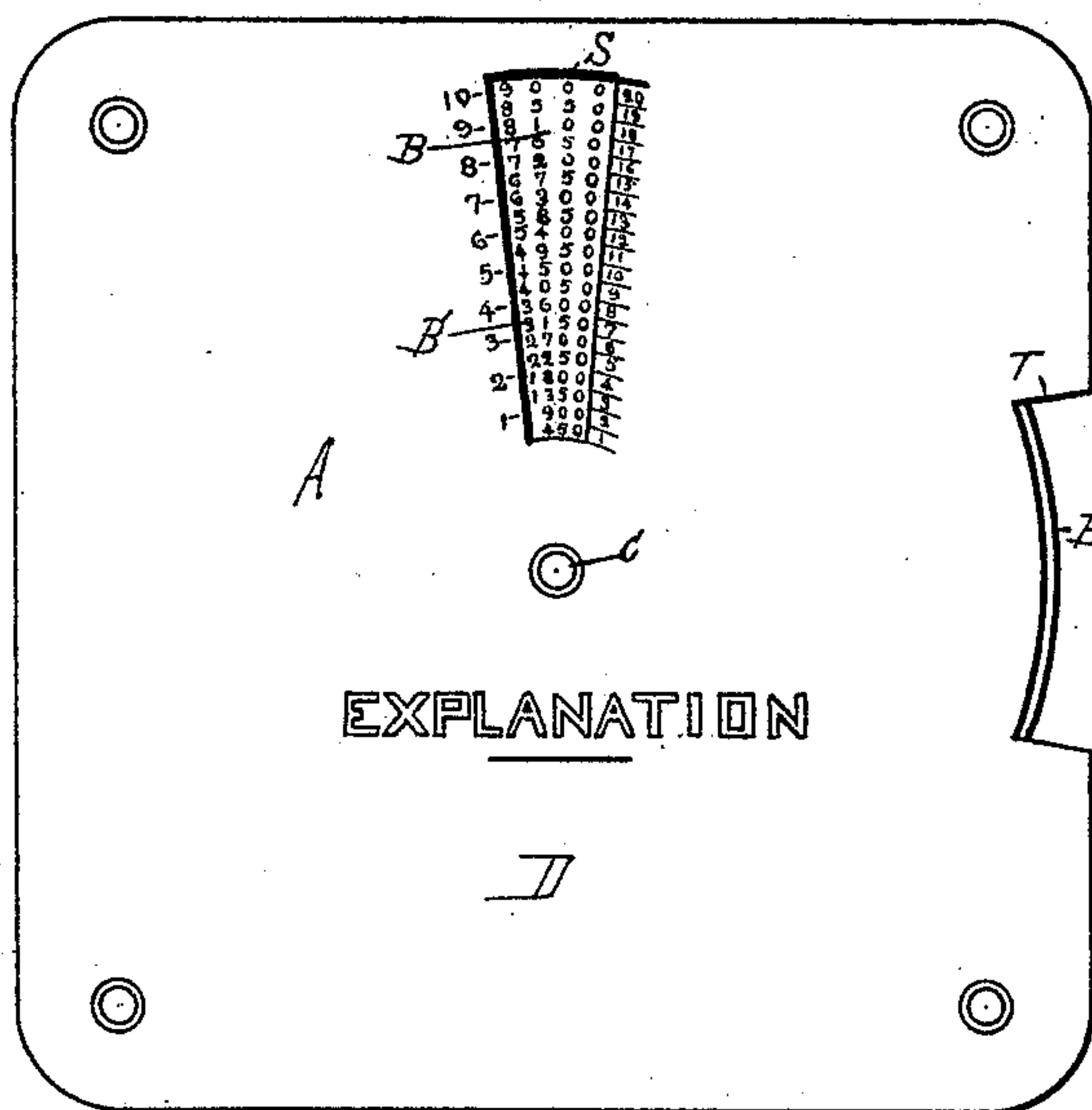
