US00D788134S

(12) United States Design Patent

Wong et al.

(10) Patent No.: US D788,134 S
(45) Date of Patent: ** May 30, 2017

(54) **MOBILE DEVICE DISPLAY SCREEN WITH GRAPHICAL USER INTERFACE FOR SUPPORTING SERVICE MAINTENANCE AND TRACKING ACTIVITIES IN SEMICONDUCTOR TOOL**

(71) Applicant: **Lam Research Corporation**, Fremont, CA (US)

(72) Inventors: **Vincent Wong**, Pleasanton, CA (US); **Ronald Ramnarine**, Fremont, CA (US); **Robert Housley**, Los Gatos, CA (US); **Sandy Shih-Hsun Chao**, Fremont, CA (US); **Mukesh Shah**, Fremont, CA (US); **Robert Ahrens**, San Jose, CA (US)

(73) Assignee: **LAM RESEARCH CORPORATION**, Fremont, CA (US)

(**) Term: **14 Years**

(21) Appl. No.: **29/504,990**

(22) Filed: **Oct. 10, 2014**

(51) **LOC (10) Cl.** **14-04**

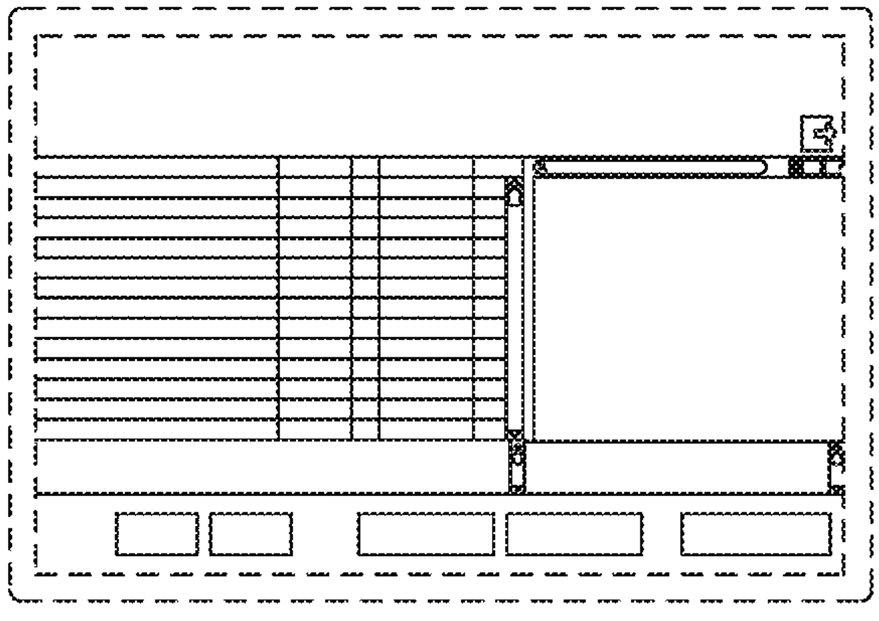
(52) **U.S. Cl.**
USPC **D14/486**

(58) **Field of Classification Search**
USPC D14/485–495
CPC G06F 3/048; G06F 3/0482; G06F 3/0484; G06F 3/00; G09G 5/00; G07F 17/32
See application file for complete search history.

(56) **References Cited**

U.S. PATENT DOCUMENTS

7,120,511	B1		10/2006	Tanzer et al.	
D578,132	S	*	10/2008	Lee	D14/486
D589,527	S	*	3/2009	Shamma	D14/486
D593,114	S	*	5/2009	Vakkalanka	D14/486
D594,019	S	*	6/2009	Ball	D14/486
D622,730	S	*	8/2010	Krum	D14/486
D636,779	S		4/2011	Boush et al.	
8,209,223	B2	*	6/2012	Fink	G06Q 30/02 386/241
8,239,359	B2	*	8/2012	Barsook	G06F 17/3079 386/239
D667,835	S		9/2012	Chaudri	
D669,090	S	*	10/2012	Rosen	D14/486
8,302,020	B2	*	10/2012	Louch	B60K 35/00 715/764
D673,165	S	*	12/2012	Ospina Gonzalez	D14/486
D678,309	S	*	3/2013	Kobayashi	D14/486
D684,160	S	*	6/2013	Truelove	D14/485
D684,161	S	*	6/2013	Truelove	D14/485
D684,164	S	*	6/2013	Friedlander	D14/486
D685,811	S		7/2013	Shia et al.	
D687,458	S		8/2013	Philopoulos	
D688,259	S		8/2013	Pearcy et al.	
D688,685	S	*	8/2013	Rhee	D14/486
D689,086	S		9/2013	Philopoulos	
D690,312	S		9/2013	Cherian et al.	
D691,160	S		10/2013	Schupp et al.	
D693,361	S		11/2013	Arnold et al.	
D696,684	S	*	12/2013	Yuk	D14/486
D696,688	S	*	12/2013	Yuk	D14/486
D700,194	S	*	2/2014	Kim	D14/486
8,667,540	B2	*	3/2014	Hoshall	H04N 7/17336 715/738
8,875,126	B1	*	10/2014	Feeser	G06F 8/61 709/201
D719,968	S	*	12/2014	Ebtekar	D14/486
9,032,296	B1	*	5/2015	Jeffs	H04N 21/2187 715/719
D732,563	S	*	6/2015	Kitch	D14/486
D732,564	S	*	6/2015	Kitch	D14/486
D733,738	S	*	7/2015	Omiya	D14/486
D734,353	S	*	7/2015	Soojun	D14/486
D735,222	S	*	7/2015	Ebtekar	D14/486
D737,840	S	*	9/2015	Omiya	D14/486
9,129,087	B2	*	9/2015	Grab	G06F 21/00
D741,351	S	*	10/2015	Kito	D14/486
D742,908	S	*	11/2015	Lee	D14/486
D751,592	S	*	3/2016	Link	D14/486
9,311,053	B2	*	4/2016	Baughman	G06F 8/20
D757,060	S	*	5/2016	Lee	D14/486
D757,077	S	*	5/2016	Blank	D14/486
D760,756	S	*	7/2016	Koeten	D14/486
D762,232	S	*	7/2016	Howard	D14/486
D762,234	S	*	7/2016	Li	D14/486
2002/0183880	A1		12/2002	Arima et al.	
2005/0004780	A1		1/2005	Lin et al.	
2006/0259198	A1		11/2006	Brcka et al.	
2008/0098333	A1	*	4/2008	Champion	A61B 5/445 715/849



2008/0184117	A1*	7/2008	Alsbury	G06Q 30/02 715/719
2009/0228408	A1	9/2009	Kaushal et al.	
2010/0153848	A1*	6/2010	Saha	G06F 17/30884 715/721
2012/0036552	A1*	2/2012	Dare	H04L 41/0253 726/1
2012/0239317	A1	9/2012	Lin	
2013/0061267	A1*	3/2013	Cansino	H04N 21/4126 725/43
2013/0100475	A1*	4/2013	Kuroyanagi	H04N 1/00453 358/1.13
2013/0104042	A1*	4/2013	Meaney	G06F 3/048 715/716
2013/0174223	A1*	7/2013	Dykeman	G06F 21/10 726/4
2014/0033256	A1*	1/2014	Cox	H04N 5/44543 725/46
2014/0115470	A1*	4/2014	Meaney	H04N 9/806 715/719
2014/0115471	A1*	4/2014	Demkin	G06F 3/048 715/719
2014/0173517	A1*	6/2014	Chaudhri	G06F 9/4443 715/830

