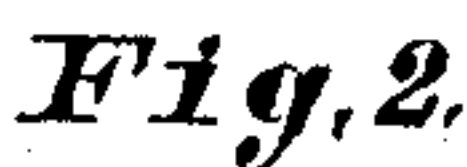


(No Model.)
T. S. POOLE, dec'd, & T. MILLER, Jr.
2 Sheets—Sheet 1.

T. S. POOLE, dec'd, & T. MILLER, Jr.

Roller Mill for Grinding Grain.

Patented Feb. 22, 1881.



Charles Pickles
J. A. Marshall Jr. C

Thomas & Poole.
Tom Miller Jr.
By J M McDougal
Atty.

(No Model.)

2 Sheets—Sheet 2.

T. S. POOLE, dec'd, & T. MILLER, Jr.

E. T. WARNER, Administrator of T. S. POOLE.

Roller Mill for Grinding Grain.

No. 238,001.

Patented Feb. 22, 1881.

Fig. 3.

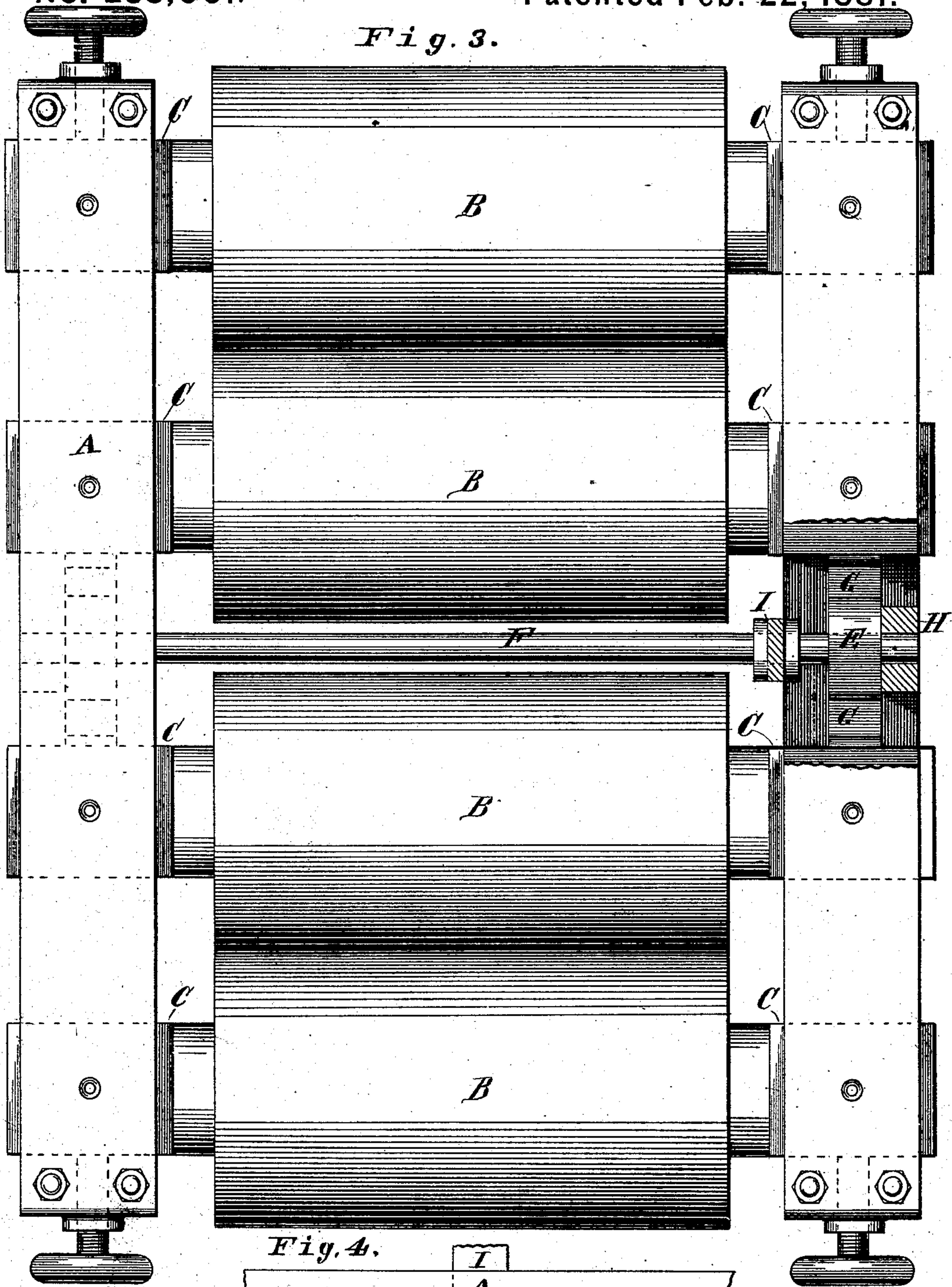
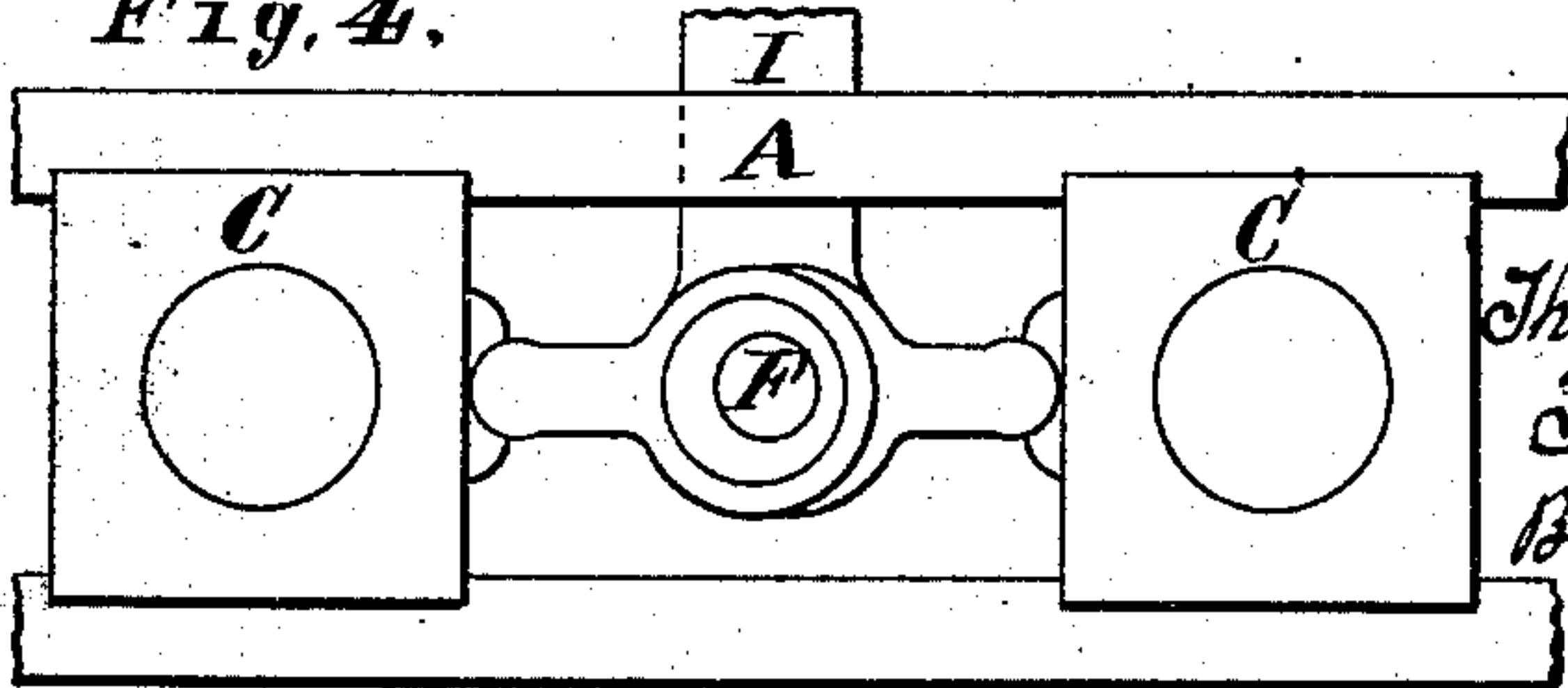


Fig. 4.



Attest:

Charles Pickles
J. A. Marshall Jr.

Inventors.

Thomas S. Poole
Tom Miller Jr.
By J. H. Douglass
Atty.