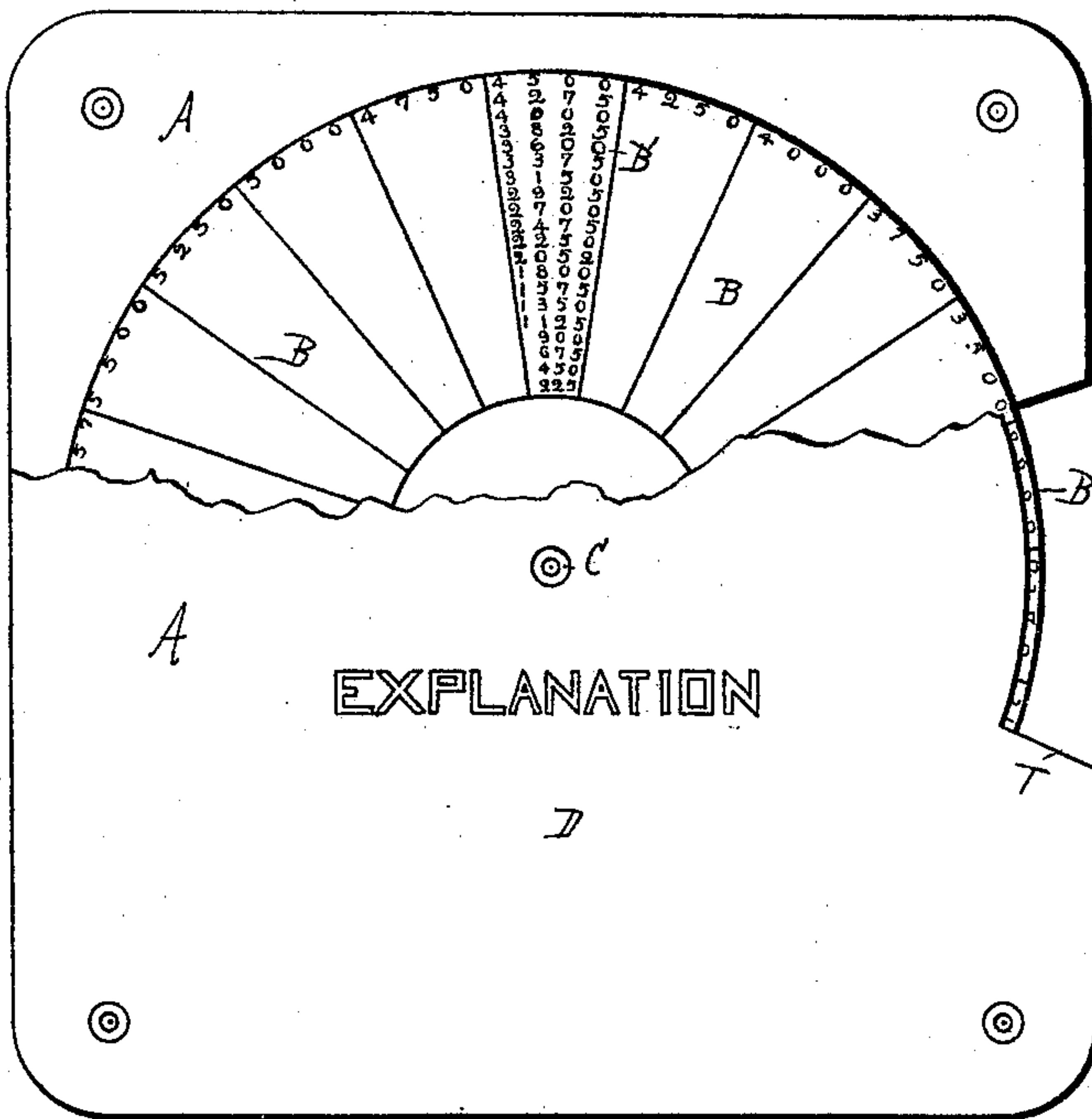