FOREIGN PATENT DOCUMENTS

EM	0020843010028	11/2012
EM	0013536010046	2/2013
JP	2005-527986	9/2005
WO	2016/057551	4/2016
WO	2016/057565	4/2016

OTHER PUBLICATIONS

U.S. Appl. No. 29/504,989, "Mobile device graphical user interface design for supporting service maintenance and tracking activities in semiconductor tool," Vincent Wong et al., filed Oct. 10, 2014.
U.S. Appl. No. 14/876,203, "Mobile device user interface for supporting service maintenance and tracking activities in semiconductor tool," Simon Gosselin et al., filed Oct. 6, 2015.
U.S. Appl. No. 14/876,213, "Mobile connectivity and control of semiconductor manufacturing equipment," Roger Patrick et al., filed Oct. 6, 2015.
TW patent application No. 104301852, Office Action mailed Nov. 13, 2015.
TW patent application No. 104301861, Office Action mailed Jan. 21, 2016.
KR patent application No. 30-2015-0018420, Office Action mailed Nov. 12, 2015.
KR patent application No. 30-2015-0018445, Office Action mailed Nov. 12, 2015.
WO patent application No. PCT/US2015/054306, International Search Report and Written Opinion mailed Mar. 18, 2016.
WO patent application No. PCT/US2015/054290, International Search Report and Written Opinion mailed Mar. 18, 2016.
KR patent application No. 30-2015-0018420, Decision of Grant of Design mailed Mar. 2, 2016.
KR patent application No. 30-2015-0018445, Decision of Grant of Design mailed Mar. 2, 2016.
TW patent application No. 104301852, Notice of Allowance mailed Apr. 19, 2016.
TW patent application No. 105300569, Notice of Allowance mailed Apr. 18, 2016.

* cited by examiner

Primary Examiner — Kevin Rudzinski
(74) *Attorney, Agent, or Firm* — Weaver Austin Villeneuve & Sampson LLP

(57) **CLAIM**

The ornamental design for a mobile device display screen with graphical user interface for supporting service maintenance and tracking activities in semiconductor tool, as shown and described.

DESCRIPTION

FIG. **1** depicts an isometric view of a mobile device having a display screen showing a first embodiment of a graphical user interface for supporting service maintenance and tracking activities in semiconductor tools.
FIG. **2** depicts a front view of the mobile device for supporting service maintenance and tracking activities in semiconductor tools.
FIG. **3** depicts a rear view of the mobile device for supporting service maintenance and tracking activities in semiconductor tools.
FIG. **4** depicts a top view of the mobile device for supporting service maintenance and tracking activities in semiconductor tools.
FIG. **5** depicts a bottom view of the mobile device for supporting service maintenance and tracking activities in semiconductor tools.
FIG. **6** depicts a right side view of the mobile device for supporting service maintenance and tracking activities in semiconductor tools.
FIG. **7** depicts a left side view of the mobile device for supporting service maintenance and tracking activities in semiconductor tools.
FIG. **8** depicts a front view of a second embodiment of a mobile device display screen with graphical user interface for supporting service maintenance and tracking activities in a semiconductor tool.
FIG. **9** depicts a front view of a third embodiment of a mobile device display screen with graphical user interface for supporting service maintenance and tracking activities in a semiconductor tool.
FIG. **10** depicts a front view of a fourth embodiment of a mobile device display screen with graphical user interface for supporting service maintenance and tracking activities in a semiconductor tool.
FIG. **11** depicts a front view of a fifth embodiment of a mobile device display screen with graphical user interface for supporting service maintenance and tracking activities in a semiconductor tool.
FIG. **12** depicts a front view of a sixth embodiment of a mobile device display screen with graphical user interface for supporting service maintenance and tracking activities in a semiconductor tool.
FIG. **13** depicts a front view of a seventh embodiment of a mobile device display screen with graphical user interface for supporting service maintenance and tracking activities in a semiconductor tool.
FIG. **14** depicts a front view of an eighth embodiment of a mobile device display screen with graphical user interface for supporting service maintenance and tracking activities in a semiconductor tool.
FIG. **15** depicts a front view of a ninth embodiment of a mobile device display screen with graphical user interface for supporting service maintenance and tracking activities in a semiconductor tool; and,
FIG. **16** depicts a front view of a tenth embodiment of a guided procedure graphical user interface page combining a summary of a mobile device display screen with graphical

user interface for supporting service maintenance and tracking activities in a semiconductor tool.

The broken lines in the drawings illustrate the display screen and portions of the graphical user interface and form no part of the claimed design.

