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PATTERSON + SHERIDAN, L.L.P. 24 Greenway Plaza, Suite 1600 Houston, TX 77046			PINHEIRO, JASON PAUL	
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UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE PATENT TRIAL AND APPEAL BOARD

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*Ex parte* KEITH MARTIN TACKETT

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Appeal 2018-007679  
Application 12/779,855  
Technology Center 3700

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Before MICHAEL L. HOELTER, BRANDON J. WARNER, and  
LISA M. GUIJT, *Administrative Patent Judges*.

WARNER, *Administrative Patent Judge*.

DECISION ON APPEAL

STATEMENT OF THE CASE

Pursuant to 35 U.S.C. § 134(a), Appellant<sup>1</sup> appeals from the Examiner's decision to reject claims 20 and 21, which are the only pending claims. *See* Appeal Br. 3; Adv. Act. 2. We have jurisdiction over the appeal under 35 U.S.C. § 6(b). An oral hearing, scheduled for March 17, 2020, was waived.

We AFFIRM.

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<sup>1</sup> We use the word "Appellant" to refer to the "applicant" as defined in 37 C.F.R. § 1.42. Appellant identifies the real party in interest as the inventor, Keith M. Tackett. Appeal Br. 2.

CLAIMED SUBJECT MATTER

Appellant's disclosed invention "relates to number place puzzles."  
Spec. ¶ 2. Claims 20 and 21, reproduced below, are the sole independent claims and are representative of the subject matter on appeal.

20. A complete number place puzzle, comprising:

nine columns and nine rows defining eighty-one boxes printed for placing numerals, wherein each row consists of three triads wherein each triad is three adjacent boxes in the row; and

sufficient pre-assigned numerals selected from numerals 1-9 and printed on the eighty-one boxes to form a puzzle having remaining empty boxes and a single solution provided that no numeral in the single solution appears more than once in each row and each column, and that each triad in the single solution contains no more than one numeral from each of three distinct groups of numerals, wherein the three distinct groups of numerals are numerals 1-3, numerals 4-6, and numerals 7-9, and wherein the complete number place puzzle has the following pre-assigned numerals:

1	5	_	3	4	7	_	_	9;
_	2	_	_	_	_	_	8	_;
_	_	3	_	_	_	7	5	_;
9	_	_	6	2	_	_	_	1;
_	8	_	_	_	_	_	2	_;
_	_	7	_	8	_	3	_	_;
_	_	_	9	_	4	_	_	6;
4	_	_	_	_	1	_	_	_;
_	_	_	_	_	_	_	_	_.

21. A complete number place puzzle, comprising:

nine columns and nine rows defining eighty-one boxes printed for placing numerals, wherein each row consists of three triads wherein each triad is three adjacent boxes in the row; and

sufficient pre-assigned numerals selected from numerals 1-9 and printed on the eighty-one boxes to form a puzzle having remaining empty boxes and a single solution provided that no numeral in the single solution appears more than once in each row and each column, and that each triad in the single solution contains no more than one numeral from each of three distinct groups of numerals, wherein the three distinct groups of numerals are numerals 1-3, numerals 4-6, and numerals 7-9, and wherein the complete number place puzzle has the following pre-assigned numerals:

1	5	_	3	_	7	_	_	9;
_	2	_	_	_	_	_	8	_;
_	_	3	_	_	_	7	5	_;
9	_	_	6	2	_	_	_	1;
_	8	_	_	_	_	_	2	_;
_	_	7	_	8	_	3	_	_;
_	_	_	9	_	4	_	_	6;
4	_	_	_	_	1	_	_	_;
_	_	_	_	_	_	_	4	_.

## EVIDENCE

The Examiner relies on the following evidence in rejecting the claims on appeal:

Internet Post from user dukuso on The New Sudoku Players' Forum, dated Oct. 6, 2005 ("Dukoso").

## REJECTIONS

The following rejections are before us for review:

- I. Claims 20 and 21 stand rejected under 35 U.S.C. § 101 as being directed to patent-ineligible subject matter. Adv. Act. 2–4.
- II. Claims 20 and 21 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Dukoso. *Id.* at 4–5.

## PROCEDURAL NOTE

The Patent Trial and Appeal Board previously heard and decided an appeal in this application, issuing a Decision on September 2, 2015 ("Previous Decision"), in which a rejection of previously-pending independent claim 11 as being directed to patent-ineligible subject matter was affirmed. We note that present claims 20 and 21 differ from previously-pending independent claim 11 only in the provision of "wherein the complete number place puzzle has the following pre-assigned numerals," along with the specific starting numbers for the puzzle. Claims 20 and 21 also differ from one another only in two entries for the specific starting numbers for the puzzle, which it is noted share the same single solution.

## ANALYSIS

### *Rejection I – Claims 20 and 21 as being directed to patent-ineligible subject matter*

Each of claims 20 and 21 recites “[a] complete number place puzzle,” that includes “nine columns and nine rows defining eighty-one boxes printed for placing numerals, wherein each row consists of three triads wherein each triad is three adjacent boxes in the row,” and “sufficient pre-assigned numerals selected from numerals 1-9 and printed on the eighty-one boxes to form a puzzle having remaining empty boxes and a single solution provided that no numeral in the single solution appears more than once in each row and each column, and that each triad in the single solution contains no more than one numeral from each of three distinct groups of numerals, wherein the three distinct groups of numerals are numerals 1-3, numerals 4-6, and numerals 7-9,” and also includes starting numbers for the puzzle “wherein the complete number place puzzle has the following pre-assigned numerals,” followed by one of two possible sets of starting numbers. Appeal Br., Claims App.