UNITED STATES PATENT OFFICE.

THOMAS S. POOLE, OF WILMINGTON, DELAWARE, AND TOM MILLER, JR.,
OF ST. LOUIS, MISSOURI. (E. TATNALL WARNER, ADMINISTRATOR OF
THOMAS S. POOLE, DECEASED.)

ROLLER-MILL FOR GRINDING GRAIN.

SPECIFICATION forming part of Letters Patent No. 238,001; dated February 22, 1881.

Application filed May 11, 1880. (No model.)

To all whom it may concern:

Be it known that we, THOMAS S. POOLE, of
Wilmington, county of New Castle, State of
Delaware, and TOM MILLER, Jr., of city of St.
5 Louis, State of Missouri, have invented cer-
tain Improvements in Adjusting Roller Grind-
ing-Mills, of which the following is a specifi-
cation.

Our invention relates to the separating of
10 the rollers in roller grinding-mills after they
have been adjusted; and it consists in a pe-
culiar construction and arrangement of de-
vices for separating the shifting roll after the
adjustable roll has been set in working posi-
15 tion and bringing it back again, so that the
rolls will have their former adjusted relation.
One of the great difficulties has been, in using
roller-mills, that the miller had to adjust or
set the adjustable roll every time the mill
20 starts up. This is owing to the fact that meal
will not pass between the rollers while adjust-
ing with the proper effect until the mill is
under headway, and the belts will not stay
upon the roller-pulleys when the mill is start-
25 ing, the power required being too great. So
it necessitates resetting the adjustable roller
every time the mill starts up, which requires
much skill and time. To obviate this diffi-
culty I use a rod or shaft between the two in-
30 side or shifting rollers of a double-roller ma-
chine, said shaft running parallel with the
rollers from end to end and journaled in the
main frame. This shaft has on each end a
double cam, also a lever at either or both ends.
35 The double cam is horizontal and has in each
end a socket, in which is fitted a link or bar,
which links, at their other end, fit into a socket
in the side of the boxes, said links and cam
thereby forming a toggle-joint.

40 By reference to the drawings herewith filed
as a part of this specification, the improved
device will be easily understood.

F represents the shaft; E, the double cam;
D, the toggle-joint, consisting of the cam E
45 and links G G; C C, the boxes; I, the lever.

Figure 1 is a side elevation, showing the
end of the shaft F and the construction of the
toggle D and its connection with the boxes
C C and lever I. Fig. 2 is a side view of the
50 toggle, the dotted lines showing the two posi-

tions the toggle takes as the lever I is moved
forward or backward.

The mode of operation can be easily under-
stood by referring to the drawings. The lever
I, as it is moved forward or backward, will 55
throw the toggle into a zigzag position, as in-
dicated by the dotted lines in Fig. 2, thus al-
lowing the shifting rollers to retire from their
working position, being forced back by means
of suitable springs, the boxes of said rollers 60
being fitted in the frame in a similar manner
to the adjustable rollers, so as to slide for-
ward and back as the position of the toggle is
changed. After the adjustable rollers have
been set up to their working position, then, 65
by this improved device, the shifting rollers
can be separated from them and brought back
exactly to their working position, at the pleas-
ure of the miller, by simply working the lever
with the hand. 70

Instead of the toggle-joint at each end of the
shaft F, an equivalent may be used—namely,
an eccentric cam, as shown in Fig. 4; or, in-
stead of the lever, a hand-wheel may be used.
This same device may be applied to a single 75
or two roller mill, the shaft F extending the
full length of the adjustable roller with a sin-
gle instead of double toggle, the lever I being
the same.

What we claim is— 80

In a grinding-mill provided with duplicate
sets of rolls, the outermost rolls of each set be-
ing adjustable in the supporting-frame, the
combination, with the two inner rolls forced
together by a spring-pressure against their 85
journal-boxes C C, of the double cams E E
and connecting-links G G, mounted upon the
intermediately-journaled shaft F, provided
with operating-lever I and means for holding
the same in fixed position, substantially as 90
shown and described.

THOMAS S. POOLE.
TOM MILLER, JR.

Witnesses for T. S. Poole:

JAMES M. WATSON,
J. MARTIN POOLE, Jr.

Witnesses for Tom Miller, Jr.:

H. M. WILCOX,
O. B. GIVENS.