1 Claim, 16 Drawing Sheets

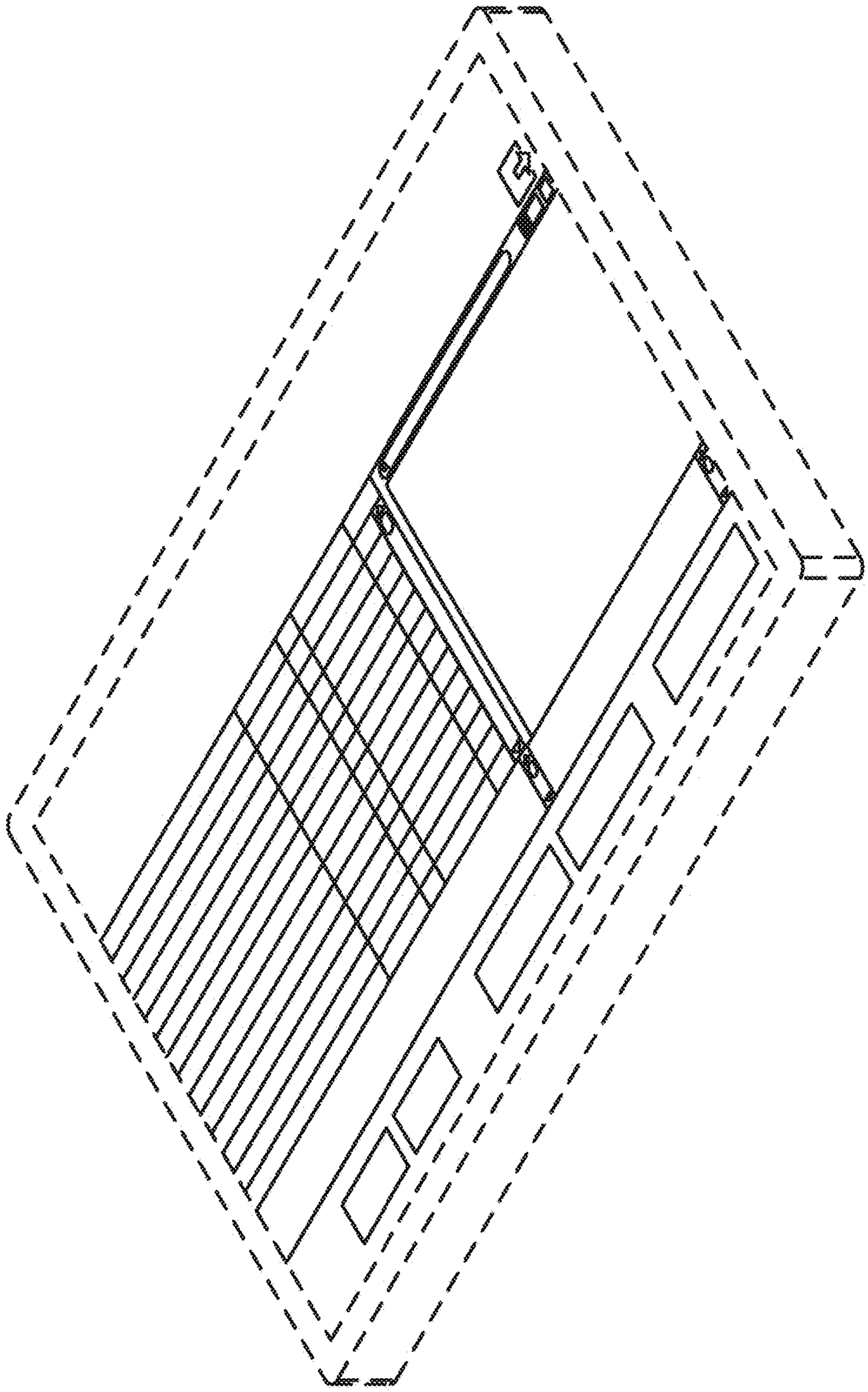


FIG. 1

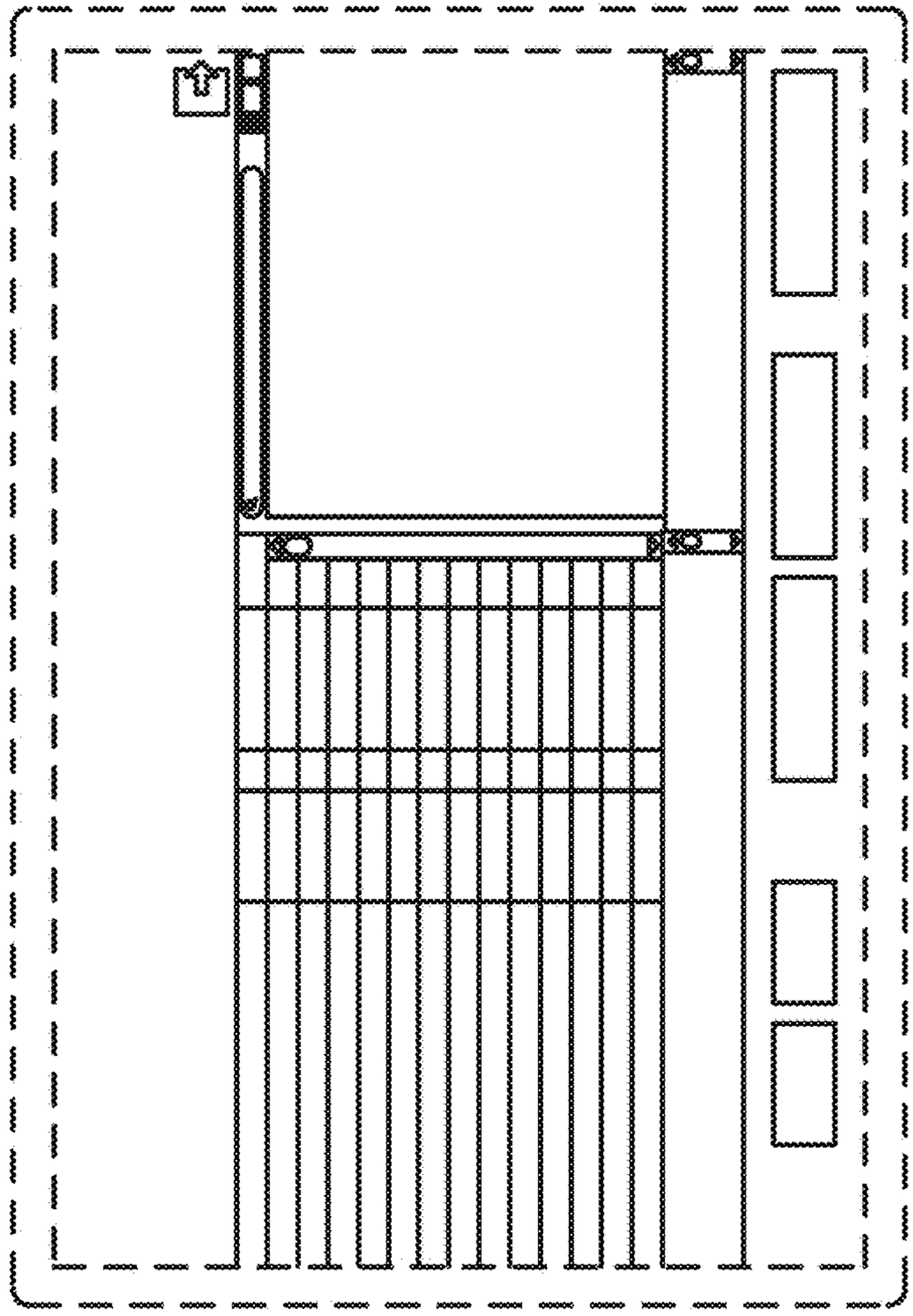


FIG. 2

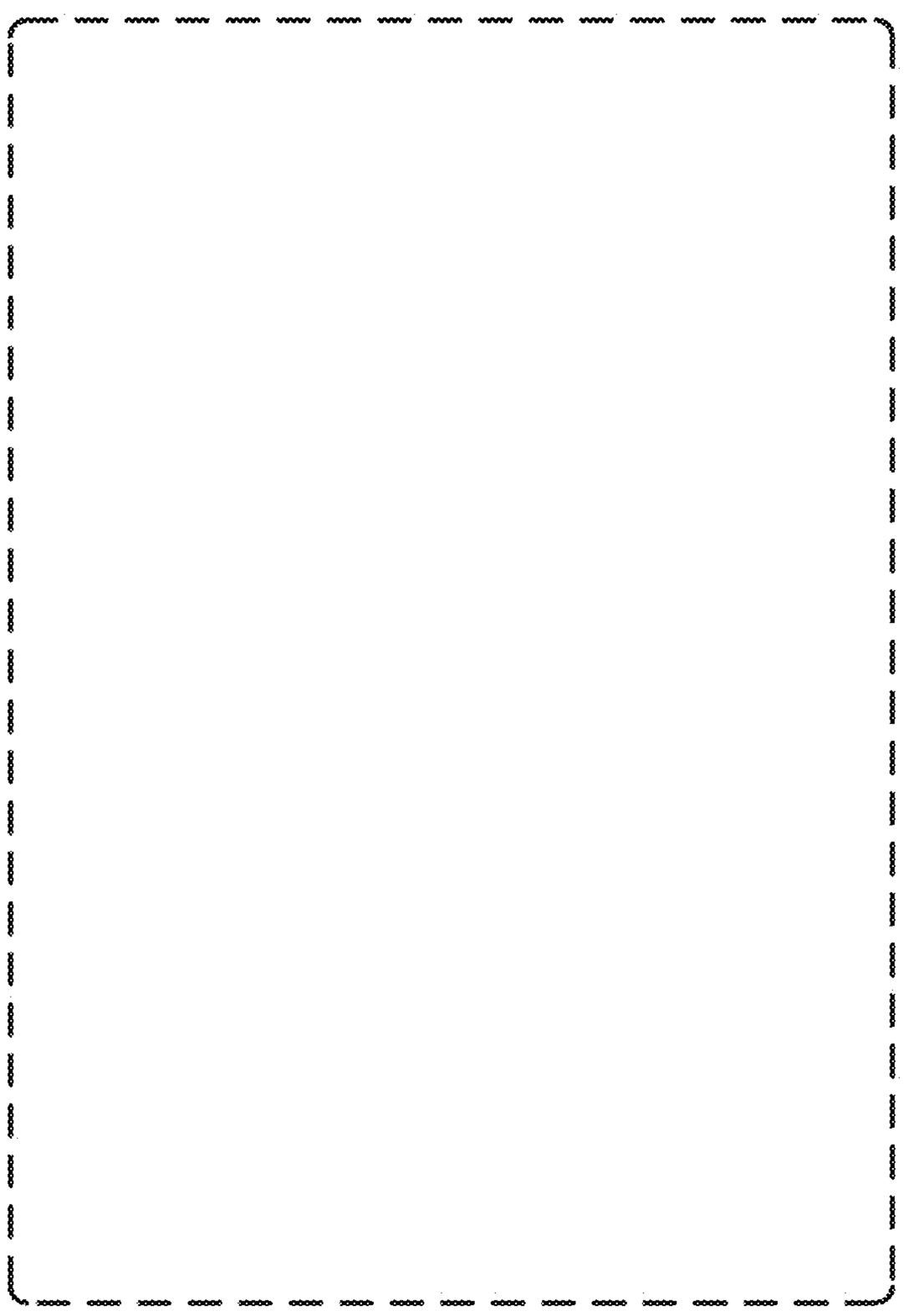