The Examiner rejects claims 20 and 21 under 35 U.S.C. § 101, concluding that the “claimed subject matter [does] not fall into one of the four statutory categories.” Adv. Act. 2. Section 101 provides that: “Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.” If the subject matter of a claim fails to fall within one of these statutory categories, namely, process, machine, manufacture or

composition of matter, it is not patentable. *In re Nuijten*, 500 F.3d 1346, 1354 (Fed. Cir. 2007); *see* Adv. Act. 2 (citing same).

For all categories except process claims, the eligible subject matter must exist in some physical or tangible form. To qualify as a machine under section 101, the claimed invention must be a “concrete thing, consisting of parts, or of certain devices and combination of devices.” *Burr v. Duryee*, 68 U.S. 531, 570 (1863). To qualify as a manufacture, the invention must be a tangible article that is given a new form, quality, property, or combination through man-made or artificial means. *Diamond v. Chakrabarty*, 447 U.S. 303, 308 (1980). Likewise, a composition of matter requires the combination of two or more substances and includes all composite articles. *Id.*

*Digitech Image Techs., LLC v. Electronics for Imaging, Inc.*, 758 F.3d 1344, 1348–49 (Fed. Cir. 2014); *see* Adv. Act. 2–3 (citing same). “The Supreme Court and [our reviewing] court have consistently interpreted the statutory term ‘process’ to require action.” *Nuijten*, 500 F.3d at 1355; *see* Adv. Act. 4 (citing same).

The “number place puzzle” recited in each of claims 20 and 21 is a mathematical structure or numerical arrangement having a single solution consisting of 9×9 Latin Squares with entries drawn from the whole numbers between 1 and 9. Appellant urges that the claimed number place puzzle has “a new and non-obvious relationship to the substrate.” Appeal Br. 5. Stated in terms more familiar to the jurisprudence of § 101, Appellant’s argument is to the effect that the claimed number puzzle is tied to a particular machine, manufacture, or composition of matter in a novel or non-obvious manner.

The Examiner correctly concludes that claims 20 and 21 do not recite any particular “substrate,” that is, any machine, manufacture, or composition of matter. Ans. 2–3. Appellant’s Specification teaches representing a solution to a number place puzzle (which is itself a number place puzzle) in

electronic form using a data structure corresponding to a two-dimensional matrix. *See* Spec. ¶¶ 36–38. This disclosure provides that claims 20 and 21 are not limited so as to require embodiment of the recited number place puzzle in any particular physical or tangible form.

Even if the claims were read to imply that the recited boxes and pre-assigned numerals are to be “printed” on some substrate (e.g., paper or an electronic medium), the Examiner is still correct that merely printing or displaying characters (boxes and numerals) does not result in any new or non-obvious functional relationship with a substrate on which they simply appear. *Ans. 2–3; see also* Reply Br. 2 (where Appellant acknowledges that number place puzzles “are typically printed on paper or computer screens, and that Appellant “does not assert novelty in selection of the type of substrate,” which significantly undermines any assertion of a functional relationship between the displayed characters and any suitable substrate on which they appear). In sum, we are not apprised of error in the Examiner’s conclusion that the number place puzzle recited in each of claims 20 and 21 is not a machine, manufacture, or composition of matter.

Further, the Examiner is correct that claims 20 and 21 do not recite any steps for creating or solving the claimed number place puzzle. *Ans. 4.* Lacking any action, that is, any recitation of method steps, the claims do not claim a process. Since the number place puzzles of claims 20 and 21 do not fall into any statutory category listed in § 101, we sustain the Examiner’s rejection of the claims.



*Rejection II – Claims 20 and 21 as unpatentable over Dukoso*

Because our decision to sustain the Examiner's rejection of the claims under 35 U.S.C. § 101 as being directed to patent-ineligible subject matter, discussed above, is dispositive as to the patentability of claims 20 and 21 (*see* 37 C.F.R. § 41.50(a)), we do not reach the Examiner's additional rejection of the claims under 35 U.S.C. § 103(a) as being unpatentable over Dukoso for the same reasons as in the Previous Decision. In short, no meaningful result would come from an attempt to review an application of prior art to an ineligible concept that does not exist in any physical form.

DECISION

We AFFIRM the Examiner's decision rejecting claims 20 and 21 under 35 U.S.C. § 101 as being directed to patent-ineligible subject matter.

We DO NOT REACH the Examiner's decision rejecting claims 20 and 21 under 35 U.S.C. § 103(a) as being unpatentable over Dukoso.

No time period for taking any subsequent action in connection with this appeal may be extended under 37 C.F.R. § 1.136(a). *See* 37 C.F.R. § 1.136(a)(1)(iv).

CONCLUSION

In summary:

<b>Claim(s) Rejected</b>	<b>35 U.S.C. §</b>	<b>Reference(s)/Basis</b>	<b>Affirmed</b>	<b>Reversed</b>
20, 21	101	Eligibility	20, 21	
20, 21	103(a)	Dukoso		
<b>Overall Outcome</b>			20, 21	

AFFIRMED