Fig I



WITNESSES:

J. H. O'Keefe
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Fig II

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INVENTOR

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UNITED STATES PATENT OFFICE.

GEORGE C. WARREN, OF SAGINAW, MICHIGAN.

TONNAGE-COMPUTER.

SPECIFICATION forming part of Letters Patent No. 528,703, dated November 6, 1894.

Application filed December 23, 1893. Serial No. 494,524. (No model.)

To all whom it may concern:

Be it known that I, GEORGE C. WARREN, a citizen of the United States, residing at Saginaw, in the county of Saginaw and State of Michigan, have invented certain new and useful Improvements in Tonnage-Computators; and I do 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 the letters of reference marked thereon, which form a part of this specification.

My invention is a tonnage computator, and consists in the special features of construction, arrangement and combination described and claimed.

Figure I is an elevation of the computator. Fig. II is same view with part broken away.

In the drawings, A, A, is the frame, and consists of two pieces of any stiff material of the same size and form, each provided with a triangular slot S, radiating from the center of each, said slot being of the size hereinafter mentioned. Between these two pieces I place a disk B, and through the center of the frames and the center of the disk I pass a rivet C, loosely securing the frames together and forming a shaft or bearing for the disk in order that it may rotate within the frames.

On one side of the frame I cut in a notch T, and beyond the edge of the disk B, so that the edge of the disk projects into the notch. By placing the finger on the edge of the disk it can be rotated with ease. Upon either side of this disk I arrange radial columns of figures, B', said columns radiating from the center to the circumference of the disk. Said figures are also arranged in concentric circles. The column of figures commencing on the inner circle with numbers of three figures, and increasing in a decimal ratio toward the outside of the column, the numbers read from left to right. The next column at the right would commence with a number of three figures, and larger according to a decimal ratio than the first number in the column to the left, and so on around the disk until the disk is full.

The opposite side of the disk is arranged in the same manner and commencing where

we left off on the other side. In the drawings, Fig. II, we have filled out but one of these columns. Fig. I shows another.

The slot S, in the frames A, A, is large enough to show the entire radial column of figures, and no more. By turning the disk B, other columns can be brought to view in turn. There being a slot S, on each side of the frame any column may be brought to view desired, either large or small. The outer edges of these slots are divided into spaces as shown by Fig. I, viz: The right hand edge of the slot is divided into as many spaces as there are numbers in the radial column of the disk B to be revealed through the space, and the left hand edge divided into one half as many spaces as the right hand edge, or one half as many as there are numbers in the radial column on the disk. The corners of the frame are secured together, but not tight enough to prevent the disk rotating.

As previously stated, the object of my invention is to provide a ready and quick tonnage computator. To ascertain the cost of any number of pounds of any commodity figured by the net ton of two thousand pounds, first place the finger on the outside of the edge of the disk as it protrudes in the slot T, rotate it in either direction until the desired price, even dollars and quarters thereof, are shown by the figure on the top line of the disk through the slot S. For example, what would be the cost of twenty-two thousand two hundred and twenty pounds of hay at nine dollars per ton? Turning the disk until we have the price, \$9, we see by the full four figures of that line that

20,000	pounds	would cost	\$90.00
2,000	"	"	9.00
200	"	"	.90
20	"	"	.09
<hr/>			
22,220	"	"	\$99.99

It will be seen that this table is built on the decimal principle. The mechanical arrangement of this disk as described I find of great advantage and convenience.

Upon the lower half D of the frame I place the explanation for the use of the computator. It may also be used as an advertising medium.

Having thus described my invention, wh
I claim as new, and desire to secure by Let-
ters Patent, is—

5 In a tonnage computator, the combination
with the disk B having upon each side thereof
columns of figures radiating from the center
thereof, the columns increasing or decreas-
ing to the left or right decimally, of the frame
A A consisting of two plates secured together
10 at their corners and between which the disk
B is placed and pivoted by the pivot C, and
the pivot C passing through the center of the
disk B and the frame A A, and forming a
central bearing for the disk within the frame,
15 a slot S in each plate of the frame, the slots
being concentric to the pivotal center C, its

edges being radii, the slots being directly op-
posite each other in the frame and each hav-
ing its edges divided into spaces, the right
edge having twice as many spaces as the left 20
edge and each slot being large enough to re-
veal a single radial column of figures on the
disk B, and the notch T in the side of the
frame exposing the edge of the disk B for the
purpose of rotating it as desired by the hand, 25
as and for purpose set forth.

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

GEORGE C. WARREN.

Witnesses:

A. H. SWARTHOUT,
J. F. O'KEEFE.