FIG. 3

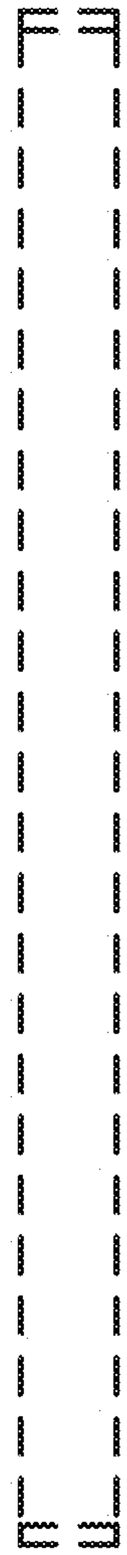


FIG. 4

FIG. 5

FIG. 6

FIG. 7

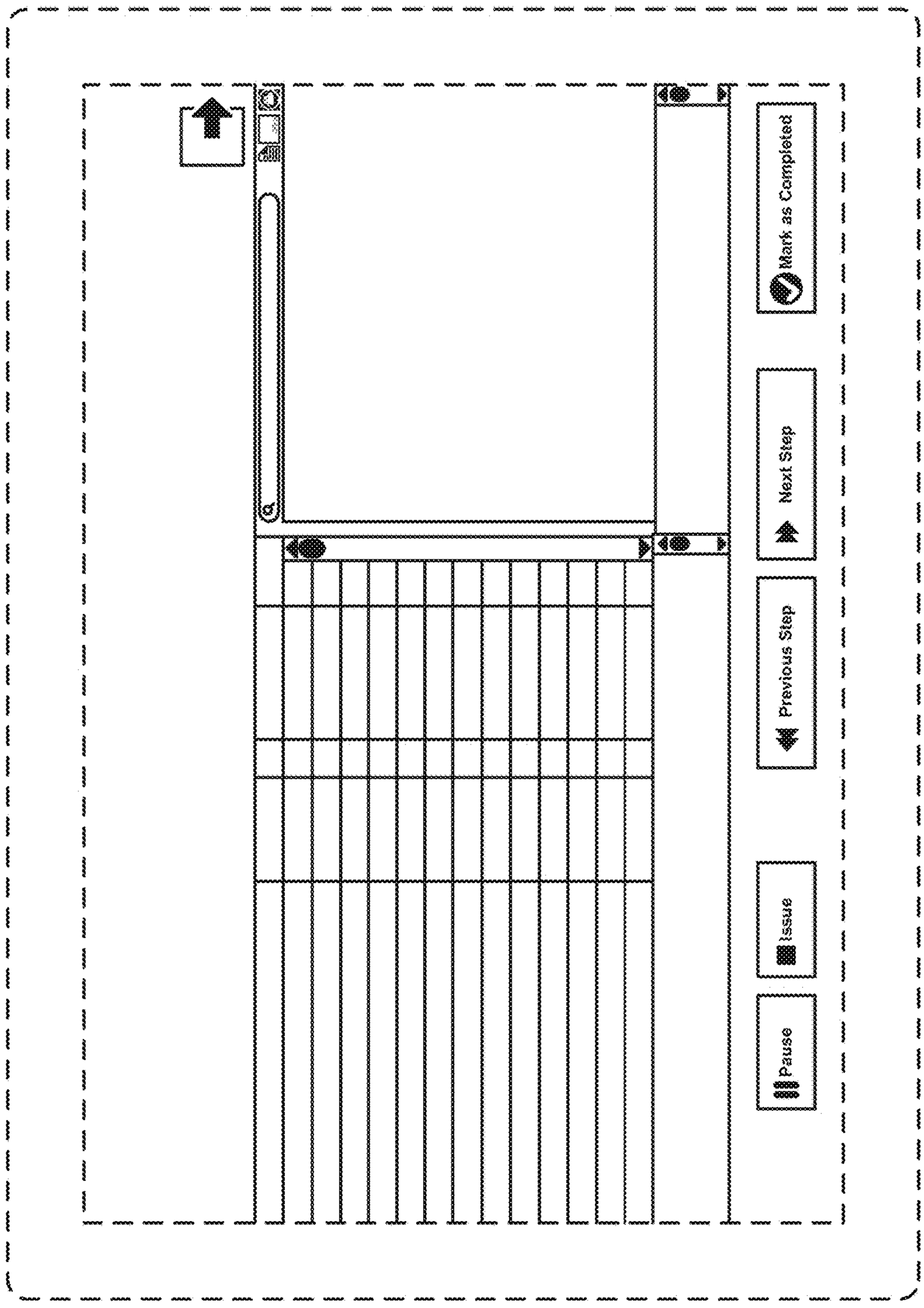


FIG. 8

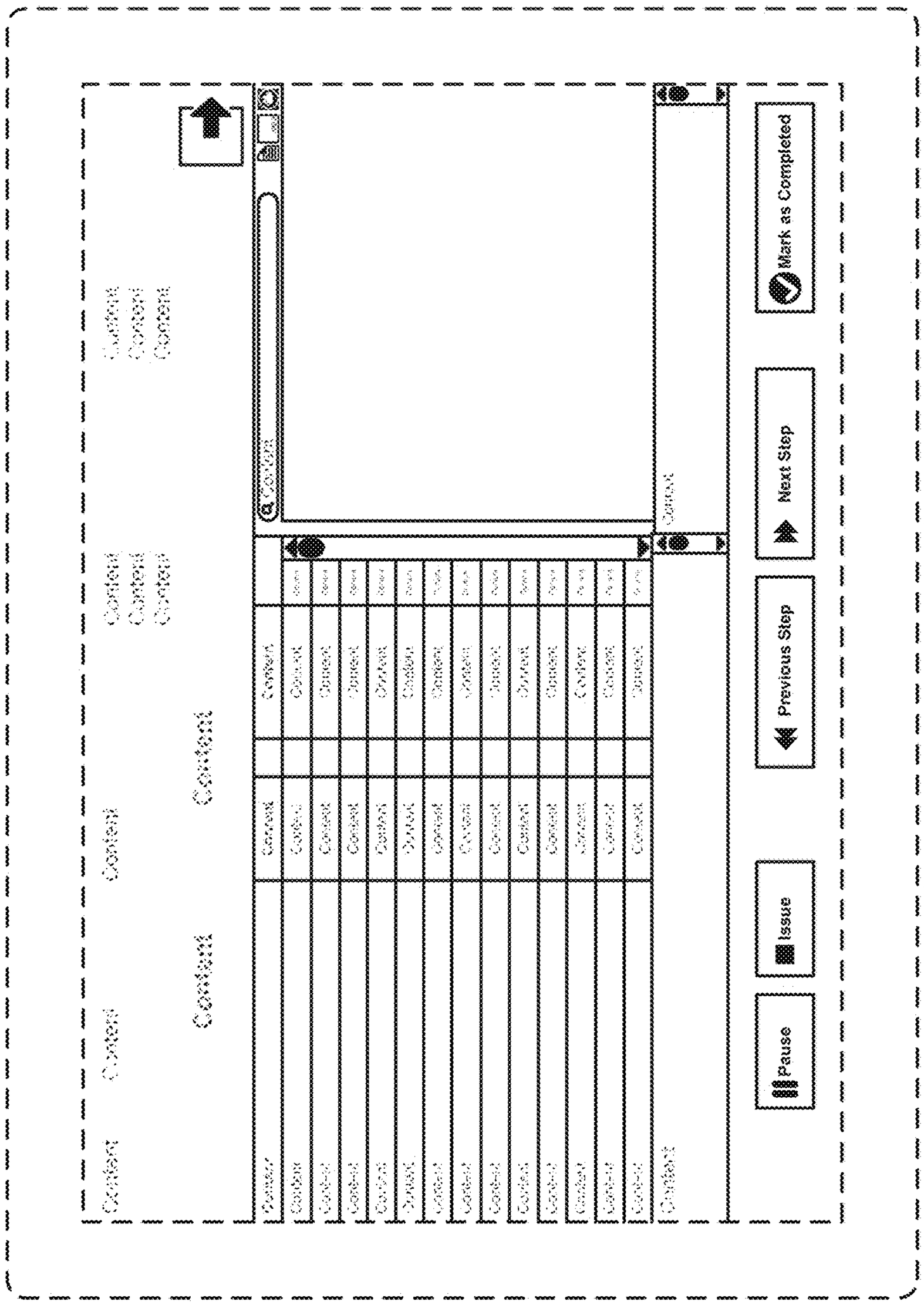


FIG. 9

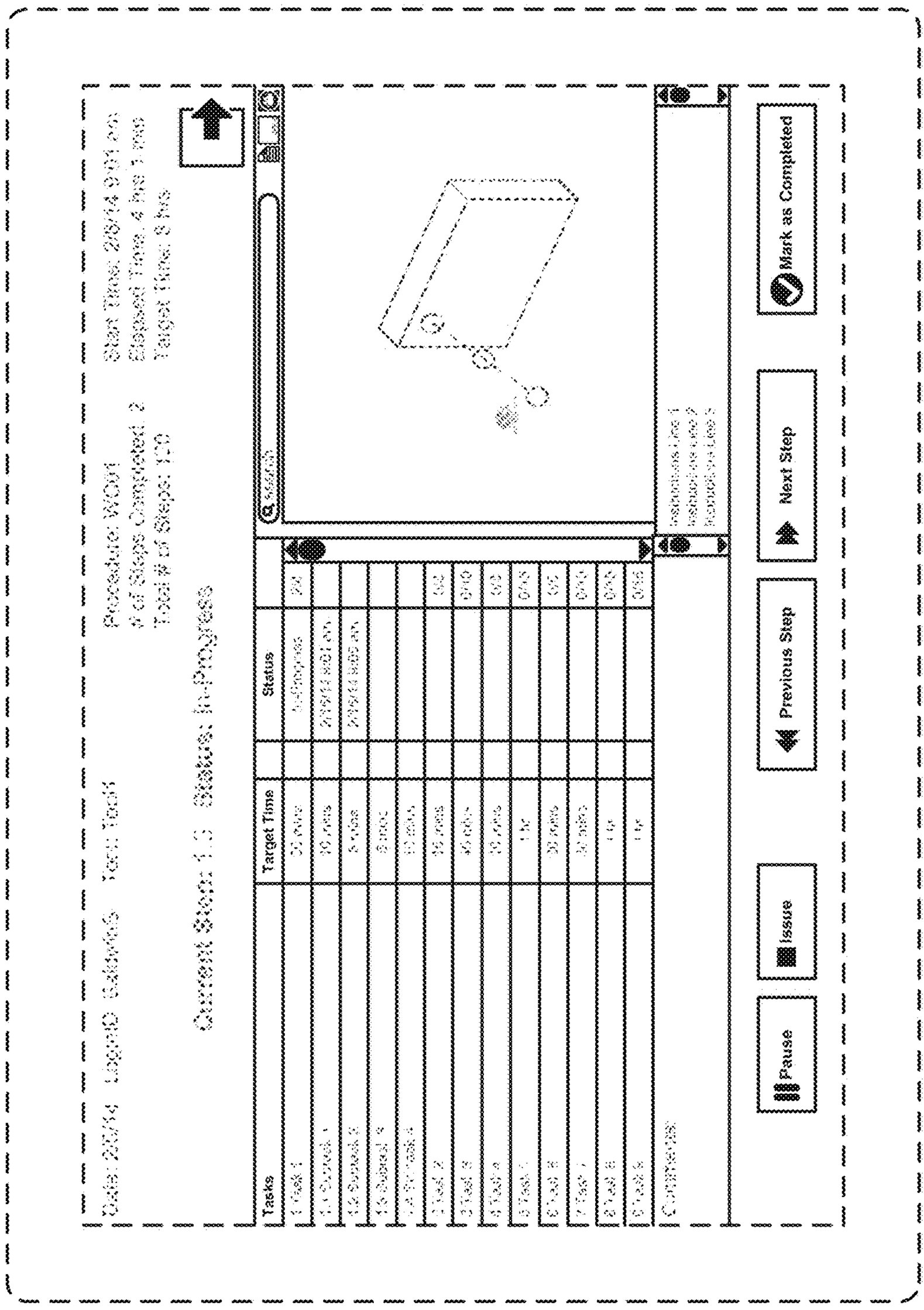


FIG. 10

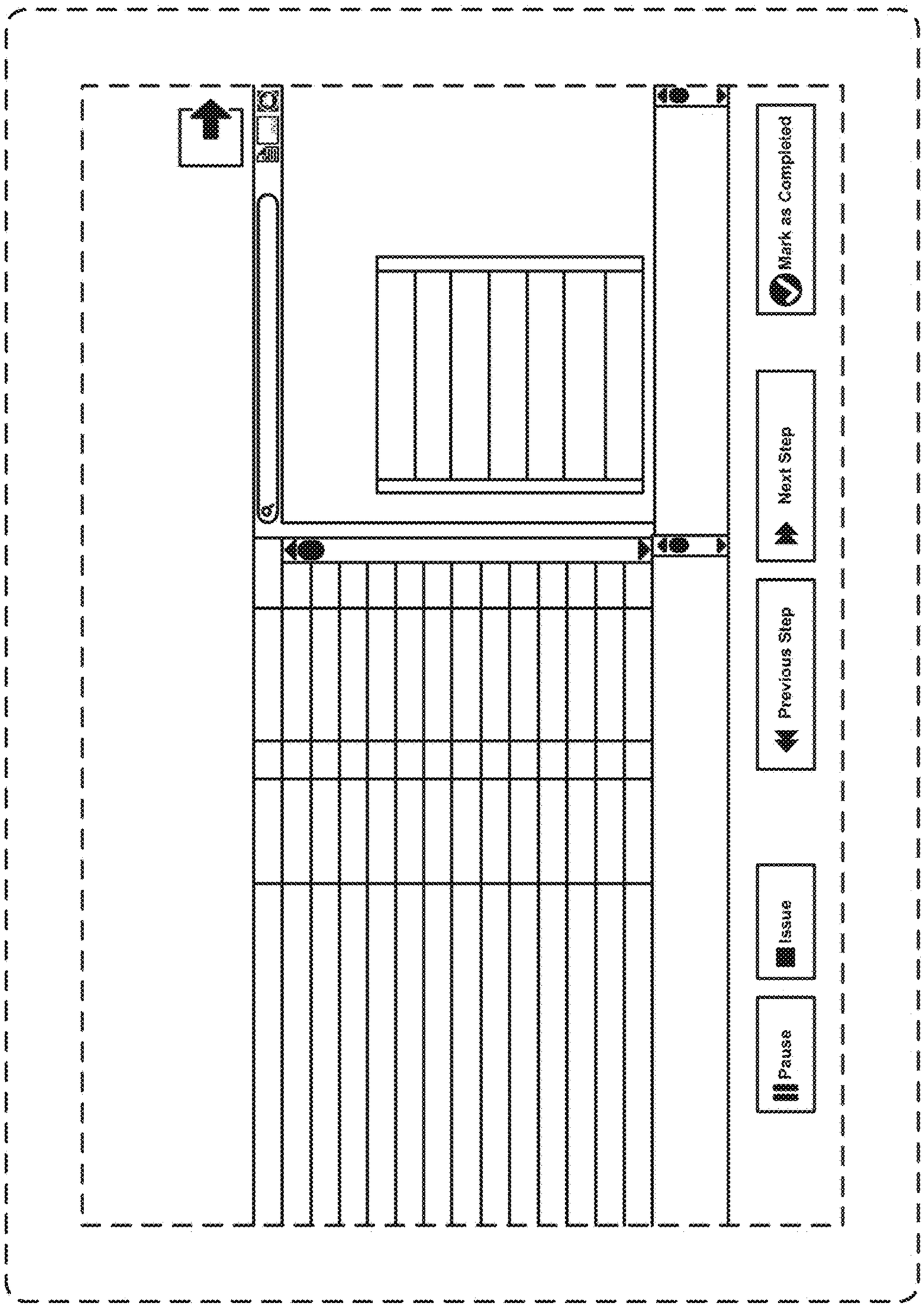


FIG. 11

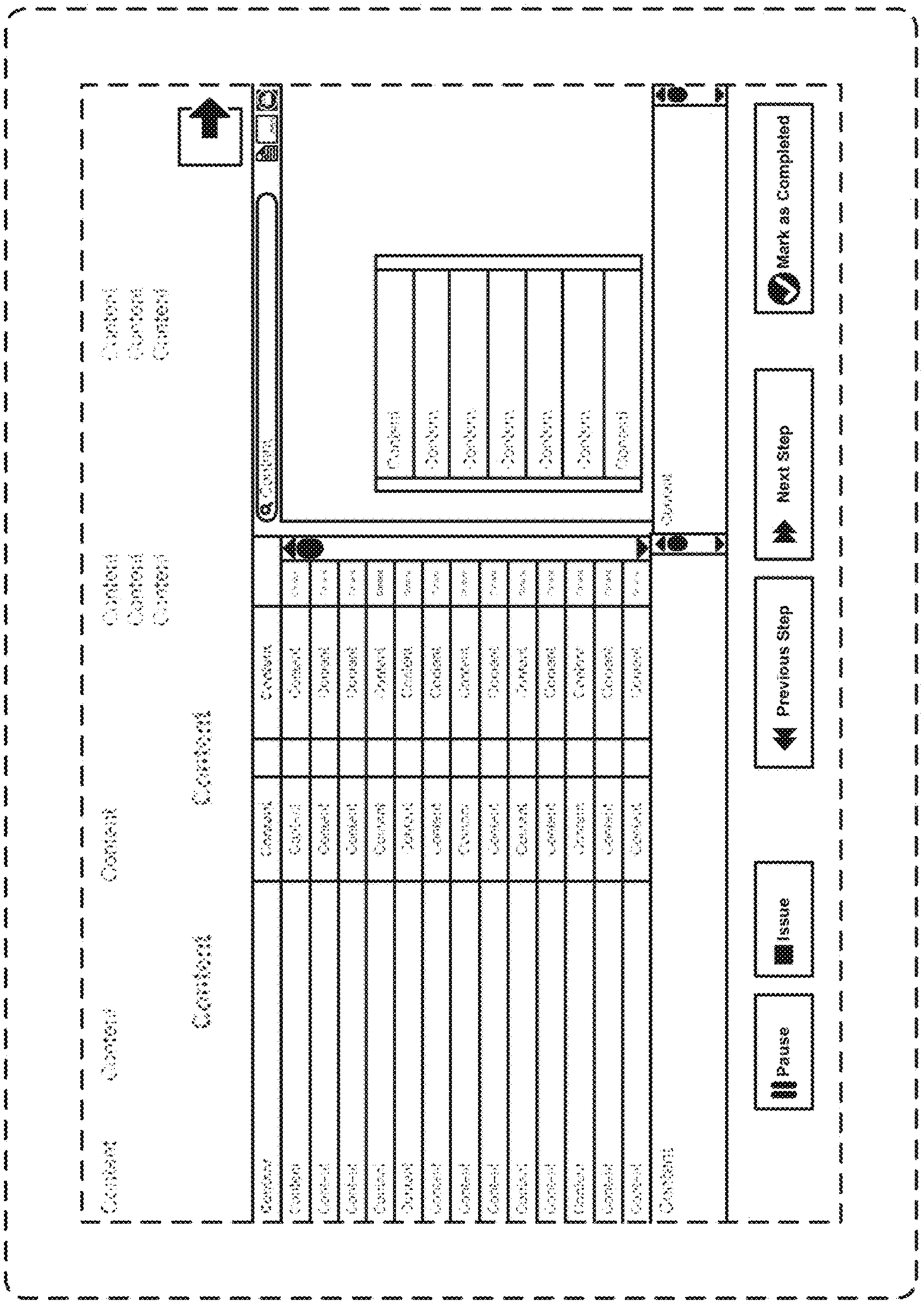

Content
Issue
Previous Step
Next Step
Mark as Completed
Pause

FIG. 12

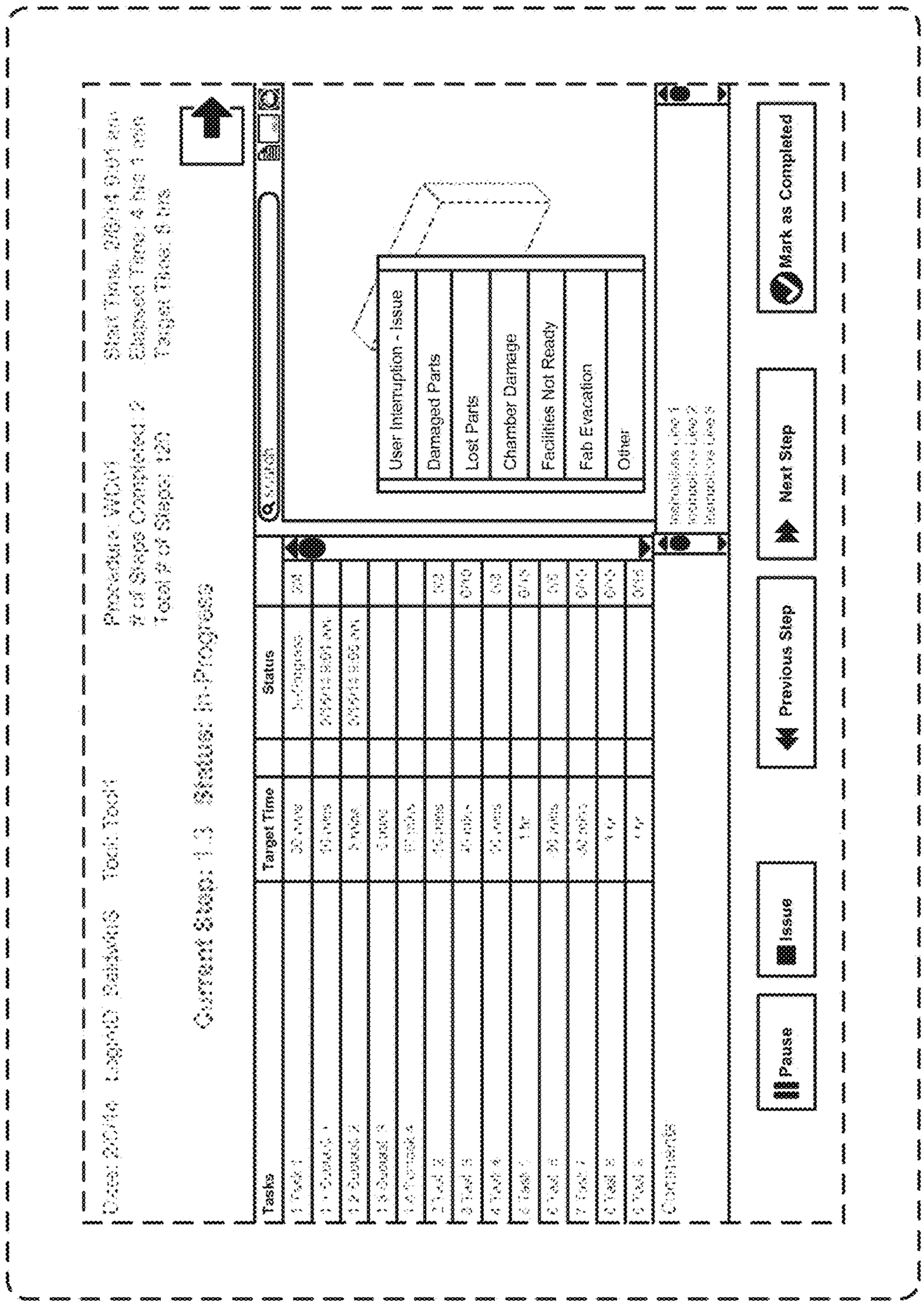

Target Time
Status
Tasks
Issue
Previous Step
Next Step
Mark as Completed
Pause
User Interruption - Issue
Damaged Parts
Lost Parts
Chamber Damage
Facilities Not Ready
Fab Evacuation
Other

FIG. 13

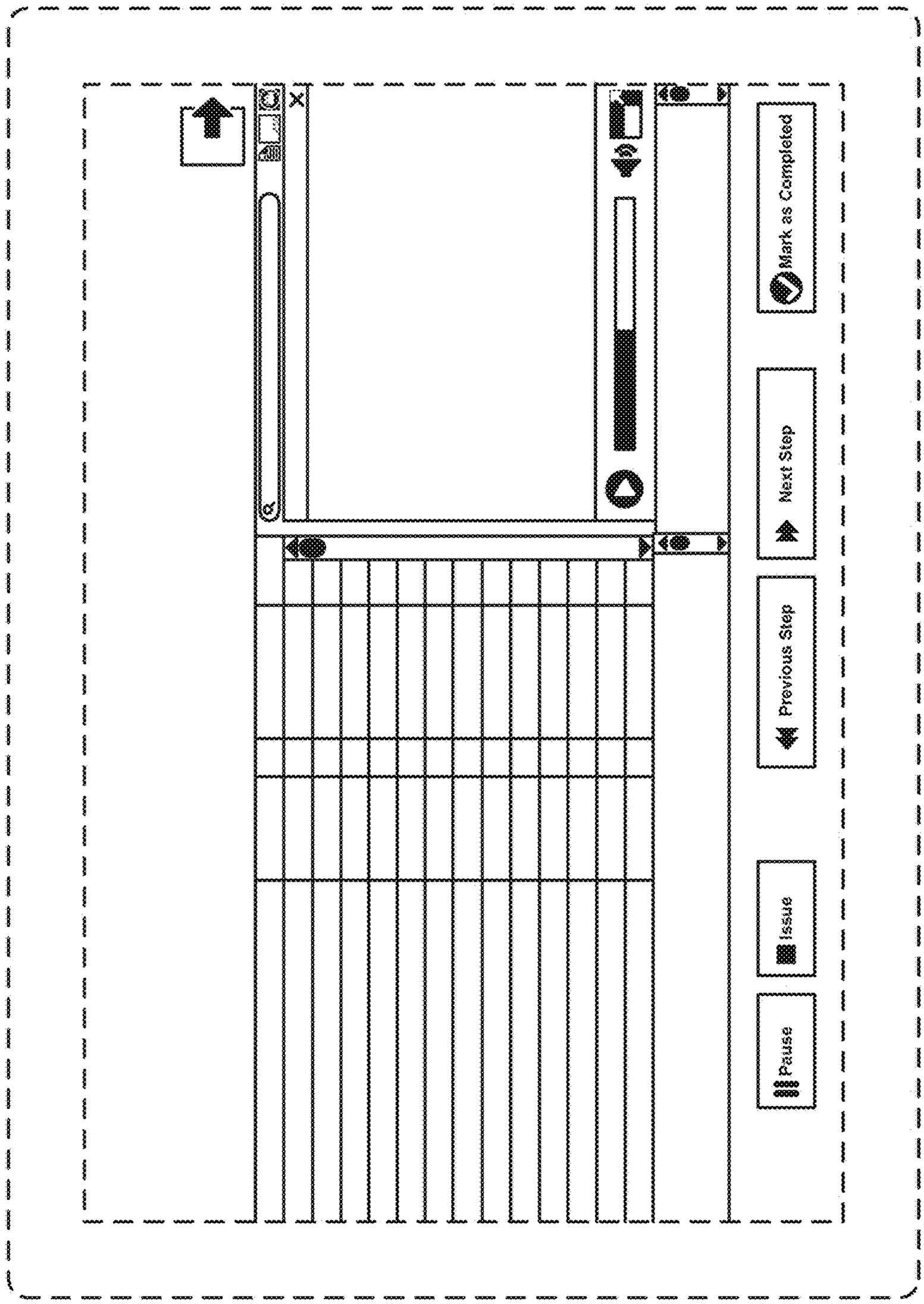


FIG. 14

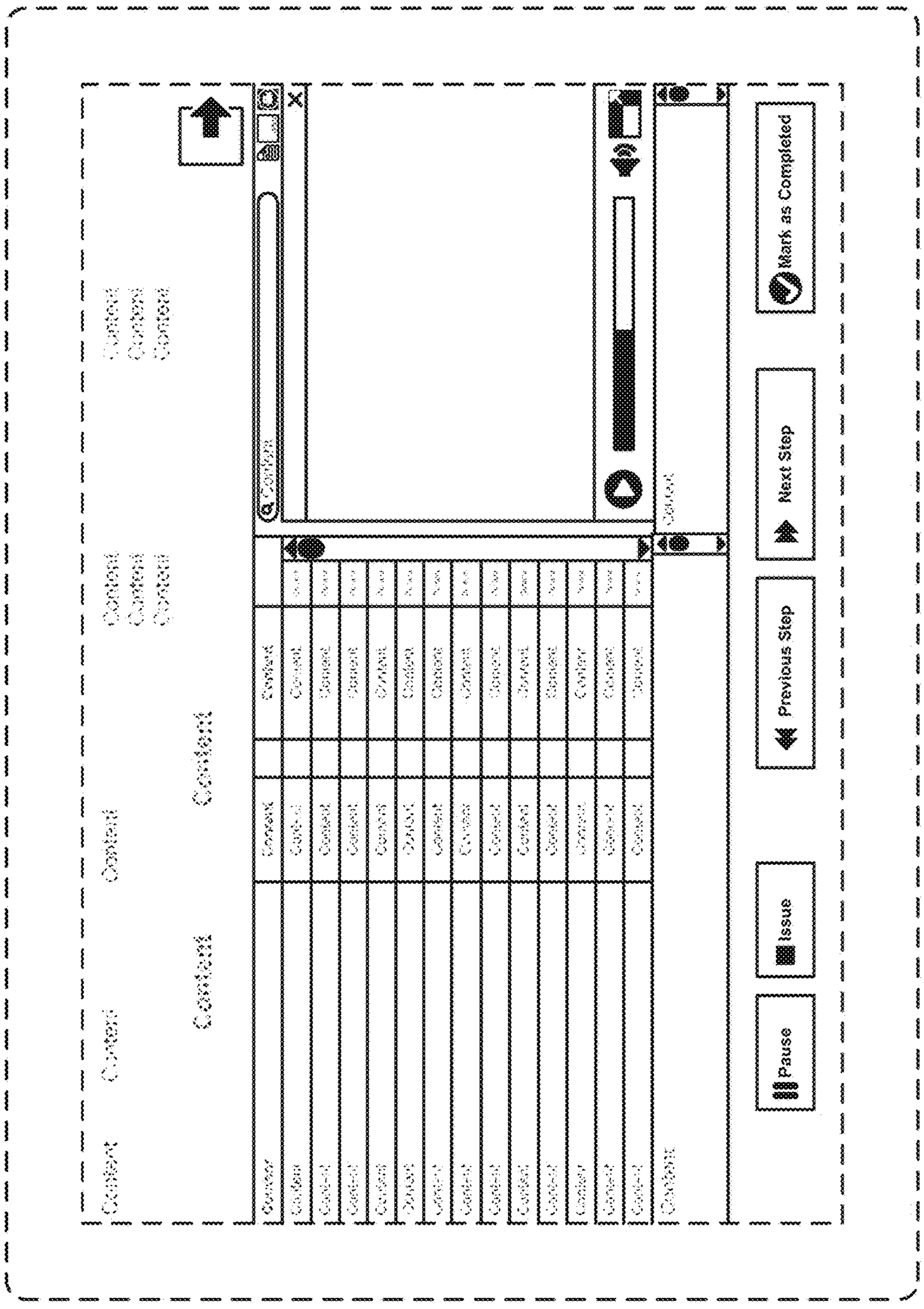


FIG. 15

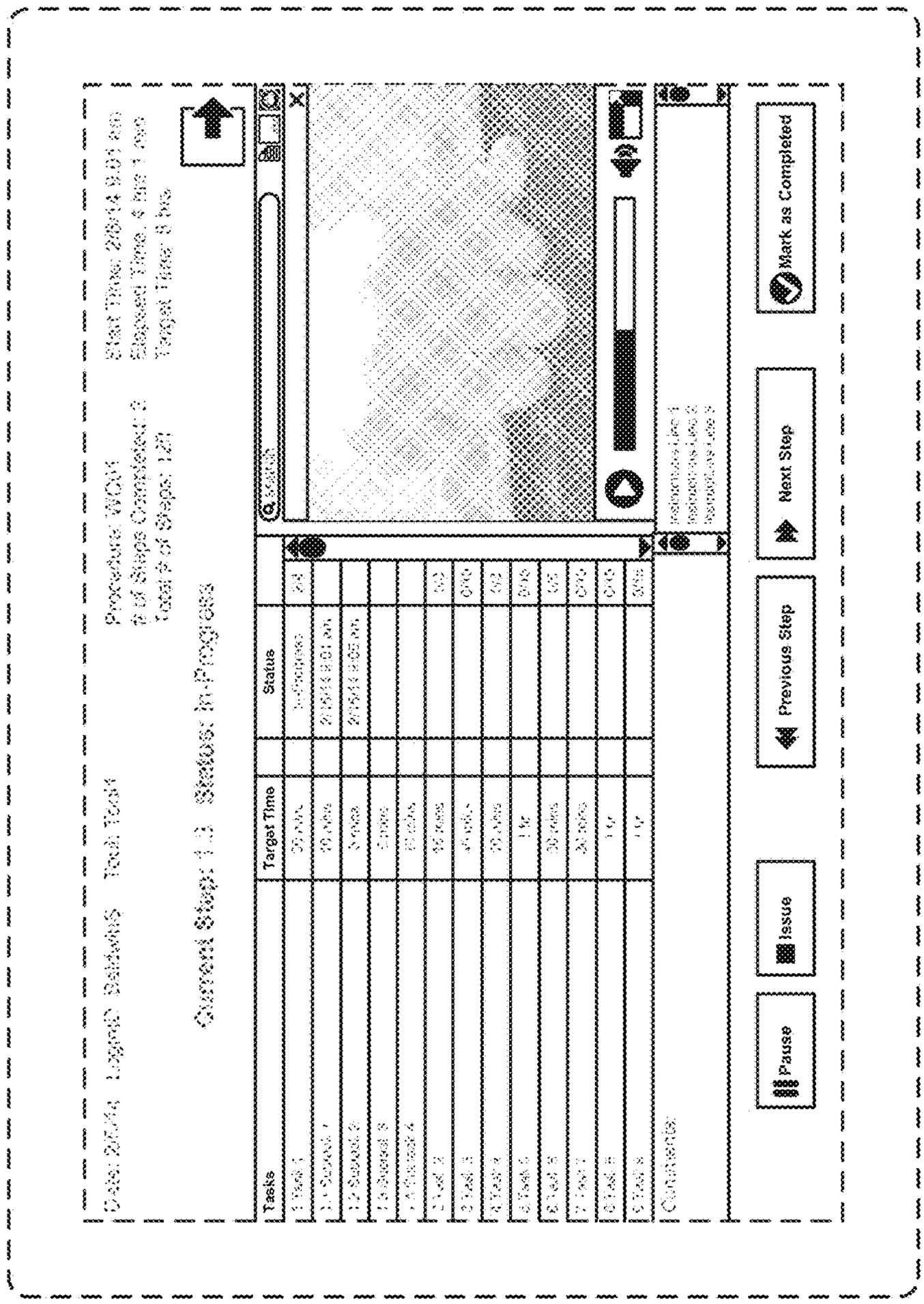


FIG. 16